Reports Requirement Analysis and Gap Analysis of Colon Cancer Prevention Program and Testing of Colon Cancer Screening Application

By

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Performed at

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Date Submitted: April 09, 2009

Supervisor: Ms. Erika Nicholson

Signature: _____

Date: _____

This report has been written by Shamita Bharathan and has not received any previous academic credit at this or any other institution.

I would like to thank Ms. Erika Nicholson for providing all the support during this learning process. I would also like to thank Mr. Todd Wilson, Ms. Janice Rhodes and the CCASPER team for their support during this course of time.

Shamita Bharathan

_____
Signature

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Date

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Executive Summary:

The author's 13 week internship was at Cancer Care Nova Scotia for the Colon Cancer Screening program. The intern joined the organization at the planning and development of the program. The main responsibilities included analysis of report requirements and gap analysis of Cancer Care Application for Screening Program with Enhanced Reporting and reporting analysis of Clinical Outcomes Research Initiatives. The author studied the requirements document for the screening program and also with discussion with the team for the Colon Cancer Prevention Program prepared the analysis report for the report requirements for the program which in turn pointed out the gaps in the applications and data requirements for these reports. These requirements were taken into consideration to fill in the gaps. As this was done at the early stage of the design and development of the application, there was no major time mismanagement and the program was able to roll out in the projected time frame. The intern was also responsible for developing the program requirement traceability matrix and writing of the test cases and testing of the CCASPER application. The author's health informatics knowledge was put to use at various levels of the development of the application and in suggesting alternatives and emphasizing the importance of the health information flow and use, privacy issues, interoperability matters, and importance of healthcare knowledge base for measurement of outcomes and research.

1. Introduction

1.1 Overview

Canada is one of the few nations in the world with a cancer registry system that allows monitoring and comparing of cancer patterns across the entire population. Such comparisons can provide valuable information for research, knowledge exchange, planning, and decision-making. With this information, knowledge and conclusions can be derived that can give substantial grounds to develop policies, procedures, and programs for prevention of cancer and care of cancer patients. There should be an enhanced capacity for adequate prevention, health promotion programs and for palliation when treatment no longer offers hope of a cure. Primary prevention is the key to reduce the number of cases that are avoidable [1].

Cancer incidence rate can be noticeably reduced through cancer prevention measures. At least one-third of all cancer cases are preventable. Prevention offers the most cost-effective long-term strategy for the control of cancer. Tobacco is the single largest preventable cause of cancer in the world today. It causes 80-90% of all lung cancer deaths, and about 30% of all cancer deaths in developing countries, including deaths from cancer of the oral cavity, larynx, esophagus and stomach [2].

1.2 Introduction to the organization

Cancer Care Nova Scotia (CCNS) was established by the Nova Scotia Department of Health in 1998. It was created to reduce the burden of cancer on individuals, families, and the health care system through prevention, screening, education, and research. Screening for various cancers is one of the main objectives of CCNS. CCNS's mandate is to coordinate, strengthen, and evaluate cancer services in Nova Scotia Working with many others in the field of cancer and health; CCNS

programs cover prevention, screening, education, treatment, follow-up care, and palliation. Direct services to cancer patients are provided by the province's District Health Authorities (DHAs) [3].

1.2.1 Mission of Cancer Care Nova Scotia

“To coordinate, evaluate and strengthen cancer care and services for all Nova Scotians” [4].

1.2.2 Goals of Cancer Care Nova Scotia

- The main goals of the CCNS are as follows: [3]
- To have high quality cancer care across the province.
- To reduce the number of people diagnosed with cancer, and dying from cancer.
- To enhance cancer research in Nova Scotia.
- To bring reliable and helpful cancer information to Nova Scotians.

CCNS strives to achieve the following: [4]

- Support - To provide crucial support to patients and their families, doctors, nurses, and other health providers.
- Education - To develop and deliver education programs for doctors, nurses, and other health professionals, based on identified needs and to ensure they have the most current knowledge to provide quality care.
- Standards - To work with cancer specialists to produce standards and guidelines for treating different kinds of cancer so that all Nova Scotians receive consistent, high quality care.
- Collaboration - To work with government, health professionals, and health administrators to plan and develop needed cancer services.
- Awareness & Policy Development - To work with health charities, government, and other community groups to address shared risk factors through awareness and policy development.

1.3 Objective of Implementation of Colon Cancer Screening Program (CRCPP)

Cancer Care Nova Scotia, with its objectives, vision, goals and values along with national recommendation of The National Committee on Colorectal Cancer Screening which is supported by Health Canada, planned to start Colon Cancer Screening Program. The National Committee on Colorectal Cancer Screening recommends colorectal cancer screening should be made available to Canadians. In order to ensure quality screening which maximizes benefits and minimizes potential risks, ideally screening should be within an organized and structured environment, with the following elements in place: a clear, concise and understandable information for patients and physicians on the risks and benefits of screening and on the administration of the test, informed consent following personal consultation with family practitioner or equivalent, standardized protocols and procedures with a single entry test and options for follow-up, systematic tracking and evaluation of all screening invitations (if used), and testing frequency, results (including false positive and false negative rates), follow-up, and outcomes[5].

1.3.1 Background

According to Canadian Cancer Statistics, an estimated 166,400 new cases of cancer and 73,800 deaths from cancer will occur in Canada in 2008. Three types of cancer account for the majority of new cases in each gender: prostate, lung and colorectal in males and breast, lung and colorectal in females. Overall, colorectal cancer is the second leading cause of death from cancer. Generally, both incidence and mortality rates are higher in Atlantic Canada and Quebec and lowest in British Columbia [5].

Nova Scotia ranks among the highest in the country in the incidence of colorectal cancer, a disease that is largely preventable. Approximately 1000 men and women are diagnosed with colon cancer every year, and about 350 of them will die from the disease [6]. Prevention through screening is

one of the objectives of CCNS. CCNS has cervical cancer screening program which screens women for cervical cancer. With the implementation of Colon Cancer Screening program, CCNS is helping Nova Scotians to detect colon cancer early. The National Committee on Colorectal Cancer Screening recommends that colorectal cancer screening should be made available to all Canadians. In order to ensure quality screening that maximizes benefits and minimizes potential risks, screening should be undertaken within an organized and structured environment, with the following elements in place: [5]

- A clear, concise and understandable information for patients and physicians on the risks and benefits of screening and on the administration of the test
- Informed consent following personal consultation with family practitioner or equivalent
- Standardized protocols and procedures with a single entry test and options for follow-up
- Systematic tracking and evaluation of all screening invitations (if used), and
- Testing frequency, results (including false positive and false negative rates), follow-up, and outcomes

The above-mentioned elements served as guidelines in developing the Colon Cancer Screening and Prevention Program (CRCPP) by CCNS. Unlike many other cancers, colon cancer has a 'precancerous' phase which, if diagnosed and treated early, it can be cured. If detected early colon cancer responds best to treatment.

The majority of colorectal cancers begin as benign growths in the lining of the colon called adenomatous polyps. Over the years, these polyps grow in size and number, thereby increasing the risk that the cells in the polyps will become cancerous. (Figure 1)

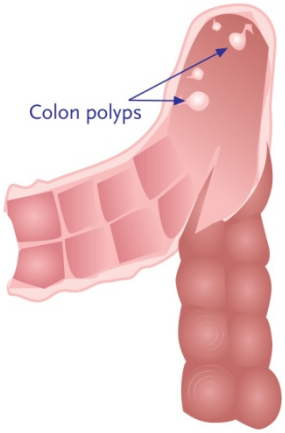

Figure 1: Polyps, taken from [6]

Timely removal of these growths (easily done during a colonoscopy) will prevent colorectal cancer from developing. It is important to identify and remove these polyps as soon as possible. Polyps can be directly identified during colonoscopy but this procedure cannot be used for screening because of the nature of the procedure and limited number of colonoscopists. Primary Colorectal Cancer screening by colonoscopy is advocated in the U.S. but is never the ideal method in a country with a national government-funded health care system or in any Canadian province, including Nova Scotia (as it is NOT an MSI-insured procedure) [7]. A non-invasive and more acceptable form of screening is Fecal Immunochemical Testing (FIT). FIT is specific for human hemoglobin, is more sensitive to colonic origin of blood loss, and has greater specificity for significant neoplasms. If FIT is positive, then the next step is to do the colonoscopy. Polyp removal is usually done during a colonoscopy and the patient is sedated during the procedure. Recovery is quick and usually pain-free. Polyps are sent for a biopsy and tested for any malignancies [8].

The ultimate goal of Cancer care Nova Scotia's Colon Cancer Prevention Program (CRCPP) is to reduce mortality from Colorectal Cancer (CRC) in Nova Scotia. In March 2007, the

Nova Scotia Department of Health announced funding for the development of a population-based prevention program, with the goal of decreasing the incidence of colorectal cancer in the province. Building any cancer prevention program takes time as there is much to consider: having the right kind and number of health professionals, ensuring health professionals have the tools and education to support high quality care, developing data collection programs and education and awareness strategies. In August 2007, Dr. Bernie Badley, a long practicing gastroenterologist and a celebrated health administrator and educator joined CCNS as the Medical Director and Ms. Erika Nicholson, as the Program Manager, of Cancer Care Nova Scotia's developing Colon Cancer Screening Program.

1.3.2 Objective of the Internship

The intern was responsible for the overall analysis and design of the CRCPP statistical reporting system. Duties include the design and maintenance of research databases: design and development of reports to meet the logistical and administrative requirements of the CRCPP. Major responsibilities include database development and management, analyze and document CRCPP reporting requirements, conduct meetings with program staff to elicit reporting requirements, develop methods of tracking research data through databases and spreadsheets, and liaise with researchers on database maintenance. Although the major objective of the internship was to analyze the report requirements of the Colon Cancer Screening Program, which included the report requirements of the screening application and the colonoscopy procedure recording software Clinical Outcomes Research Initiative (CORI), as the internship progressed the intern was entrusted with other duties of the Colon Cancer Screening application like the development of the requirements traceability matrix and also with testing of the application.

1.3.3 Lessons Learned

The author gained a lot of experience in getting involved in the right time with the phased activities of province wide launch of cancer screening program, which is unique to Canada. Although Ontario has Colon Cancer screening program in place they lack reporting of any of the outcomes and are not sure about the coverage of the population. The intern learned the emergence of complications and diversifications, in a program implementation project and how best one can solve and accommodate these issues, and how good as a team can work together to put in the thoughts, ideas and knowledge for the common good.

Intern's interactions with medical director of the program and also with the epidemiologists gave an insight into the systematic reporting of the outcomes and importance of the basis of every measurement. Another insight the intern achieved through this term is the importance of how best clinical software can be used for benefit of patients as well as for the clinician is gained through the exploration of Clinical Outcomes Research Initiative software

2. Work Performed

2.1 Cancer Care Application for Screening Program with Enhanced Reporting (CCASPER)

The intern joined the team of developers for the Cancer Care Application for Screening and Prevention with Enhanced Reporting (CCASPER) at an early stage of its development. The administrative back bone of this program is the CCASPER. This screening application is developed at the CCNS with the support from Information Technology Services of Capital Health. The decision to build this screening application was taken after analyzing various softwares available in the market. The intricate decision to determine the population, of age between 50-74 and taking them through an array of events and re-inviting them to participate in a two year cycle is neatly and efficiently designed in the CCASPER application. Roll out of the program is planned in stages.

2.1.1 Reports Requirement Analysis and Gap Analysis of Colon Cancer Prevention Program

The screening application is developed at the Cancer Care Nova Scotia. The major duty of the intern was to analyze the report requirements of CCASPER, which is handling the administrative side of the program and CORI, which is the used in the CRCPP for recording the colonoscopy procedure outcomes. The author studied the colon cancer screening application requirements document thoroughly to understand the screening application. The program update meeting intern attended every week enhanced the author to have a better understanding of the Colon Cancer Screening Application, the requirements, expectations from different levels, wish lists of the managers, clinicians etc. and the application design and development progress. The various meetings, the author arranged with epidemiologists, medical director of the program, program manager, subject matter expert, and senior analysts helped to understand the report expectations from the program at administrative level and clinical level. Since the intern was starting at the early stage of development, report requirement analysis pointed out the gaps in data requirement for the reports. So the reports helped to do the gap analysis of the screening application. Along with these the intern was able input the knowledge gained through the course works in health informatics to figure out what data should be collected to derive the useful information which can be converted to knowledge base for further research and development. The intern with this background knowledge was able to develop a framework of reports. The author had done various round of discussion with the program manager, and epidemiologists to fine tune the report requirements of the colon cancer screening application (CCASPER) and CORI. Statistical expertise of the intern is utilized to figure out the formulas for getting the reports and to handle sensitivity and specificity issues of the tests performed for the screening procedure. The various CCSAPER Report requirement analysis and gap analysis done by the intern is attached as Appendix I

2.1.2 Requirements Traceability Matrix of Colon Cancer Prevention Program

The author was responsible for developing the requirements traceability matrix for mapping requirements of the program to the application, report requirements and test scripts. The requirement traceability matrix is developed in an excel sheet after the author has thoroughly gone through the requirement document of the Colon Cancer Prevention Program. The requirements were listed out and mapped against the numbering of the requirements document and provisions were given to map the requirements with the design document reference, test case reference, UAT validation and comments. At every stage of this matrix development, author had taken special care to split each requirement to sub divisions so that the required data can be mapped from the application side or the required batch can be created from the database. The intern had discussions with senior analyst and subject matter expert to clarify with the development of the matrix. After completion of the test scripts, the scripts / cases were mapped with the requirements. As Appendix II of this document the CCASPER requirements traceability matrix is appended.

2.1.3 Testing of Cancer Care Application for Screening Program with Enhanced Reporting (CCASPER)

The third major duty intern performed during the internship period is to develop the test cases for testing the colon cancer screening application (CCASPER). Author has by that time studied the requirements document thoroughly, which helped a lot in writing the test scripts. Testing any application is the systematic approach of testing the function of the application. The intern started writing the test cases comparing the requirements document and also the application screen shots. There are two phases of testing the application. The first test scripts were written for testing the front end of the application. The second set of test scripts were written to test the database whether it is generating the appropriate batch. The batch running plays a huge role in this application as this

is the one which is triggering all the events. The events of the program are right from determining the population to who gets opted out, who gets the screening kit, who should get reminder letters, who has FIT (Fecal Immunochemical Test) kit result, who is getting colonoscopy, etc., is decided at the backend of the software.

The author systematically tested the application with test data and finally with the production data. The validation of the determined population for the invitation letter, the validation of invitation generated at the mail house were don e as the final steps of go live of the program. The test cases are appended to this document as Appendix III.

3. **Relationship to health informatics learning**

This 13 weeks internship in medical informatics has allowed this intern to utilize the knowledge gained through health informatics courses. Following are the instances outlined relating to health informatics education gained:

Statistics for Health Informatics

When it comes to the report, it is the statistical analysis of the data. The statistical knowledge gained through the course was practically used for all the report formulas and to find which statistical analysis is suitable, depending upon the quality and quantity of data and report we are looking for.

Knowledge Management for Health Informatics

The author was able to apply the theoretical knowledge gained through this course on what are the health data to be collected to get the maximum outcome from this screening program and how best that data can be converted to knowledge base for further analysis, research and quality improvement of the program as well as the clinicians and other healthcare providers involved with the program.

Information Technology Project Management

The planning of the report analysis through the six major was used as the intern plans these three major jobs. The intern attended the weekly CRCPP group meeting. The author very well used the project management skills learned to accomplish the project assigned with three different major duties. Prioritizing the tasks, meeting the deadlines, planning the contingencies for scope creep was efficiently handled by the intern. Author coordinated meetings with epidemiologists, subject matter expert, program manager, medical director and programmers and system analyst working on Colon Screening Application and programmers working on CORI customization for understanding the report requirements, to do the gap analysis of the application along with the requirements document. The project management skills came in very handy for the successful completion of this internship project.

Clinical Care Fundamentals

At every stage of writing the report requirements, the clinical care fundamentals course gave a good insight how to evolve meaningful reports in terms of the quality assurance reports for the clinicians and also what are the reports that are relevant for the population / patient in a clinician perspective. The importance of the sensitivity and specificity of the screening test and procedures were carefully analyzed with the background knowledge of the intern gained through clinical care fundamentals.

Health Information Flow and Use

Health information flow and use helped the intern to give timely input into the screening application design flow chart/ participant pathways. The details studied in this course was used as bench mark while writing the report requirements of both Colon Cancer Screening Application and CORI how best the health information can be used, reused and reported for the benefit of reengineering the health care system in Canada

Health Information Flow and Standards

When issues presented regarding coding of CORI reports to HL 7 messaging format, the author was able to share knowledge gained in this course which were useful for better understanding of the problem.

Health Information Systems and Issues

The knowledge gained in this course about the privacy standards to be insured while handling health data was closely followed by the author when handling the test data and production data. As the author competent to understand the importance privacy of the health showed willingness to share all the e-mail communications done during the period of internship for the privacy impact assessment consultants, as a part of assessment.

Data Mining

The skills gained in data mining course to critically analyze the pathways of events happening with 'IF and 'then' rules helped a lot while writing the test cases and assigning the different case scenarios to test participants to create the all possible combinations of events that can happen in real world situation when the program is going on live.

5. Conclusion

Overall the internship period gave this author a good real world experience of launching a province wide screening program. Reporting expectations from any program is huge and it has wide impact on the healthcare system. The reports generated out of it are the ultimate measuring tool for the outcomes of the program. Unless it is not measured it cannot be managed. So measuring correctly is the key to success of the program. The reports requirement analysis done by the author during the internship is an easy to follow, but elaborate description of each report with its mathematical calculation with data source of each variable in the formula.

6. Recommendation

The healthcare information is in the era of changing to standards for handling every aspect. As a health informatician, intern would like to recommend that there should be a standard expectation for reports from the screening program which can be compared against different locations and also against different screening programs. As champion for this initiative breast screening program reports are standardized and approved at the national level. Sooner or later, the national or international level reporting expectation will be in that standard... So the intern strongly recommends the reports generating out of CCASPER and CORI to follow the language and type of reports of that reporting to keep up with standardization.

References:

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Appendix I

Reports Requirement Analysis and Gap Analysis of Colon Cancer Prevention Program: Cancer Care Application for Screening Program with Enhanced Reporting (CCASPER) and Clinical Outcomes Research Initiatives

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Reports Requirement Analysis and Gap Analysis of Colon Cancer Prevention Program: Cancer Screening Application

Reports Requirement Analysis and Gap Analysis

This document provides a detailed analysis of the various report requirements from the Colon Cancer Prevention Program: Cancer Screening Application. While getting into the details of generating the report, simultaneously the developers can identify the gaps in the program with respect to the program requirements.

General

The CRCPP target population is defined as Medical Services Insurance (MSI) registered Nova Scotia Residents between the ages of 50 and 74. A participant is defined as a member of this target population participating in the program. Members of the military, RCMP and inmates are not included in this target population.

PHASE I

Program Operations Reports

A.1. Crude Colon Cancer Incidence rate

$$\text{Rate}=\left(\frac{a_n}{b_n}\right)*100{,}000$$

Var	Definition	Data source
a_n	Total number of new cases diagnosed for the area of interest during that year	Cancer Registry
b_n	Total target population in the area of interest during that year	NS department of finance

Frequency of report: Annual

The number of new cases for the Community Health Board (CHB), county, DHA and province per 100,000 of the target population of that area per year. This number is calculated using the new Colon cancer count as the numerator and population data provided by the NS department of finance as the denominator. The resulting number is multiplied by 100,000 to get the crude Colon cancer incidence rate per 100, 000 population.

A.2. Mapping of the screening population

Mapping of Colon cancer incidence through the screening program

Frequency of map: Annual

Map1: Number of people screened - visualizes the number of people screened through the program from the province

Map2: Number of positive screens- the number people who has positive screens through the screening program

Map3: Number of positive Diagnosis - the number people who are diagnosed with Colon cancer through the screening program

Map4: Place of residence (privacy rules around geo mapping patient data and reverse geo-coding are to be considered)
Map5: Location of diagnostic follow-up with colonoscopy or DCBE
Map6: Location of cancer treatment

General Specs for Reports 3-6

Frequency of report: Variable
The variable one will allow us to get a report for any variable shorter/ longer period if we think it is relevant. For example if we would like to assess the impact of change in information package on participation, so we have the freedom to choose the dates and generate the report.

As we are planning to do repeated screening of the same individual once every two years, biennial reporting seems to be more appropriate. However, we need to consider modifying reporting frequency should there be a material change in the program (e.g. a move to annual screening).
Participant forms are sent out in batches with the FIT kit. (e.g. In January 2010 the forms were sent to Chris, Cathy, Debbie, Tom)
Reporting period is the time interval for which we are querying for the report (January 1, 2010- January 31, 2010)
Participants are those who have returned their FIT sample, which includes samples that had to be rejected from the lab. (In this reporting period we are considering who are all returned from Chris, Cathy, Debbie, Tom batch).

When we are generating report for a time period there should be a gap between the current time and the end period of the report of minimum three months to help ensure completeness of data for the reporting period.
An annual screening rate report we usually wait until all QA functions have been performed on the data and ensure the data is complete. In Gyn, that is usually 3 months after the end of year – but could vary.
We will eventually develop a history so that we will know mean/median time from kit being sent to target population to being received by lab. To receive complete reports at any time for any query, it is good to run the report in a completed cycle of the program.

A.3. FIT kits mailed out Rate by CHB, DHA

The number of FIT kits mailed out by CHB, DHA for the reporting period.

Participation Reports

A.4. Colon Cancer Screening Participation Rate

Number= a_n
Percentage= $\left(\frac{a_n}{b_n - c_n} \right) * 100$

Var	Definition	Data source
a_n	Number of people returning their FIT sample for the defined area for the defined period of time	Lab feed
b_n	Number of FIT Kits sent out for the defined area for the defined period of time	CCASPER
c_n	FIT kits returned (wrong address) for the defined area for the defined period of time	CCASPER

The number and percentage of people participating in the screening program for the CHB, county, DHA and province out of the target population. This count includes all the samples received for analysis, regardless of sample quality. The number of kits returned with wrong address will be excluded from the target population denominator.

Report Template
Sample1

Colon Cancer Prevention Program				
Colon Cancer Screening Participation Rate				
Reporting period: dd/mm/yyyy to dd/mm/yyyy				
	CHB	**County**	**DHA**	**Province**
FIT sample returned				
FIT kit sent out				
FIT kits returned				
Rate				
Percentage				

Colon Cancer Prevention Program																
Colon Cancer Screening Participation Rate																
Reporting period: dd/mm/yyyy to dd/mm/yyyy																
Participation		**CHB***				**County**				**DHA****				**Province**			
		a_n	b_n	c_n	Rate	a_n	b_n	c_n	Rate	a_n	b_n	c_n	Rate	a_n	b_n	c_n	Rate
Total																	
Age																	
50-54																	
55-59																	
60-64																	
65-69																	
70-74																	
Sex																	
Male																	
Age																	
Male	50-54																
	55-59																
	60-64																
	65-69																
	70-74																
Female																	
Age																	
Female	50-54																
	55-59																
	60-64																
	65-69																
	70-74																

Unknown																	
Age																	
Unknown	50-54																
	55-59																
	60-64																
	65-69																
	70-74																
Ethnicity		a_n															
Acadian																	
African Canadian																	
Asian																	
Caucasian																	
First Nations																	
Immigrant- Other																	
Middle Eastern																	

***CHB –** Community Health Board

****DHA –** District Health Authority

A.5. Age-specific Colon Cancer Screening Participation Rate

Number= a_n
Percentage=$\left(\frac{a_n}{b_n - c_n} \right) * 100$

Var	Definition	Data source
a_n	Number of people returning their FIT samples within each age category for the defined area for the defined period	Lab feed
b_n	Number of FIT Kits sent out within each age category for the defined area for the defined period	CCASPER
c_n	FIT kits returned (wrong address) within each age category for the defined area for the defined period	CCASPER

The number and percentage of people participating in the screening program within each age category for the county, DHA and province out of the target population. The following five year age categories are used 50-54, 55-59, 60-64, 65-69 and 70-74.
This count includes all the samples received for analysis, regardless of sample quality. FIT kits with a wrong address will be excluded from the target population denominator.

A.6. Age-specific Colon Cancer Screening Participation Rate by sex

Number= a_n
Percentage=$\left(\frac{a_n}{b_n - c_n} \right) * 100$

Var	Definition	Data source
a_n	Number of people returning their FIT samples within each sex category for the defined area for the defined period	Lab feed
b_n	Number of FIT Kits sent out within each sex category for the defined area for the defined period	CCASPER
c_n	FIT kits returned (wrong address) within each sex category for the defined area for the defined period	CCASPER

The number and percentage of people participating for the screening program under each sex category for each age category for the county, DHA and province out of the target population. Sex categories are male, female and unknown.
This count includes all the samples received for analysis, regardless of sample quality. FIT kits with a wrong address will be excluded from the target population denominator.

A.7. Ethnicity-specific Colon Cancer Screening Participation

Number= a_n

Var	Definition	Data source
a_n	Number of people returning their FIT samples within each ethnicity category for the defined area for the defined period	Lab feed/ CCASPER

The number of people participating for the screening program under each ethnicity category for the county, DHA and province out of the target population. Ethnicity categories are Acadian; African Canadian; Asian; Caucasian; First Nations; Immigrant – Other; Middle Eastern.

This count includes all the samples received for analysis, regardless of sample quality. i.e. it includes the samples that are not suitable for analysis. Here we are capturing the participation of the individual who is sending the sample, irrespective whether it is analyzed or not.

Opt –out Reports

General Specs for Reports 8-10

Frequency of report: Variable

When we are generating report for a time period there should be a gap between the current time and the end period of the report of minimum three months. It depends on how quickly the data makes its way into the registry. Wait times, participation rates, opt out rates etc.should not.

Participant forms are sent out in batches. (e.g. In January 2008 includes Chris, Cathy, Debbie, Tom).The opt-out rate includes only those individuals who returned an opt out form during the period of interest.

Reporting period is the time interval for which we are querying for the report (January 1, 2008- January 31, 2008)

People opting out are the people who are opting out from the sent out batches for the reporting period irrelevant of their opted out date or method.(e.g If Tom opted out in March he is counted as opt out in the reporting period of January 1, 2008 –January 31, 2008 NOT in March reporting period). In this example the percentage of opting out becomes Tom/ (Chris, Cathy, Debbie, Tom) i.e. 1/4

A.8. Colon Cancer Screening Opt-Out Rate

Number= a_n
Percentage=$\left(\frac{a_n}{b_n}\right)*100$

Var	Definition	Data source
a_n	Number of people opting out either through opt out option in the participant form, phone call, or by e-mail during the period of interest for the defined area	CCASPER

b_n	Number of participant form send out for the period of interest for the defined area	CCASPER

The number and percentage of people opting out of screening either through opt out option in the participant form, phone call, or by e-mail for the CHB, county, DHA and province out of the number of people sent participation forms for the period of interest.

A.9. Age-specific Colon Cancer Screening Opt-Out Rate

Number= a_n
Percentage= $\left(\frac{a_n}{b_n}\right)*100$

Var	Definition	Data source
a_n	Number of people opting out either through opt out option in the participant form, phone call, or by e-mail within each age category during the period of interest for the defined area	CCASPER
b_n	Number of participant form send out mail within each age category for the period of interest for the defined area	CCASPER

The number and percentage of people opting out of screening either through opt out option in the participant form, phone call, or by e-mail within each age category for the county, DHA and province out of the number of people sent participation forms for the period of interest. The following five year age categories are used 50-54, 55-59, 60-64, 65-69 and 70-74.

A.10. Age-specific Colon Cancer Screening Opt-Out Rate by sex

Number= a_n
Percentage= $\left(\frac{a_n}{b_n}\right)*100$

Var	Definition	Data source
a_n	Number of people opting out either through opt out option in the participant form, phone call, or by e-mail within each sex category during the period of interest for the defined area	CCASPER
b_n	Number of participant form send out mail within each sex category for the period of interest for the defined area	CCASPER

The number and percentage of people opting out of screening either through opt out option in the participant form, phone call, or by e-mail within each sex category for the county, DHA and province out of the number of people sent participation forms for the period of interest. Sex categories include male, female and unknown.

Mail Reports

A.11. Number of letters sent out for a defined period

Frequency of report: Variable

List out the various **types of letters and consents** (Consent given by the participant to DHA RN at the DHA RN appointment, consent given by the participant to Physician /Colonoscopist before the colonoscopy procedure) sent out and find the number of each type for a defined period

Data Source: CCASPER participant log

A.12. Wrong address Rate

Number= a_n
Percentage=$\left(\frac{a_n}{b_n}\right)*100$

Var	Definition	Data source
a_n	Number of participant form and FIT kit returned due to wrong address for the defined area for the reporting period	CCASPER
b_n	Number of FIT kits send for the defined area for the defined period	CCASPER

Frequency of report: Variable

When we are generating report for a time period there should be a gap between the current time and the end period of the report of minimum three months.

FIT kits are sent out in batches. (e.g In January 2008 includes Chris, Cathy, Debbie, Tom)

Reporting period is the time interval for which we are querying for the report (January 1, 2008- January 31, 2008)

The number of participant forms and FIT kits with wrong addresses out of the total number of participant forms and FIT kits sent out during the period of interest. (e.g. FIT kit sent to Tom was returned in March, that kit is counted as returned kit in the reporting period of January 1, 2008 –January 31, 2008 NOT in March reporting period). In this example the percentage of returned kit becomes ¼.

The number of participant forms and FIT kits returned due to wrong address for the CHB, county, DHA and province for the reporting period

A.13. Reminder Letter Response Rate

Number= a_n
Percentage=$\left(\frac{a_n}{b_n}\right)*100$

Var	Definition	Data source
a_n	Number of FIT samples received from the target population who were sent reminder letters for the	CCASPER

	defined area for the defined period of interest	
b_n	Number of reminder letters sent population for the defined area for the defined period	CCASPER

Frequency of report: Variable
The number and percentage of people participating by sending their FIT sample for the county, DHA and province out of the sent a reminder population during that reporting period
When we are generating report for a time period there should be a gap between the current time and the end period of the report of minimum three months.
Reporting period is the time interval for which we are querying for the report

The number and percentage of people returning their FIT sample following a reminder letter out of the total number of reminder letters sent during the period of interest for CHB, county, DHA, and province.

A.14. Number of Follow-up FIT kits Mailed

Number= a_n

Var	Definition	Data source
a_n	Number of follow-up FIT kits sent out for the defined area for a defined period	CCASPER

Frequency of report: Variable
Reporting period is the time interval for which we are querying for the report
The number of subsequent FIT kits sent out in that reporting period as a result of the spoiled or lost original for the CHB, county, DHA and province.

Worked out example:
FIT kits were sent out in Jan 2008 to Tom Chris, Cathy and Debbie in one batch and Matt, Jeff, Mary and Cheryl in the second batch
We received FIT samples from Tom, Chris, Jeff, in March and Mary and Cathy in April. The sample from Jeff was rejected. We sent out another FIT kit to Jeff in March
Here, we are reporting the number of FIT kits send out as result of the spoiled original for the reporting period in this example January 1, 2008 to January 31, 2008. We are generating the report for January 2008 in May 2008. The number of FIT kits sends out as result of the spoiled original in that reporting period is 1 i.e. kit for Jeff.

Screening Reports

General Specs for Report 15-18
Frequency of report: Variable

When we are generating report for a time period there should be a gap between the current time and the end period of the report of minimum three months.
Reporting period is the time interval for which we are querying for the report

Worked out example:
Participant forms were sent out in Jan 2008 to Tom, Chris, Cathy and Debbie in one batch and Matt, Jeff, Mary and Cheryl in the second batch
We received FIT samples from Tom, Jeff, in March and Cathy in April. The sample from Jeff was rejected.
When we are reporting the number of people screened, out of the target population for the reporting period in this example January 1, 2008 to January 31, 2008. The target population includes Tom, Chris, Cathy, Debbie, Matt, Jeff, Mary and Cheryl. We are generating the report for January 2008 in May 2008. The number of people screened in that reporting period is 2 i.e. Tom and Cathy. The percentage of population screened during the same reporting period is 2/8*100

A.15. Colon Cancer Screening Rate

Number= a_n
Percentage=$\left(\frac{a_n}{b_n}\right)*100$

Var	Definition	Data source
a_n	Number of adequate FIT samples analyzed for the defined area for a defined period	CCASPER
b_n	Target population for the defined area for a defined period	CCASPER

The number and percentage of people screened through the program which is count of and percentage of the sample analyzed for the reporting period for the CHB, county, DHA and province within the participant form sent out population during that reporting period

A.16. Age-specific Colon Cancer Screening Rate

Number= a_n
Percentage=$\left(\frac{a_n}{b_n}\right)*100$

Var	Definition	Data source
a_n	Number FIT sample analyzed within each age category for the defined area for the defined period	CCASPER
b_n	Target population within each age category for the defined area for a defined period	CCASPER

The number and percentage of people screened within each age category through the program which is count of and percentage of the sample analyzed for the reporting period for the county, DHA and province out of the participant form sent out population during that reporting period. Age categories include the five year age category i.e. 50-54, 55-59, 60-64, 65-69 and 70-74.

A.17. Age specific Colon Cancer Screening Rate by sex

Number= a_n
Percentage=$\left(\frac{a_n}{b_n}\right)*100$

Var	Definition	Data source
a_n	Number FIT sample analyzed within each sex category for each age category for the defined area for the defined period	CCASPER
b_n	Target population within each sex category for each age category for the defined area for a defined period	CCASPER

The number and percentage of people screened within each sex category for each age category through the program which is count of and percentage of the sample analyzed for the reporting period for the county, DHA and province out of the participant form sent out population during that reporting period. Sex categories include male, female and unknown.

A.18. Number of Individuals Screening for Colon Cancer by Ethnicity

Number= a_n

Var	Definition	Data source
a_n	Number FIT sample analyzed in that ethnicity category for the defined area for the defined period	CCASPER

The number of people screened within each ethnicity category through the program which is count of and percentage of the sample analyzed for the reporting period for the county, DHA and province out of the participant form sent out population during that reporting period. Ethnicity categories include: Acadian; African Canadian; Asian; Caucasian; First Nations; Immigrant – Other; Middle Eastern.

This count includes all the samples analyzed for the screening of Colon cancer. i.e. it excludes the samples that are not suitable for analysis. Here we are capturing the screening number, so we are deducting the samples that are not good for analysis.

Reports for Fit kits

General Specs for Report 19-21

Frequency of report: Variable

When we are generating report for a time period there should be a gap between the current time and the end period of the report of minimum three months.

Reporting period is the time interval for which we are querying for the report

Worked out example:

FIT kits were sent out in Jan 2008 to Tom Chris, Cathy and Debbie in one batch and Matt, Jeff, Mary and Cheryl in the second batch

We received FIT samples from Tom, Chris, Jeff, in March and Mary and Cathy in April. The sample from Jeff was rejected.
When we are reporting the number of FIT kits not returned, out of the target population for the reporting period in this example January 1, 2008 to January 31, 2008. The target population includes Tom, Chris, Cathy, Debbie, Matt, Jeff, Mary and Cheryl. We are generating the report for January 2008 in May 2008. The number of FIT kits not returned in that reporting period is 3 i.e. Debbie, Matt and Cheryl. The percentage of FIT kits not returned during the same reporting period is 3/8*100

A.19. Number of FIT kits not returned for CHB, county, DHA, and province for a defined period

Number= a_n
Percentage=$\left(\frac{a_n}{b_n}\right)*100$

Var	Definition	Data source
a_n	Number of FIT kits not returned for the defined area for a defined period	CCASPER
b_n	Number of FIT kits send out for the defined area for a defined period	CCASPER

The number and percentage of FIT kits not returned out of the FIT kits sent out for the reporting period for the CHB, county, DHA and province.

A.20. Number of FIT kits not returned by age for CHB, county, DHA, and province for a defined period

Number= a_n
Percentage=$\left(\frac{a_n}{b_n}\right)*100$

Var	Definition	Data source
a_n	Number of FIT kits not returned in that age category for the defined area for the defined period	CCASPER
b_n	Number of FIT kits send out for the defined area for the defined period	CCASPER

The number and percentage of FIT kits not returned under each age category out of the FIT kits sent out for the reporting period for the county, DHA and province. Age categories include the five year age category i.e. 50-54, 55-59, 60-64, 65-69 and 70-74.

A.21. Number of FIT kits not returned by sex for CHB, county, DHA, and province for a defined period

Number= a_n
Percentage=$\left(\frac{a_n}{b_n}\right)*100$

Var	Definition	Data source
a_n	Number FIT kits not returned in within each sex category for the defined area for the defined period	CCASPER
$_{bn}$	Number of FIT kits send out for the defined area for the defined period	CCASPER

The number and percentage of FIT kits not returned under each sex category out of the FIT kits sent out for the reporting period for the county, DHA and province. Sex categories include male, female and unknown.

A.22. Number of participant forms received with FIT kits for a defined period
Frequency of report: Variable
Data Source: CCASPER log

A.23. Number of participant forms received without FIT kit for a defined period
Frequency of report: Variable
Data Source: CCASPER log

A.24. Number of FIT kit received without participant form for a defined period
Frequency of report: Variable
Data Source: CCASPER log

A.25. Number of FIT kits expired as per the FIT kit expiry date at the mail house for the reporting period
Frequency of report: Variable
Find the number of FIT kits expired without sending for the reporting period. We can also find out the percentage of expiry out of the total FIT kits stored/ received for distribution
Note: Recording of FIT kit orders, delivery, in stock, shelf life and expiry dates are not under the scope of the program right now but eventually these parameters will be recorded and then we will be able to track the number of FIT kits expired without sending to the user.

A.26. Number of FIT kits expired which are identified by the lab as per the FIT kit expiry date for the reporting period
Frequency of report: Variable
Find the number of FIT kits expired as per the FIT kit expiry date when the sample was received at the lab for the reporting period.

A.27. Number of FIT kits expired which are identified by the lab as per the sample expiry conditions for the reporting period
Frequency of report: Variable
Find the number of FIT kits expired which are identified by the lab as per the sample expiry conditions**,** when the sample was received at the lab for the reporting period. The sample should reach the lab within 10 days of Day 1 collection.

A.28. Turn Around Time between FIT kit sent and FIT kit returned to Lab

Median TAT = a_n

Var	Definition	Data source
a_n	Median time between the FIT kit sent out from CCNS and FIT kit returned to lab for a defined period	CCASPER
	Quartile of turn around time between FIT kit sent and FIT kit returned to Lab is calculated	

Frequency of report: Quarterly, Variable
The median time between the FIT kit sent and FIT kit returned to lab is calculated for the reporting period

A.29. Turn Around Time between FIT kit received and FIT result reported to CCNS by the processing lab

Median TAT = a_n

Var	Definition	Data source
a_n	Median time between the FIT kit sent out from CCNS and FIT resulted to CCNS for a defined period	CCASPER
	Quartile of turn around time between FIT kit received and FIT result reported to CCNS is calculated	

Frequency of report: Quarterly, Variable
The median time between the FIT kit received and FIT result reported to CCNS is calculated for the reporting period

FIT Test Reports

A.30. Sample Reject Rate by lab
Reasons for rejection

Number= a_n
Percentage= $\left(\frac{a_n}{b_n}\right)*100$

Var	Definition	Data source
a_n	Number FIT kits rejected by lab for the defined area for the defined period	CCASPER
b_n	Number of FIT kits received by that lab for the defined period	CCASPER
Reasons for rejection	List and rank the reasons for rejection in ascending order	CCASPER

Frequency of report: Quarterly, Variable

This report should be generated at least once in 3 months and send to the lab. When we are generating report for a time period there should be a gap between the current time and the end period of the report of minimum three months.
The variable option should be there to generate the report if we would like to evaluate any major changes in program.
The number of FIT kits rejected at the lab due to various reasons (FIT kit expiry date, sample expiry time, bad samples etc. can be some of the reasons). If the reporting period is January1, 2008 to January 31, 2008, The number of FIT kits rejected for that time period and the percentage is calculated out of the total number of FIT kits received in that lab for that reporting time. The report would be based on the date FIT was performed and if not available would default to date received in lab.

A.31. Number of positive FIT results by lab

Number= a_n
Percentage=$\left(\frac{a_n}{b_n}\right)*100$

Var	Definition	Data source
a_n	Number of positive FIT test result by lab for a defined period	CCASPER
b_n	Number of FIT kits analyzed by that lab for the defined period	CCASPER

Frequency of report: Quarterly, Variable
This report should be generated at least once in 3 months and send to the lab. When we are generating report for a time period there should be a gap between the current time and the end period of the report of minimum three months.
The variable option should be there to generate the report if we would like to evaluate any major changes in program.
The number of positive FIT test result for the reporting period. If the reporting period is January1, 2008 to January 31, 2008 then it is the number of positive FIT result for that time period and the percentage is calculated out of the total number of FIT kits analyzed in that lab for that reporting period.

A.32. Number of negative FIT results by lab

Number= a_n
Percentage=$\left(\frac{a_n}{b_n}\right)*100$

Var	Definition	Data source
a_n	Number of negative FIT test result by lab for a defined period	CCASPER
b_n	Number of FIT kits analyzed by that lab for the defined period	CCASPER

Frequency of report: Quarterly, Variable
This report should be generated at least once in 3 months and send to the lab. When we are generating report for a time period there should be a gap between the current time and the end period of the report of minimum three months.
The variable option should be there to generate the report if we would like to evaluate any major changes in program.
The number of negative FIT test result for the reporting period. If the reporting period is January1, 2008 to March 31, 2008 then it is the number of negative FIT result for that time period and the percentage is calculated out of the total number of FIT kits analyzed in that lab for from January 1, 2008 to March 31 2008.

Call Logs

A.33. Number of process calls versus clinical calls for a defined period
Frequency of report: Variable
Out of total calls received find out the number of process calls and clinical calls by the type of calls for defined period of time
Data Source: CCASPER contact log

A.34. Reasons of calls for a defined period
Frequency of report: Variable
List the various reasons we are providing and find the number of times each reason is chosen by the user/ call attendee for defined period
Data Source: CCASPER contact log

A.35. Call resolution time by call type for a defined period
Frequency of report: Variable
List out the various types of calls and calculate the median length of call for each type for a defined period.
Data Source: CCASPER

A.36. Number of open calls for a defined period
Frequency of report: Variable
Data Source: CCASPER

B. PHASE II

Wait Time Reports

B.1. DHA RN Wait time

DHA RN Wait time = Median of $(a_n - b_n)$

Var	Definition	Data source
a_n	DHA RN appointment date of one person	CCASPER
b_n	Positive test result date of that person	CCASPER
	Quartiles of wait time is calculated	

Frequency of report: Quarterly, Variable
This report should be generated at least once in 3 months and sent to the DHA RN.
The variable option should be there to generate the report if we would like to evaluate any major changes in program. When we are generating report for a time period there should be a gap between the current time and the end period of the report of minimum three months.
The wait time to get an appointment with DHA RN once FIT test result is positive. The number of days between the positive FIT result and DHA RN appointment is calculated for each patient and median and quartiles of the number of days for all patients who got appointment for the reporting period is calculated.

Cancellation can occur from the patient side and healthcare provider side.

B.2. Colonoscopy Appointment Wait Time

Colonoscopy Appointment Wait time = Median of $(a_n - b_n)$

Var	Definition	Data source
a_n	Colonoscopy procedure date of one person	CORI and CCASPER
b_n	Appointment request date for that person	CCASPER
	Quartiles of wait time is calculated	

Frequency of report: Quarterly, Variable
This report should be generated at least once in 3 months and send to the clinic. When we are generating report for a time period there should be a gap between the current time and the end period of the report of minimum three months.
The variable option should be there to generate the report if we would like to evaluate any major changes in program.
It is median wait time to get an appointment for colonoscopy once appointment request has send out. The number of days between appointment request and colonoscopy appointment is calculated for each patient and median of the number of days for all patients who got appointment for the reporting period is calculated.

B.3. Colonoscopy Procedure Wait Time

Colonoscopy Procedure Wait time =	Median of $(a_n - b_n)$

Var	Definition	Data source
a_n	Colonoscopy procedure date of one person	CORI and CCASPER
b_n	Date on which the CCNS was informed that participant has a positive FIT test result	CCASPER
	Quartiles of wait time is calculated	

Frequency of report: Quarterly, Variable
This report should be generated at least once in 3 months and send to the clinic. When we are generating report for a time period there should be a gap between the current time and the end period of the report of minimum three months.
The variable option should be there to generate the report if we would like to evaluate any major changes in program.
It is median wait time to do the colonoscopy procedure once CCNS has been informed that the participant is having a positive FIT test result. The number of days between procedure date and positive FIT test result is calculated for each patient and median of the number of days for all patients who got appointment for the reporting period is calculated

B.4. Program Colonoscopist Wait Time

Program Colonoscopist Wait time =	Median of $(a_n - b_n)$

Var	Definition	Data source
a_n	Colonoscopy procedure date of one person for that Program Colonoscopist	CORI and CCASPER
b_n	Appointment referral date of that person for that Program Colonoscopist	CCASPER
	Quartiles of wait time is calculated	

Frequency of report: Quarterly, Variable
This report should be generated at least once in 3 months and sent to the DHA program manager, Program Colonoscopist. When we are generating report for a time period there should be a gap between the current time and the end period of the report of minimum three months. The variable option should be there to generate the report if we would like to evaluate any major changes in program.
It is median wait time to get an appointment for colonoscopy once appointment has been made by the DHA screening RN. The number of days between booking and actual colonoscopy appointment is calculated for each patient from the screening program for that Program Colonoscopist and median of the number of days for all patients who got appointment for that Program Colonoscopist for the reporting period is calculated.

Colonoscopy Procedure Participation Reports

B.5. Number of participants deemed fit/ healthy for colonoscopy

Number= a_n
Percentage=$\left(\frac{a_n}{b_n}\right)*100$

Var	Definition	Data source
a_n	Number of participants with positive FIT result who is deemed fit / healthy to undergo colonoscopy as assessed by the DHA RN for a defined period	CCASPER
bn	Total number of participants with positive FIT result who are assessed by the DHA RN for a defined period	CCASPER

The number and percentage of participants who are deemed to fit / healthy for colonoscopy

B.6. Number of participants deemed not fit/ healthy for colonoscopy

Number= a_n
Percentage=$\left(\frac{a_n}{b_n}\right)*100$

Var	Definition	Data source
a_n	Number of participants with positive FIT result who is not fit / healthy to undergo colonoscopy as assessed by the DHA RN for a defined period	CCASPER
bn	Total number of participants with positive FIT result who are assessed by the DHA RN for a defined period	CCASPER

The number and percentage of participants who are deemed to not fit / healthy for colonoscopy

B.7. Number of fit/ healthy participants who have consented for colonoscopy

Number= a_n
Percentage=$\left(\frac{a_n}{b_n}\right)*100$

Var	Definition	Data source
a_n	Number of participants with positive FIT result who is fit / healthy and have consented to do colonoscopy for a defined period	CCASPER

b_n	Total number of participants with positive FIT result who are assessed by the DHA RN for a defined period	CCASPER

The number and percentage of participants who are deemed to not fit / healthy for colonoscopy

B.8. Number of positive FIT test getting colonoscopy procedure within 6 weeks and three months

Number= a_n
Percentage= $\left(\frac{a_n}{b_n}\right)*100$

Var	Definition	Data source
a_n	Number of participants with positive FIT test getting colonoscopy procedure done within three months of positive test result	CORI/ CCASPER
b_n	Total number of positive FIT test result during that reporting period	CCASPER

Frequency of report: Quarterly
This report should be generated once in four months and send to DHA RN and colonoscopy unit manager. When we are generating report for a time period there should be a gap between the current time and the end period of the report of minimum three months.
The number of participants with positive FIT test getting colonoscopy procedure within three months from the date the FIT test was recorded as positive.

B.9. Number of individuals with negative FIT result who have a subsequent positive FIT within 30 months by lab for a defined period

Number= a_n
Percentage= $\left(\frac{a_n}{b_n}\right)*100$

Var	Definition	Data source
a_n	Number of individuals with negative FIT result who have a subsequent positive FIT within 30 months by lab for a defined period	CORI/ CCASPER
b_n	Number of negative FIT cases by that lab from that population for the defined period	CCASPER

Frequency of report: Biennial
This report should be generated once in two years. When we are generating report for a time period there should be a gap between the current time and the end period of the report of minimum three months.

The number of negative FIT test result which has become positive within 30 months for the reporting period for that lab. If the reporting period is for January1, 2008 to January 31, 2008, then it is the number of negative FIT result which has become positive in the next cycle i.e. after 30 months and the percentage is calculated out of the total number of negative FIT results for that lab. The report is generated in October 2010.

Worked out example:
Out of the 10 samples we analyzed in Jan 2008, we received 8 negative results for January 2008. These 8 people are due for the screening in January 2010. We send out the invitation/ FIT kit in Jan 2010. We analyze 6 samples out of this 8. One of the result turned to be positive. This is the number we are calculating here for the month of January for this report and the percentage is 1/6 for that reporting period

Quality Indicators

B.10. Aggregate Cecal intubation rate of Program Colonoscopists by DHA and province

Number= a_n
Rate=$\left(\frac{a_n}{b_n} \right)$

Var	Definition	Data source
a_n	Number of cecum intubation from all sites within the defined area within a defined period	CORI
b_n	Number of colonoscopy done from all sites within the defined area within the reporting period	CORI

Frequency of report: Annual
This report should be generated once in yearly and send to the Program Colonoscopist and site. When we are generating report for a time period there should be a gap between the current time and the end period of the report of minimum three months.
The number of cecum visualization from all sites within defined area during the reporting period.

B.11. Cecal intubation rate by Program Colonoscopist

Number= a_n
Rate=$\left(\frac{a_n}{b_n} \right)$

Var	Definition	Data source
a_n	Number of cecum intubation from all colonoscopies by Program Colonoscopist within a defined period	CORI
b_n	All colonoscopies done from all sites by that Program Colonoscopist within the reporting period	CORI

Frequency of report: Annual
This report should be generated once in yearly and send to the colonscopist and site. When we are generating report for a time period there should be a gap between the current time and the end period of the report of minimum three months.
The number of cecum visualization from all sites by colonscopist during the reporting period.

Report Template Sample 1

Colon Cancer Prevention Program			
Cecal intubation Rate			
Reporting period: dd/mm/yyyy to dd/mm/yyyy			
	Program Colonoscopist	**DHA**	**Province**
Number of cecum intubation from all sites			
Number of colonoscopy done from all sites			
Rate			

Report Template Sample 2

Annual reports can be sent in a letter format with Program Colonoscopist's rate and the DHA and provincial rate.

Report Template Sample 3

Colon Cancer Prevention Program			
Cecal intubation Rate			
Reporting period: dd/mm/yyyy to dd/mm/yyyy			
	Number of cecum intubation from all sites	**Number of colonoscopy done from all sites**	**Rate**
Program Colonoscopist 1			
Program Colonoscopist 2			
Program Colonoscopist 3			
Program Colonoscopist 4			
DHA			
Province			

This report is generated for the program evaluation and for the Medical experts of the program

B.12. Bowel Preparation Quality by Program Colonoscopist

Number= a_n
Rate= $\left(\frac{a_n / c_n / d_n / e_n}{b_n} \right)$

Var	Definition	Data source
a_n	Number of **excellent** bowel preparation for colonoscopy from all sites by Program Colonoscopist within a defined period	CORI
c_n	Number of **good** bowel preparation for colonoscopy from all sites by Program Colonoscopist within a defined period	CORI
d_n	Number of **fair** bowel preparation for colonoscopy from all sites by Program Colonoscopist within a defined period	CORI
e_n	Number of **poor** bowel preparation for colonoscopy from all sites by Program Colonoscopist within a defined period	CORI
b_n	Number of colonoscopy done from all sites by that Program Colonoscopist within the reporting period	CORI

B.13. Bowel Preparation Quality by DHA, Province

Number= a_n
Rate= $\left(\frac{a_n / c_n / d_n / e_n}{b_n} \right)$

Var	Definition	Data source
a_n	Number of **excellent** bowel preparation for colonoscopy from all sites within a defined period	CORI
c_n	Number of **good** bowel preparation for colonoscopy from all sites within a defined period	CORI
d_n	Number of **fair** bowel preparation for colonoscopy from all sites within a defined period	CORI
$/e_n$	Number of **poor** bowel preparation for colonoscopy from all sites within a defined period	CORI
b_n	Number of colonoscopy done from all sites within the reporting period	CORI

Report Template Sample1

Colon Cancer Prevention Program								
Bowel Preparation Rate								
Reporting period: dd/mm/yyyy to dd/mm/yyyy								
	Excellent		**Good**		**Fair**		**Poor**	
	No.	**Rate**	**No.**	**Rate**	**No.**	**Rate**	**No.**	**Rate**
Program Colonoscopist								
DHA								
Province								

B.14. Colonoscope Withdrawal Time by Program Colonoscopist

Rate= Median of a_n

Var	Definition	Data source
a_n	Time taken to withdraw the scope after cecum intubation by Program Colonoscopist within a defined period	CORI

Complications Reports

General Specifications for Report 49-59

The Gyn program gets the hysterectomy data from DAD (Discharge abstract database), same way we can get the bowel perforation incident report from the individual file and matching the Health Card number we can assure whether that individual has gone through the screening program. But certain privacy issues have to be sorted out with health department to receive the data.
Frequency of report: Annual
This report should be generated yearly and send to the Colonoscopist and/ or site as appropriate. When we are generating report for a time period there should be a gap between the current time and the end period of the report of minimum three months.

B.15. Bowel perforation rate by Program Colonoscopist

Number= a_n

$$\text{Rate}=\left(\frac{a_n}{b_n}\right)$$

Var	Definition	Data source
a_n	Number of bowel perforation occurred during or as a result of colonoscopy from all sites by Program Colonoscopist within a defined period	CORI, DAD
b_n	Number of colonoscopy done from all sites by that Program Colonoscopist within the reporting period	CORI

The number and rate of bowel perforations occurring from all colonoscopies done by Program Colonoscopist during the reporting period.

B.16. Bowel perforation rate of Program Colonoscopists by DHA, province

Number= a_n
Rate=$\left(\frac{a_n}{b_n} \right)$

Var	Definition	Data source
a_n	Number of bowel perforation occurred during or as a result of colonoscopy done by Program Colonoscopists from all sites within the defined area within a defined period	CORI, DAD
b_n	Number of colonoscopy done by Program Colonoscopists from all sites within the defined area within the reporting period	CORI

The number of bowel perforations occurring from all sites by Program Colonoscopists during the reporting period.

B.17. Bowel perforation rate out of program Colonoscopists by DHA, province

Number= a_n
Rate=$\left(\frac{a_n}{b_n} \right)$

Var	Definition	Data source
a_n	Number of bowel perforation occurred during or as a result of colonoscopy done by out of program Colonoscopists from all sites within the defined area within a defined period	DAD
b_n	Number of colonoscopy done by out of program Colonoscopists from all sites within the defined area within the reporting period	DAD

The number of bowel perforations occurring by out of program Colonoscopist from all sites during the reporting period

B.18. Bowel perforation rate by DHA, province

Number= a_n
Rate=$\left(\frac{a_n}{b_n} \right)$

Var	Definition	Data source
a_n	Number of bowel perforation occurred during or as a result of colonoscopy done by Program Colonoscopists and out of program colonscopist from all sites within the defined area within a defined period	DAD
b_n	Number of colonoscopy done by Program and out of program Colonoscopists from all sites within the defined area within the reporting period	DAD

The number of bowel perforations occurring from all sites by Program and out of program Colonoscopists during the reporting period.

B.19. Hemorrhage rate by Program Colonoscopist

Number= a_n
Rate= $\left(\frac{a_n}{b_n} \right)$

Var	Definition	Data source
a_n	Number of Hemorrhage occurred during or as a result of colonoscopy from all sites by Program Colonoscopist within a defined period	CORI, DAD
b_n	Number of colonoscopy done from all sites by that Program Colonoscopist within the reporting period	CORI

The number and rate of hemorrhage occurring from all colonoscopies done by Program Colonoscopist during the reporting period.

B.20. Hemorrhage rate of program Colonoscopists by DHA, province

Number= a_n
Rate= $\left(\frac{a_n}{b_n} \right)$

Var	Definition	Data source
a_n	Number of Hemorrhage occurred during or as a result of colonoscopy done by Program Colonoscopists from all sites within the defined area within a defined period	DAD
b_n	Number of colonoscopy done by Program Colonoscopists from all sites within the defined area within the reporting period	CORI

The number of hemorrhage occurring from all sites by Program Colonoscopists during the reporting period.

B.21. Hemorrhage rate by out of program Colonoscopists DHA, province

Number= a_n
Rate=$\left(\frac{a_n}{b_n} \right)$

Var	Definition	Data source
a_n	Number of Hemorrhage occurred during or as a result of colonoscopy done by out of program Colonoscopists from all sites within the defined area within a defined period	DAD
b_n	Number of colonoscopy done by out of program Colonoscopists from all sites within the defined area within the reporting period	DAD

The number of hemorrhage occurring from all sites by out of program Colonoscopist during the reporting period

B.22. Hemorrhage rate by DHA, province

Number= a_n
Rate=$\left(\frac{a_n}{b_n} \right)$

Var	Definition	Data source
a_n	Number of Hemorrhage occurred during or as a result of colonoscopy done by Program Colonoscopists and out of program colonoscopists from all sites within the defined area within a defined period	DAD
b_n	Number of colonoscopy done by Program and out of program Colonoscopists from all sites within the defined area within the reporting period	CORI

The number of hemorrhage occurring from all sites by Program and out of program Colonoscopists during the reporting period.

B.23. Other complications rate by Program Colonoscopist

Number= a_n
Rate=$\left(\frac{a_n}{b_n} \right)$

Var	Definition	Data source
a_n	Number of Other complications occurred during or as a	CORI, DAD

	result of colonoscopy from all sites by Program Colonoscopist within a defined period	
b_n	Number of colonoscopy done from all sites by that Program Colonoscopist within the reporting period	CORI

The number and rate of other complications occurring from all colonoscopies done by Program Colonoscopist during the reporting period.

B.24. Other complications rate of Program Colonoscopists by DHA, province

Number= a_n
Rate= $\left(\frac{a_n}{b_n} \right)$

Var	Definition	Data source
a_n	Number of other complications occurred during or as a result of colonoscopy done by Program Colonoscopists from all sites within the defined area within a defined period	CORI, DAD
b_n	Number of colonoscopy done by Program Colonoscopists from all sites within the defined area within the reporting period	CORI

The number of other complications occurring from all sites by Program Colonoscopists during the reporting period.

B.25. Other complications rate by out of program Colonoscopists by DHA, province

Number= a_n
Rate= $\left(\frac{a_n}{b_n} \right)$

Var	Definition	Data source
a_n	Number of Other complications occurred during or as a result of colonoscopy done by out of program Colonoscopists from all sites within the defined area within a defined period	DAD
b_n	Number of colonoscopy done by out of program Colonoscopists from all sites within the defined area within the reporting period	DAD

The number of other complications by out of program Colonoscopists occurring from all sites during the reporting period

B.26. Other complications rate by DHA, province

Number= a_n
Rate= $\left(\frac{a_n}{b_n} \right)$

Var	Definition	Data source
a_n	Number of other complications occurred during or as a result of colonoscopy done by Program and out of program Colonoscopists from all sites within the defined area within a defined period	CORI, DAD
b_n	Number of colonoscopy done by Program and out of program Colonoscopists from all sites within the defined area within the reporting period	CORI

The number of other complications occurring from all sites by Program and out of program Colonoscopists during the reporting period.

B.27. Complications rate by Program Colonoscopist

Number= a_n
Rate= $\left(\frac{a_n}{b_n} \right)$

Var	Definition	Data source
a_n	Number of any complications occurred during or as a result of colonoscopy from all sites by Program Colonoscopist within a defined period	CORI, DAD
b_n	Number of colonoscopy done from all sites by that Program Colonoscopist within the reporting period	CORI

The number any complications (bowel perforation, hemorrhage, or any other complications) occurring from all colonoscopies done by Program Colonoscopist during the reporting period.

B.28. Complications rate of Program Colonoscopists by DHA, province

Number= a_n
Rate= $\left(\frac{a_n}{b_n} \right)$

Var	Definition	Data source
a_n	Number of any complications occurred during or as a result of colonoscopy done by Program	CORI, DAD

	Colonoscopists from all sites within the defined area within a defined period	
b_n	Number of colonoscopy done by Program Colonoscopists from all sites within the defined area within the reporting period	CORI

The number of any complications (bowel perforation, hemorrhage, or any other complications) occurring from all sites by Program Colonoscopists during the reporting period.

B.29. Complications rate by out of program Colonoscopists by DHA, province

Number= a_n
Rate=$\left(\frac{a_n}{b_n} \right)$

Var	Definition	Data source
a_n	Number of any complications occurred during or as a result of colonoscopy done by out of program Colonoscopists from all sites within the defined area within a defined period	DAD
b_n	Number of colonoscopy done by out of program Colonoscopists from all sites within the defined area within the reporting period	DAD

The number of any complications (bowel perforation, hemorrhage, or any other complications) by out of program Colonoscopists occurring from all sites during the reporting period

B.30. Complications rate by DHA, province

Number= a_n
Rate=$\left(\frac{a_n}{b_n} \right)$

Var	Definition	Data source
a_n	Number of any complications occurred during or as a result of colonoscopy done by Program and out of program Colonoscopists from all sites within the defined area within a defined period	CORI, DAD
b_n	Number of colonoscopy done by Program and out of program Colonoscopists from all sites within the defined area within the reporting period	CORI

The number of any complications (bowel perforation, hemorrhage, or any other complications) occurring from all sites by Program and out of program Colonoscopists during the reporting period.

B.31. Death rate by Program Colonoscopist within a defined period

Number= a_n
Rate= $\left(\frac{a_n}{b_n} \right)$

Var	Definition	Data source
a_n	Number of death occurred during or as a result of colonoscopy from all sites by Program Colonoscopist within a defined period	Vital Stat, CORI
b_n	Number of colonoscopy done from all sites by that Program Colonoscopist within the reporting period	CORI

The number of death occurring from all sites by Colonoscopist during the reporting period.

B.32. Death rate of program Colonoscopists by DHA, province

Number= a_n
Rate= $\left(\frac{a_n}{b_n} \right)$

Var	Definition	Data source
a_n	Number of death occurred during or as a result of colonoscopy done by Program Colonoscopists from all sites within the defined area within a defined period	DAD
b_n	Number of colonoscopy done by Program Colonoscopists from all sites within the defined area within the reporting period	CORI

The number of death occurring from all sites by Program Colonoscopists during the reporting period.

B.33. Death rate by out of program Colonoscopist within a defined period by DHA and province

Number= a_n
Rate= $\left(\frac{a_n}{b_n} \right)$

Var	Definition	Data source
a_n	Number of death occurred during or as a result of colonoscopy from all sites by out of program Colonoscopist within a defined period	Vital Stat, DAD

b_n	Number of colonoscopy done by out of program Colonoscopists from all sites within the defined area within the reporting period	DAD

The number of death occurring from all sites by out of program Colonoscopist during the reporting period.

B.34. Death rate by DHA and province

Number= a_n
Rate=$\left(\frac{a_n}{b_n} \right)$

Var	Definition	Data source
a_n	Number of death occurred during or as a result of colonoscopy from all sites by Program and out of program Colonoscopist within a defined period	Vital Stat, DAD
b_n	Number of colonoscopy done by program and out of program Colonoscopists from all sites within the defined area within the reporting period	DAD

The number of death occurring from all sites due to colonoscopy during the reporting period.

Colon Cancer Prevention Program										
Complications Rate										
Reporting period: dd/mm/yyyy to dd/mm/yyyy										
	Bowel Perforation		Hemorrhage		Other complications		Complications (aggregate)		Death	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Program Colonoscopist										
1										
2										
3										
4										
All Program Colonoscopists										
Out of program colonoscopists										
All Colonoscopies										
DHA										
1										
2										
3										
4										
5										
7										
8										
9										
Province										

B.35. Adenoma Detection Rate by Program Colonoscopist

Number= a_n
Rate=$\left(\frac{a_n}{b_n} \right)$

Var	Definition	Data source
a_n	Number of adenoma detected during colonoscopy from all sites by Program Colonoscopist within a defined period	CORI
b_n	Number of colonoscopy done from all sites by that Program Colonoscopist within the reporting period	CORI

Frequency of report: Annual

This report should be generated yearly and send to the Colonoscopist and site. When we are generating report for a time period there should be a gap between the current time and the end period of the report of minimum three months.

The number of adenoma detected from all sites by Program Colonoscopist during the reporting period.

B.36. Adenoma Detection Rate by DHA and Province

Number= a_n
Rate=$\left(\frac{a_n}{b_n} \right)$

Var	Definition	Data source
a_n	Number of adenoma detected during colonoscopy from all sites within the defined area within a defined period	CORI
b_n	Number of colonoscopy done from all sites by within the defined area within the reporting period	CORI

Frequency of report: Annual

This report should be generated yearly and send to the colonscopist and / or site. When we are generating report for a time period there should be a gap between the current time and the end period of the report of minimum three months.

The number of adenoma detected from all sites during the reporting period.

B.37. Colon Cancer Detection rate by Program Colonoscopist

Number= a_n
Rate=$\left(\frac{a_n}{b_n} \right)$

Var	Definition	Data source
a_n	Number of cancer detected during colonoscopy from all sites by Program Colonoscopist within a defined period	CORI

b_n	Number of colonoscopy done from all sites by that Program Colonoscopist within the reporting period	CORI

Frequency of report: Annual

The number of cancer detected by the Program Colonoscopist.

B.38. Number of confirmed cases of Colon cancer out of positive FIT test for a defined period

Number of confirmed cases of Colon cancer out of positive FIT test for a defined period	Number of participants with screen detected invasive Colon cancer, advanced adenoma within the number of participants with positive FIT referred for colonoscopy.
Percentage of confirmed cases of Colon cancer out of positive FIT test for a defined period	(Number of participants with screen detected invasive Colon cancer, advanced adenoma / the number of participants with positive FIT referred for colonoscopy)* 100.

Note:

Regarding Erika's request on comparing the above report with all the identified cases of Colon cancer in NS, it is possible to do that. Janice and I had a discussion with Ms. Karen Starrat on this indicator. Right now they have a gap in the data, Cancer registry will eventually capture the data by the stage of the disease and we could eventually do the comparison whether these people have gone through the screening program and identified at what stage of the disease.

B.39. Number of cases that are not Colon cancer out of positive FIT test for a defined period

Percentage of cases that are not Colon cancer out of positive FIT test for a defined period

Percentage of cases that are not Colon cancer within the target population for a defined period

Number of cases that are not Colon cancer out of positive FIT test result for a defined period (A)	The number should be come from the institution after completing all the investigation of one patient
Percentage of cases that are not Colon cancer out of positive FIT test result for a defined period (B)	B = (A / Number of positive FIT test result for the defined period)*100
Percentage of cases that are not Colon cancer out of target population for a defined period (C)	C = (A/ target population for that defined period)*100

B.40. Number of cases that are diagnosed with Colon cancer in the target population who does not have any familial connection for a defined period

Identify the non risk population and do the analysis from that population

Number of cases that are diagnosed with Colon cancer through the screening program population for a defined period (A)	The number should be come from the institution after completing all the investigation of one patient
Percentage of cases that are detected early with Colon cancer out of non-risk population for a defined period (B)	B = (A / target population who do not have familial connection for that defined period)*100

B.41. Billing Report for institutional per case funding

There is a batch processing every night to retrieve reports regarding the colonoscopies completed. It is in the scope of the CORI program to make sure that all the required data fields should be made as mandatory fields for signing off by the Program Colonoscopist. The batch processing will generate four different categories

Colonoscopy not signed off	Payment is not due
Colonoscopy signed off and no pathology request created	Payment is due
Colonoscopy signed off, pathology request created, but no pathology data entered	Payment is not due
Colonoscopy signed off, pathology request created, and pathology data is entered	Payment is due

Appendix II
Requirements Traceability Matrix

Requirements Traceability Matrix			Date Modified	13/01/2009				
CCASPER Phase 1			CRCPP					
Tech Lead: Todd Wilson			SME: Janice Rhodes					
QA Lead: Shamita			Target Implementation Date:		02/03/09			
BR#	Category/Functional Activity	Requirement Description	Req Doc Ref	Design Doc Ref	Code Module Ref	Test Case Ref No.	UAT Validation	Comments
1	DB Batch	Determine screening population	2.1.0.0 1)			20. 1. Step 4		
2	DB Batch	MSI Population data feed	2.1.0.0 2)					
3	DB Batch	Focus population by DHA	2.1.0.0 3)			20. 1. Step 4		
4	Participant Maintenance	Participant Status and information source	2.1.0.0 4)	6, 7		20. 1. Step 3		
5	Participant Maintenance	Participant Opt Out/In	2.1.0.0 5)	6, 7		20. 2.		
6	Participant Maintenance	Pause Participant Events	2.1.0.0 6)	6, 7				
7	Participant Maintenance	Participant Other Name	2.1.0.0 7)	6, 7		3		
8	Participant Maintenance	Participant Mailing Address	2.1.0.0 8)	6, 7		5		
9	Participant Maintenance	Participant Phone	2.1.0.0 8)	6, 7		6		
10	Participant Maintenance	Participant Postal Code Default	2.1.0.0 8)	6, 7				
11	Participant Maintenance	Participant Address History	2.1.0.0 9)	6, 7		5		
12	Participant Maintenance	Participant Home Address	2.1.0.0 10)	6, 7		5		
13	Participant Maintenance	Participant Modified Date	2.1.0.0 11)	6, 7		3 Step 34		
14	Participant Maintenance	Participant Form	2.1.0.0 12)	6, 7, 8, 9				
15	Participant Maintenance	Participant Ethnicity	2.1.0.0 12)	6, 7				
16	Participant Maintenance	Participant future contact id	2.1.0.0 13)	6, 7				
17	Participant Maintenance	Participant PCP	2.1.0.0 15)	6, 7		7		
18	Participant Maintenance	Participant PCP History	2.1.0.0 15)	6, 7		7		
19	Participant Maintenance	Participant Age	2.1.0.0 16)	6, 7				
20	DB Batch	Risk factors event flow	2.1.0.0 14)					
21	DB Batch	Invitation volume control	2.1.0.0 17)					
22	Program Maintenance	Invitation volume control	2.1.0.0 17)	??				
23	DB Batch	Population control	2.1.0.0 17)			20.1		
24	Program Maintenance	Population control	2.1.0.0 17)	??				
25	DB Batch	Send Invitation Letter	2.1.0.0 14)			20.1		
26	DB Batch	Send Invitation Letter	2.1.0.0 18)			20.1		
27	DB Batch	Send Participant Form	2.1.0.0 19)			20.3		
28	DB Batch	Send FIT test	2.1.0.0 19)			20.3		
29	DB Batch	FIT / Reminder Response Duration	2.1.0.0 21)			20.7		
30	DB Batch	Send FIT Reminder	2.1.0.0 20)			20.6		
31	DB Batch	Send FIT test	2.1.0.0 14)			20.3		
32	Participant Maintenance	Participant email	2.1.0.0 22)	6, 7		3 step 12, 28		
33	DB Batch	Return Mail data feed	2.1.0.0 20)					
34	DB Batch	Mail Address Validation	2.1.0.0 17)					
35	DB Batch	Resend FIT	2.1.0.0 ..)					

Appendix II
Requirements Traceability Matrix

36	REMOVED TW 2009-01-19	Monitor Mail	2.1.0.0 ..)	??				
37	DB Batch	Negative FIT result to Part	2.1.0.1 11)					
38	DB Batch	Negative FIT result to PCP	2.1.0.1 11)					
39	Mail House	Russell House	2.1.0.1 1)					
40	Mail House	Weekly Mail	2.1.0.1 2)					
41	DB Batch	Mailing Lists to Mail House	2.1.0.1 3)					
42	DB Batch	Send FIT Reminder	2.1.0.1 6)			20.6		
43	Mail House	Return Address to CRCPP	2.1.0.1 8)					
44	DB Batch	Resend FIT	2.1.0.1 9)					
45	DB Batch	Send Information Letter for resend FIT	2.1.0.1 9)					
46	REMOVED TW 2009-01-19	Monitor Result Letter to Participant and PCP	2.1.0.1 10)	??				
47	Mail House	Mail QA audit	2.1.0.1 12)					
48	Mail House	First Class Mail	2.1.0.1 13)					
49	Mail House	Canada Post Rejected	2.1.0.1 13)					
50	DB Batch	E-load FIT Results	2.1.0.2 3)					
51	Load FIT Results	Manual Entry FIT Results	2.1.0.2 2)	6, 7, 8, 9				
52	Lab	Meditech Data feed	2.1.0.2 3)					
53	DB Batch	Return to population	2.1.0.2 4)					
54	Participant Maintenance	DHARN Link +FIT	2.1.0.2 5)	6, 7				
55	Fit Topic	Processing Lab ID history	2.1.0.2 7)	6, 7, 8, 9		10		
56	Fit Topic	Date of test history	2.1.0.2 7)	6, 7, 8, 9		10		
57	Fit Topic	Test received in lab history	2.1.0.2 7)	6, 7, 8, 9		10		
58	Fit Topic	Test result	2.1.0.2 7)	6, 7, 8, 9		10		
59	Fit Topic	Quality of test	2.1.0.2 7)	6, 7, 8, 9		10		
60	Fit Topic	date of test resulted	2.1.0.2 7)	6, 7, 8, 9		10		
61	Fit Topic	Accession number	2.1.0.2 7)	6, 7, 8, 9		10		
62	Fit Topic	Date of test result entry	2.1.0.2 8)	6, 7, 8, 9		10		
63	Fit Topic	Who entered the test result?	2.1.0.2 8)	6, 7, 8, 9				
64	REMOVED TW 2009-01-19	Postal code for FIT result	2.1.0.2 9)					
65	Fit Topic	FIT test expiry date	2.1.0.2 10)	6, 7, 8, 9		10		
66	Lab	Returned participant form	2.1.0.2 11)	12		11		
67	Lab	Returned Fit test	2.1.0.2 11)	12		11		
68	REMOVED TW 2009-01-19	Project manager- leadership	2.1.0.3					
69	QEII	Development and maintenance of CRCPP d	2.1.0.3 1)					
70	PM	Screening access / help line for PM	2.1.0.3 1)					
71	PM	Access to participant form for updates for PM	2.1.0.3 2)	6, 7				
72	Participant Event Log	Custom mail instances	2.1.0.3 3)	6, 7				
73	DB Batch	Custom mail instances	2.1.0.3 3)					
74	PM	Workflow monitor for PM to track outstandin	2.1.0.3 4)	??				
75	PM	Refer participants with clinical questions to PCP or telehealth	2.1.0.3 5)	??				
76	PM	Refer participants with positive test to DHAR	2.1.0.3 6)	??				
77	PM	work flow note to PM for kits received withou	2.1.0.3 7)	??				

Appendix II
Requirements Traceability Matrix

78	DHARN Link	RN link between screening program and the CRCPP participants with an abnormal FIT result	2.1.0.4 1)	6, 7				
79	PM	Notification to DHARN of individuals with ab	2.1.0.4 2)	??				
80	DHARN Assesment Topic	Access appropriate forms in database to ent	2.1.0.4 3)	6, 7, 8, 9				Bernie to co
81	DHARN Assesment Topic	Participant Health Status form	2.1.0.4 3)	6, 7, 8, 9				
82	CORI	Link from CCASPER to CORI to populate ap	2.1.0.4 3)					
83	DHARN Assesment Topic	Access appropriate forms in database to enter patient health status	2.1.0.4 3)	6, 7, 8, 9				
84	DHARN Assesment Topic	Consent form to CCASPER	2.1.0.4 4)	6, 7, 8, 9				
85	Participant Event Log	Opt out for colonoscopy to CCASPER	2.1.0.4 4)	6, 7				
86	DHARN Assesment Topic	Opt out for colonoscopy to CCASPER	2.1.0.4 4)	6, 7, 8, 9				
87	DHARN Assesment Topic	Date of colonoscopy appointment	2.1.0.4 5)	6, 7, 8, 9				
88	CCASPER Work Flow	Workflow maintenance list for abnormal FIT	2.1.0.4 6)	??				Janice to de
89	CCASPER Work Flow	Warning status for overdue contacts	2.1.0.4 7)	??				same as abo
90	DHARN Assesment Topic	History of Consent for colonoscopy	2.1.0.4 8)	6, 7, 8, 9				
91	Participant Event Log	History of opt out for colonoscopy	2.1.0.4 8)	6, 7				
92	data entry staff	Manual data entry capibility	2.1.0.5 1)	????				FIT entry for
93	Mail House	Reason for mail return	2.1.0.5 3)					
94	Mail House	Forward participants for address resolution t	2.1.0.5 4)					
95	Mail House	Forward participants for re-mailing to PM	2.1.0.5 4)					
96	DB Batch	Initial process of positive FIT test result letters to the participant	2.1.0.5 5)					
97	DB Batch	Initial process of positive FIT test result letters to PCP	2.1.0.5 5)					
98	DB Batch	Reject tables for eloads	2.1.0.5 6)					
99	DB Design	Screening Program Gyn/Colon	2.1.1.1.1					
100	Participant Maintenance	Participant	2.1.1.1.2	6, 7		3		
101	Participant Maintenance	Participant Status	2.1.1.1.3	6, 7		3		
102	Participant Maintenance	Participant Log	2.1.1.1.4	6, 7				
103	REMOVED TW 2009-01-19	Program Criteria Values	2.1.1.1.5					
104	REMOVED TW 2009-01-19	Criteria Definitions	2.1.1.1.6					
105	DB Batch	Program Population	2.1.1.1.7			20.1		
106	Participant Maintenance	Participant address	2.1.1.1.8	6, 7		5		
107	DB Design	Program event	2.1.1.1.9			8		
108	DB Design	Program event parms	2.1.1.1.10					
109	DB Design	program event schedule	2.1.1.1.11					
110	Participant Maintenance	Address	2.1.1.1.12	6, 7		5		
111	HCP Maintenance	Address	2.1.1.1.12	10, 11		7		
112	DB Batch	Mail Items	2.1.1.1.13			20		
113	PM	Mail Items	2.1.1.1.13			20		

Appendix II
Requirements Traceability Matrix

114	REMOVED TW 2009-01-19	Participant Procedure	2.1.1.1.14					
115	REMOVED TW 2009-01-19	PP Details	2.1.1.1.15					
116	DB Design	Program Topic	2.1.1.1.16					
117	DB Design	Program Topic Values Metadata	2.1.1.1.17					
118	HCP Maintenance	Provider Address	2.1.1.1.18	10, 11				
119	CCASPER Work Flow	Program Event log	2.1.1.1.19	???				same as abo
120	Participant Maintenance	Participant Provider	2.1.1.1.20	6, 7				
121	HCP Maintenance	Participant Program RN	2.1.1.1.21	10, 11				
122	Participant Maintenance	Participant Details	2.1.1.1.22	6, 7				
123	DB Design	Postal Codes by DHA	2.1.1.1.23			20		
124	DB Batch	Population feed from MSI	2.1.2.0 1)					
125	DB Batch	Population weekly update feed from MSI	2.1.2.0 2)					
126	PM	data resources -STAR - read only access	2.1.2.1 1					
127	PM	data resources -MSI - read only access	2.1.2.1 2					
128	PM	data resources -Canada post	2.1.2.1 3					
129	Mail House	Package and send letters	2.1.2.1 4 1)					
130	Mail House	Package and send results	2.1.2.1 4 1)					
131	Mail House	Package and send educational material	2.1.2.1 4 1)			20		
132	Mail House	Package and send Fit kits weekly	2.1.2.1 4 1)			20		
133	DB Batch	Mail list to the mail house by CCASPER	2.1.2.1 4 2)					
134	Mail House	Return mails CRCPP	2.1.2.1 4 2)					
135	DB Batch	Electronic FIT result - lab feed every night	2.1.2.1 5 1)					
136	HITS NS	NShIS feed- lab result	2.1.2.1 6 1)					
137	Part Form Topic	Participant form for viewing and manual entr	2.1.4.0	6, 7, 8, 9		3		
138	Fit Topic	FIT form for viewing and manual entry	2.1.4.0	6, 7, 8, 9		10		
139	Fit Topic	FIT historical records by participant	2.1.4.0	6, 7, 8, 9		10		
140	HCP Edit	PCP form for viewing and manual entry	2.1.4.0	10, 11				
141	Program Event Log	Mailing logs	2.1.4.0	6, 7		8		
142	Contact Log	Help Line Log	2.1.4.0	13, 14		12		Janice to def
143	Contact Log	Data entry	2.1.4.0	13, 14		12		
144	Participant Event Log	Participant log	2.1.4.0	6, 7		8		
145	Participant Event Log	Data entry	2.1.4.0	6, 7				
146	Admin Batch Controls	Maintenance Tables	2.1.4.0	??				
147	Admin Security	Security Logs	2.1.4.0	??				
148	Admin Security	Reports	2.1.4.0	??				
149	Admin Security	Login - User credential CCASPER/CORI	2.1.4.1	3, 4, 16		19		
150	Admin Security	Login - User authentication CCASPER/COR	2.1.4.1	3, 4, 16		19		
151	Admin Security	Passwords CCASPER/CORI	2.1.4.1.1	3, 4, 16		19		look into pas
152	Admin Security	Software access control	2.1.4.1.2	3, 4, 16		19		
153	Admin Security	User assigned role	2.1.4.1.2	3, 4, 16		19		Janice to rev
154	Admin Security	Log-in failures	2.1.4.1.2	3, 4, 16				Three attem
155	PM	Signing-off on assigned role	2.1.4.1.2					

Appendix II
Requirements Traceability Matrix

156	Admin Security	Registry Super User	2.1.4.1.3.1	3, 4, 16				
157	Admin Security	Registry Senior	2.1.4.1.3.2	3, 4, 16		14		
158	Admin Security	Registry User	2.1.4.1.3.3	3, 4, 16		15		
159	Admin Security	Management	2.1.4.1.3.4	3, 4, 16		15a		
160	Admin Security	PM	2.1.4.1.3.5	3, 4, 16				
161	Admin Security	DHARN	2.1.4.1.3.6	3, 4, 16		17		
162	Admin Security	Lab	2.1.4.1.3.7	3, 4, 16		17a		
163	Home Page	Home page	pg 17 1.	5				
164	Home Page	Program announcements	pg 17 2.	5				
165	Home Page	Share point access	pg 17 3.	5				
166	Home Page	Useful links which are used by the program	pg 17 4.	5				
167	Home Page	Role specific reminder box for call managem	pg 17 5.	5				
168	Home Page	Role specific reminder box for task manager	pg 17 5.	5				
169	Home Page	Program specific forms	pg 17	5				
170	Participant Search	Participant search	pg 17	6		1,2		
171	Participant Search	Health card number	pg 17	6		1,2		
172	Participant Search	MSI/PMI number	pg 17	6				
173	Participant Search	Surname	pg 17	6		1,2		
174	Participant Search	First name	pg 17	6		1,2		
175	Participant Search	DOB	pg 17	6		1,2		
176	Participant Search	Any of the above in combination with a syste	pg 17	6		1,2		
177	Participant Search	If the participant is not found a new file will b	pg 17	6		1,2		
178	Participant Maintenance	Data entry	pg 17	7		3		
179	Participant Maintenance	Edit participant name	pg 17	7		3		
180	Participant Maintenance	Edit participant phone type	pg 17	7		6		
181	Participant Maintenance	Edit participant address	pg 17	7		5		
182	Participant Maintenance	Edit participant previous surnames	pg 17	7		3		
183	Participant Maintenance	Edit participant program status (opt out or n	pg 17	7		20		
184	Participant Maintenance	Edit pause feature	pg 17	7				
185	Participant Maintenance	Edit participant active / inactive status	pg 17	7		3		
186	Participant Maintenance	Edit participant address including postal cod	pg 17	7		5		
187	Participant Maintenance	Edit participant phone number	pg 17	7		6		
188	Participant Maintenance	Assign participant to healthcare provider	pg 17	7		7		
189		Merge duplicate history files	pg 17					
190	DB Batch	Merge duplicate Participant files	pg 17					
191	Participant Maintenance	Merge duplicate Participant files	pg 17	??				
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193	DB Rules	Age range parameters	pg 18 para 1			20.1		
194	DB Rules	Time between events	pg 18 para 1					
195		Report parameters	pg 18 para 1					
196		DHA mailing parameters	pg 18 para 1			20.1		
197	DB Design	Letter templates	pg 18 para 1					

Appendix II
Requirements Traceability Matrix

198	PM	Letter templates	pg 18 para 1					
199		Deletions of key events	pg 18 para 1					
200	Admin Batch Controls	Batch monitoring and error handling	pg 18 para 1					
201	Admin Batch Controls	Application controls (i.e. Note field availability, session time out etc)	pg 18 para 1					
202	Admin Batch Controls	Ability to control number of mailings being generated by region	pg 18 para 1					
203	HCP Search	Provider Search	pg 18 para 2	10		7		
204	HCP Edit	Provider number	pg 18 para 2	11		7		
205	HCP Edit	Provider First name	pg 18 para 2	11		7		
206	HCP Edit	Provider Surname	pg 18 para 2	11		7		
207	HCP Edit	Speciality code	pg 18 para 2	11		7		
208	HCP Edit	Status code	pg 18 para 2	11		7		
209	HCP Edit	Edit name of provider	pg 18 para 3	11		7		
210	HCP Edit	Edit Phone of provider	pg 18 para 3	11		7		
211	HCP Edit	Edit or add address/es of provider	pg 18 para 3	11		7		
212	HCP Edit	Verification date for address change	pg 18 para 3	11		7		
213	HCP Edit	Modification date for address change	pg 18 para 3	11		7		
214	DB Batch	Merge duplicate HCP files	pg 18 para 3					
215	HCP Edit	Merge duplicate HCP files	pg 18 para 3	11				
216	Participant Event Log	Date of Invitation letter sent	pg19 para 1	6, 7		8		
217	Participant Event Log	Status of invitation letter	pg19 para 1	6, 7		8		
218	Participant Event Log	Date of Participation letter/ FIT kit sent	pg19 para 1	6, 7		8		
219	Participant Event Log	Status of participation letter / FIT kit sent	pg19 para 1	6, 7		8		
220	REMOVED TW 2009-01-19	Address to which participation letter / FIT kit was sent	pg19 para 1					
221	Participant Event Log	Date of reminder letter sent	pg19 para 1	6, 7		8		
222	Participant Event Log	Status of reminder letter sent	pg19 para 1	6, 7		8		
223	REMOVED TW 2009-01-19	Address to which reminder letter was sent	pg19 para 1					
224	Fit Topic	FIT results	pg19 para 1	6, 7, 8, 9		10		
225	Lab Errors	Information from lab if FIT received without participant form	pg19 para 1	12		11		
226	Lab Errors	Information from lab participant form with no opt option and without FIT	pg19 para 1	12		11		
227	Participant Event Log	Date of any subsequent Fit sent	pg19 para 1	6, 7		10		
228	Participant Event Log	Status of any subsequent Fit sent	pg19 para 1	6, 7				
229	Participant Event Log	Date of Participant results notification	pg19 para 1	6, 7				
230	HCP Edit	Status PCP assigned	pg19 para 1	10, 11				
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232	Participant Event Log	Date of PCP notified	pg19 para 1	6, 7				
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234	Participant Event Log	Date of Referral to DHARN	pg19 para 1	6, 7				

Appendix II
Requirements Traceability Matrix

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239	DHARN Assesment Topic	Date of Consent letter	pg19 para 1	6, 7, 8, 9				
240	Participant Program	Pause status	pg19 para 1	6, 7				
241	Colo Topic	Date of colonoscopy	pg19 para 1	6, 7, 8, 9				
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243	Contact Log	Reason why mail was returned	pg19 para 1	6, 7				
244	Contact Log	Process calls to CRCPP	pg 20 1)	13, 14		12		
245	Participant Maintenance	Participants demographics	pg 20 1)	6, 7		5		
246	Participant Maintenance	Reason for demographic update	pg 20 para 3	6, 7				
247	Contact Log	Clinical/ Referral calls to PCP for clinical questions	pg 20 1)	13, 14		12		
248	Contact Log	Number of process calls	pg 20 2)	13, 14		12		
249	Contact Log	Reason for process calls	pg 20 2)	13, 14		12		
250	Contact Log	Number of clinical calls	pg 20 2)	13, 14		12		
251	Contact Log	Type of calls	pg 20 2)	13, 14		12		
252	Contact Log	Follow up calls	pg 20 3)	13, 14		12		
253	Contact Log	Data entry for new address verification	pg 20 3)	13, 14		12		
254	Contact Log	Process call history	pg 20 4)	13, 14		12		
255	Contact Log	Clinical call history	pg 20 4)	13, 14		12		
256	Contact Log	Follow up call history	pg 20 4)	13, 14		12		
257	Contact Log	Multiple call reasons	pg 20 5)	13, 14		12		
258	Participant Maintenance	Participant without PCP , PPM to record the attached PCP for that participant	pg 20 6)	6, 7				
259	Participant Maintenance	Demographic update of the participant	pg 20 7)			3		
260	DB Batch	Date of demographic update to the participant file	pg 20 7)			5		
261	DB Design	Security Logs	pg 20 8)			19		
262	Contact Log	verbal opt out	pg 20 9)	13, 14		12		
263	Participant Program	Date of verbal opt out request	pg 20 9)	6, 7		20.2		
264	DB Batch	Letter to confirm the verbal opt out	pg 20 9)			20.2		
265	Participant Event Log	Date of the letter to confirm verbal opt out	pg 20 9)	6, 7		20.2		
266	Contact Log	Length of calls	pg 20 10)	13		12		
267	Contact Log	Call status (open or closed)	pg 20 11)	13				
268	Participant Maintenance	Participant current cycle status	pg 21 para 1	6, 7		3		
269	Participant Maintenance	Participant status	pg 21 para 1	6, 7		3		
270	Participant Maintenance	Participant status source	pg 21 para 1	6, 7		3		
271	Participant Maintenance	Participant status date	pg 21 para 1	6, 7		3 step31		
272	User maintenance	User and Passwords management CCASPER/CORI	pg 21 para 2	4, 16		19		

273	Application code maintenance	Phone type code	pg 21 para 2	??				allows entry
274	Application code maintenance	Address type code	pg 21 para 2	??				
275	Application code maintenance	Province code	pg 21 para 2	??				
276	Application code maintenance	Provider type code	pg 21 para 2	??				
277	Application code maintenance	Participant status code	pg 21 para 2	??				
278	Application code maintenance	Partiicipant program status code	pg 21 para 2	??				
279	Application code maintenance	Site type code	pg 21 para 2	??				
280	Application code maintenance	Region code	pg 21 para 2	??				
281	Application code maintenance	Diagnosis code	pg 21 para 2	??				
282	Application code maintenance	Lab identification codes	pg 21 para 2	??				
283	Application code maintenance	Specimen quality code	pg 21 para 2	??				
284	Application code maintenance	Reason for call codes	pg 21 para 2	??				
285	Application code maintenance	Fit result codes	pg 21 para 2	??				
286	Report requirements	Number of FIT Kits mailed by DHA	2.1.5	??				
287	Report requirements	TAT between FIT and Lab	2.1.5	??				
288	Report requirements	TAT between Lab and CCASPER	2.1.5	??				
289	Report requirements	% of tests completed over number of tests mailed by DHA	2.1.5	??				
290	Report requirements	Number of normal FITs	2.1.5	??				
291	Report requirements	Number of abnormal FITs	2.1.5	??				
292	Report requirements	Number of spoiled FITs	2.1.5	??				
293	Report requirements	Reasons for spoiled tests	2.1.5	??				
294	Report requirements	Number of subsequent FITs sent as a result of spoiled original	2.1.5	??				
295	Report requirements	Number of process calls vs clinical calls	2.1.5	??				
296	Report requirements	Reasons for calls by call type	2.1.5	??				
297	Report requirements	Number of opt outs	2.1.5	??				
298	Report requirements	Number of referrals to DHARN	2.1.5	??				
299	Report requirements	Number and type of letters sent (includes declination and consents)	2.1.5	??				
300	Report requirements	Number of open calls	2.1.5	??				

Appendix II
Requirements Traceability Matrix

301	Report requirements	Participants with no postal code (will go to PM for resolution prior to mailing)	2.1.5	??				
302	Report requirements	Number of kits received without a participant form	2.1.5	??				
303	Report requirements	Number of participant forms with no opt out option received without a kit	2.1.5	??				
304	Report requirements	Call resolution time by call type	2.1.5	??				
305	Report requirements	Number of FIT Kits expired	2.1.5	??				
306	Mail House	Labels for mailing participant material (including unique identifiers)	2.1.6					
307	Mail House	Labels for lab and CRCPP mailings	2.1.6					
308	DB Batch	Labels for lab and CRCPP mailings	2.1.6					
309	DB Batch	Invitation letter to participant	2.1.6	6, 7, 8, 9		20.1		
310	Participant Form Topic	Participant form	2.1.6	6, 7, 8, 9		10		
311	DB Batch	Reminder letter to participant if FIT not received in Lab	2.1.6			20.6		
312	DB Batch	Normal result letter to participant and PCP with no known colorectal risk factors (self reported)	2.1.6					
313	DB Batch	Normal result letter to participant and PCP with known colorectal risk factors (self reported)	2.1.6					
314	DB Batch	Abnormal FIT result letter to participant and PCP from the CRCPP after the DHARN has spoken with the participant???	2.1.6					
315	DB Batch	Explanations and instructions for second FIT sent if first is spoiled/expired	2.1.6					
316	DB Batch	Letter to the participant confirming the verbal request to opt out.	2.1.6			20.2 Step 10		
317	DB Batch	Reminder letter if no follow up in CCASPER within one month of referral to DHARN	2.1.6					
318	DB Batch	Reminder letter if no follow up in CCASPER within one month of referral to PCP	2.1.6					
320	DB Batch	Reminder letter if no follow up in CCASPER within one month of referral to RN	2.1.6					Janice to foll

Appendix III

Colon Cancer Screening Application

Client Acceptance Test Script

2009-03-28

Prepared by
Shamita Bharathan

Test Scripts

This template is used at this test execution level to record the status of client acceptance test cases and the actions to be taken. When all steps for client acceptance test cases are executed and the results recorded, this information should be attached to this appendix.

Test Case Specification

Test Case Ref #000

Login to the system with user name 'itsupport' and password 'password'

Test Case Ref #001

Project Name: CRCPP Screening Application

Person(s) Responsible:

Written By: Shamita Bharathan	Executed By:
Date: March 2, 2009	Date:

Conditions To Be Tested

Testing 'participant search' under participant tab

Test Preparation

1. Before going through this test script, the MSI load is expected

Note:

Execution Procedure	Expected Results
1. Step 1 – Select a health card number from MSI (HCN X), do the search with HCN X, print screen and save. Do the search once again and compare the results for consistency.	1. Result of Step 1
2. Search that HCN X in application and select edit and screen print the participant edit page and compare with the result of step 1	2. Result of Step 2 –the result should be the same as saved from result of step1
3. Step 2 – Search last name in all 'upper case'(uc) of HCN X check the results	3. Result of step 3 -do
4. Step 3 - Search last name in all 'lower case' ('lc') of HCN X check the results	4. Result of Step 4 - do
5. Step 4 - Search last name first few letters in all 'uc' with % of HCN X check the results	5. Result of Step 5 - do
6. Step 5 - Search last name first few letters in all 'lc' with % of HCN X check the results	6. Result of Step 6 - do
7. Step 6 - Search first name in all 'uc' of HCNX check the results	7. Result of Step 7 - do
8. Step 7 - Search first name in all 'lc' of HCNX check the results	8. Result of Step 8 - do
9. Step 8 - Search first name with first few letters in all 'uc' with % of HCN X check the results	9. Result of Step 9 - do
10. Step 9 - Search first name with first few letters in all 'lc' with % of	10. Result of Step 10 – do
	11. Result of Step 11 – do
	12. a pop up window should show up with the correct format and once you enter the correct format, result should be the same as step 1
	13. Result of Step 11-

HCNX check the result 11. Step 10 - Search DOB – write in whatever day, date and year format of HCN X check the results 12. Step 11- Search with combination of last name and year of birth with % of HCN X 13. Step 12 - Search with combination of first few letters last name with % and year of birth with wild card of HCN X 14. Step 13 - Search with combination of first few letters first name with % and year of birth with wild card of HCN X 15. Step 14 – Search with % and couple of numbers in the middle of HCN X and % 16. Step 15 - Search with % and couple of last numbers of HCN X 17. Step 16 - Search couple of first numbers of HCN X and %	result of step 1 14. Result of Step -12 Result of Step1 15. Result of Step -13 Result of Step1 16. Result of Step -14 Result of Step1 17. Result of Step -15 Result of Step1 18. Result of Step -16 Result of Step1

Pass	***Fail***	**Action Taken**	**Priority/Severity**

Test Case Ref #002

Project Name: CRCPP Screening Application

Person(s) Responsible:

Written By: Shamita Bharathan	Executed By:
Date: March 2, 2009	Date:

Conditions To Be Tested

Testing 'participant search' under form entry

Test Preparation

2. Before going through this test script, the MSI load is expected

Note:

Execution Procedure	**Expected Results**
1) Step 1 – Select a health card number from MSI (HCN Y), do the search with HCN Y, print screen and save. Do the search once again and compare the results for consistency. 2) Step 2 - Search last name in all 'upper case'(uc) of HCN Y check the results 3) Step 3 - Search last name in all 'lower case' ('lc') of HCN Y check the results 4) Step 4 - Search last name first few letters in all 'uc' with wild card (%) of HCN Y check the results 5) Step 5 - Search last name first few letters in all 'lc' with wild card (%) of HCN Y check the results	1) Result of Step 1 - 2) Result of Step 2 –the result should be the same as saved from step1 3) Result of Step 3 - do 4) Result of Step 4 - do 5) Result of Step 5 - do 6) Result of Step 6 - do 7) Result of Step 7 - do 8) Result of Step 8 - do 9) Result of Step 9 – do

6) Step 6 - Search first name in all 'uc' of HCN Y check the results 7) Step 7 - Search first name in all 'lc' of HCN Y check the results 8) Step 8 - Search first name with first few letters in all 'uc' with % of HCN Y check the results 9) Step 9 - Search first name with first few letters in all 'lc' with % of HCN Y check the result 10) Step 10 - Search DOB – write in whatever day, date and year format of HCN Y check the results 11) Step 11- Search with combination of last name and year of birth with % of HCN Y 12) Search with combination of first few letters last name with % and year of birth with % of HCN Y 13) Search with combination of first few letters first name with % and year of birth with % of HCN X	10) a pop up window should show up with the correct format and once you enter the correct format, result should be the same as step 1 11) Result of Step 11- result of step 1 12) Result of Step -12 Result of Step1 13) Result of Step -13 Result of Step1

Pass	*Fail*	Action Taken	Priority/Severity

Test Case Ref #003

Project Name: CRCPP Screening Application

Person(s) Responsible:

Written By: Shamita Bharathan	Executed By:
Date: March 3, 2009	Date:

Conditions To Be Tested

Testing 'edit /delete participant form' in participant tab

Test Preparation

3. Before going through this test script, the MSI load is expected

Note:

Execution Procedure	Expected Results
1) Step 1 – Log on to MSI and select a health card number from MSI (HCN X), do the search with HCN X, print screen and save. 2) Step 2 - Search with HCN X, see whether the results are the same as step 1 result, select the participant, go to edit, print screen the edit page and save. 3) Step3- Edit the last name and save 4) Step4- Edit the First Name and save 5) Step5- Edit the Middle Name and save 6) Step6- Edit the Preferred Name and save	1) Result of Step 1- this is for verification of the participant details after we search in the application 2) Result of Step 2 – this is to compare the result of the participant after editing all the fields mentioned below 3) Result of step 17- Steps 3- 16 is the preparation for testing the editing function of partcipant

7) Step7- Edit the DOB and save 8) Step8- Edit the Sex and save 9) Step9- Edit the Preferred Language and save 10) Step 10- Click on No Future Contact and save 11) Step 11- Click on twin and save 12) Step 12 – Edit Email address and save 13) Step 13- Add comments and save 14) Step 14 – Change Status and save 15) Step15 – Change Status Date and save 16) Step 16- Change the Status Source and save 17) Step 17- screen print and save 18) Step 18 – Go to participant page and search HCN X and select the participant and click on edit to view edit page, print screen and save. 19) Step19- Delete the last name and save 20) Step20- Delete the First Name and save 21) Step21- Delete the Middle Name and save 22) Step22- Delete the Preferred Name and save 23) Step23- Delete DOB and save 24) Step24- Delete the Sex and save 25) Step25- Delete the Preferred Language and save 26) Step 26- Remove the check on No Future Contact and save 27) Step 27- Remove the check on twin and save 28) Step 28 – Delete Email address and save 29) Step 29- Remove comments and save 30) Step 30 – Change Status to choose a status and save 31) Step31 – Change Status Date and save 32) Step 32 Change the Status Source and save 33) Step 33- screen print and save 34) Step 34 – Go to participant page and search HCN X and click on edit to view edit page, check the modified date print screen and save	edit page of the mentiioned functions. The result of step 17 should be to compare with result of step 18 and it should be same 4) Step 19 - should not able to save as this a mandatory field 5) Step 20 - Step22, Should be able to delete and save 6) Step 23- Should not be able to delete and save 7) Step 24-step 29, should be able to do the steps and save 8) Step 30 – Should not be able to save as this a mandatory field 9) Step31 Should not be able to save as this a mandatory field 10) Step 33 – this result is used to compare with result of step34 11) Step 34 – result should be same as step33 with modified date displaying date the modification

Pass	*Fail*	Action Taken	Priority/Severity

Test Case Ref #004

Project Name: CRCPP Screening Application

Person(s) Responsible:

Written By: Shamita Bharathan	Executed By:
Date: March 3, 2009	Date:

Conditions To Be Tested

Testing 'add/delete Health card number in participant form' in participant tab

Test Preparation

1. Before going through this test script, the MSI load

Note:

Execution Procedure	Expected Results
1) Step 1 – Log on to MSI and select a health card number from MSI (HCN X), do the search with HCN X, print screen and save. 2) Step 2 - Search with HCN X, see whether the results are the same as step 1 result, select the participant, go to edit, click on the health card tab, print screen the edit page and save. 3) Step3- Add Other Provinces health card number 4) Step4 – Add Military health card number and save 5) Step 5 – Add RCMP health card number and save 6) Step 6- Add Federal health card number and save 7) Step7 – Add Private Insurance number and save 8) Step 8 – Add Outside Canada card number and save 9) Step 9 – print screen and save 10) Step10 – Go to participant page and search HCN X and select the participant and click on edit to view edit page, print screen and save 11) Step 11- Delete Other Provinces health card number by selecting 'duplicate' remove and save 12) Step 12 - Delete Military health card number by selecting 'error correct' remove and save 13) Step 13 – Delete RCMP health card number by selecting 'entered on wrong participant' remove and save 14) Step 12- screen print and save 15) Step 13 – Go to participant page and search HCN X and select the participant and click on edit to view edit page, print screen and save. 16) Click on the show deleted and check whether everything deleted is in the deleted history, compare with screen print of step 9 with delete reason displayed	1) Result of Step 1- this is for verification of the participant details after we search in the application 2) Result of Step 2 – this is to compare the result of the participant after editing all the fields mentioned below 3) Result of step 3-8 Steps 3- 8 is the preparation for testing the health card number adding function of partcipant edit page. The result of step 9 should be used to compare with result of step 10 4) Step 10 result should be same as step 9 5) Step 15- Check whether all the health card numbers we deleted are not appearing on the screen 6) Step 16- Check whether all the health card numbers we deleted are appearing on the screen

Pass	*Fail*	Action Taken	Priority/Severity

Test Case Ref #005

Project Name: CRCPP Screening Application

Person(s) Responsible:

Written By: Shamita Bharathan	Executed By:
Date: March 4, 2009	Date:

Conditions To Be Tested

Testing 'add /delete Address in participant form' in address tab

Test Preparation

1. Before going through this test script, the MSI load

Note:

Execution Procedure	Expected Results
1) Step 1 – Log on to MSI and select a health card number from MSI (HCN X), do the search with HCN X, print screen and save.	1) Result of Step 1- this is for verification of the participant details after we search in the application
2) Step 2 - Search with HCN X, see whether the results are the same as step 1 result, select the participant, go to edit, click on address tab, print screen the edit page and save.	2) Result of Step 2 – this should be same as the result of step 1 and this is to compare the result of the participant after editing all the fields mentioned below
3) Step 3 - Add an address without city name, postal code and from date and try to save.	3) Result of step 3- should not be able to save
4) Step 4 - Add an address without postal code and from date and try to save.	4) Result of step 4- should not be able to save
5) Step 5 - Add an address without from date and try to save.	5) Result of step 5- should not be able to save
6) Step6- Add a location address, choose this as the primary address, complete all fields on the address tab and save	6) Result of Step 6-10 should be able to save
7) Step 7 – Add an office address, complete all fields on the address tab and save	7) Result of Step 11 is to compare with the result of step 11
8) Step 8 – Add a temporary address, complete all fields on the address tab and save	8) Result of Step 12 – Should be same as the result of step 11
9) Step 9 – Add a historic address, complete all fields on the address tab and save	9) Result of Step 13- the resulting page should not be having location address
10) Step 10 – Add a mailing address, complete all fields on the address tab and save	10) Result of Step 14- the resulting page should not be having location address and office address
11) Step 11 - Print screen and save	11) Result of Step 15- the resulting page should not be having location address, office address and temporary address
12) Step 12 - go to participant page, search for HCN X, click on edit, open the address tab, print screen and save. Compare with earlier print screen of step 11	
13) Step13 – Delete location address, by selecting 'duplicate' remove and save	
14) Step 14 – Delete an office address, by selecting 'error correct' remove and save	
15) Step 15 – Delete a temporary address, by selecting 'entered on wrong participant' remove and save	

16) Step 16- screen print and save 17) Step 17 – Go to participant page and search HCN X and select the participant and click on edit to view edit page, open the address tab print screen and save. 18) Step 18- Click on the show deleted and check whether everything deleted is in the deleted history, compare with screen print of step 11 with delete reason displayed	12) Result of Step 16 – This is to compare with the result of Step 17 13) Result of Step 17 – should be the same as the result of step 16 14) Result of Step 18 should be same as result of step 11 with delete reason

Pass	***Fail***	**Action Taken**	**Priority/Severity**

Test Case Ref #006

Project Name: CRCPP Screening Application

Person(s) Responsible:

Written By: Shamita Bharathan	Executed By:
Date: March 4, 2009	Date:

Conditions To Be Tested

Testing 'add /delete Phone number in participant form' in phone tab

Test Preparation

1. Before going through this test script, the MSI load

Note:

Execution Procedure	**Expected Results**
1) Step 1 – Log on to MSI and select a health card number from MSI (HCN X), do the search with HCN X, print screen and save. 2) Step 2 - Search with HCN X, see whether the results are the same as step 1 result, select the participant, go to edit, click on phone tab, print screen the edit page and save. 3) Step3- Add a home phone choose this as the primary phone number, complete all fields on the phone tab and save 4) Step4- Add a office phone, complete all fields on the phone tab and save 5) Step5- Add a home fax, complete all fields on the phone tab and save 6) Step6- Add a office fax, complete all fields on the phone tab and save 7) Step7- Add a cell phone, complete all fields on the phone tab and save 8) Step 8 - Print screen and save 9) Step 9 - go to participant page, search for HCN X, click on edit, open the phone tab, print screen and save. Compare with earlier print screen of step 8 10) Step10 – Delete home phone number by selecting 'duplicate' click	1) Result of Step 1- this is for verification of the participant details after we search in the application 2) Result of Step 2 – this should be same as the result of step 1 and this is to compare the result of the participant after editing all the fields mentioned below 3) Result of step 3- 7 should be able to save 4) Result of step 8 is to compare with the result of step 9 5) Result of Step 9 – Should be same as the result of step 8 6) Result of Step 10- the resulting page should not be having home

remove and save 11) Step 11 – Delete an office phone number by selecting 'error correct', click remove and save 12) Step 12 – Delete a cell phone number by selecting 'entered on wrong participant' click remove and save 13) Step 13- screen print and save 14) Step 14 – Go to participant page and search HCN X and select the participant and click on edit to view edit page, open the phone tab print screen and save. 15) Step 15- Click on the show deleted and check whether everything deleted is in the deleted history, compare with screen print of step 8 with delete reason displayed	phone number 7) Result of Step 11- the resulting page should not be having home phone number and office phone number 8) Result of Step 12- the resulting page should not be having home phone number office phone number and cell phone number 9) Result of Step 13 – This is to compare with the result of Step 14 10) Result of Step 14 – should be the same as the result of step 13 11) Result of Step 15 should be same as result of step 8 with delete reason

Pass	***Fail***	**Action Taken**	**Priority/Severity**

Test Case Ref #007

Project Name: CRCPP Screening Application

Person(s) Responsible:

Written By: Shamita Bharathan	Executed By:
Date: March 4, 2009	Date:

Conditions To Be Tested

Testing 'add /delete HCP in participant form' in 'Health Care Professional' tab

Test Preparation

1. Before going through this test script, the MSI load

Note:

Execution Procedure	**Expected Results**
1) Step 1 – Log on to MSI and select a health card number from MSI (HCN X), do the search with HCN X, print screen and save. 2) Step 2 - Search with HCN X, see whether the results are the same as step 1 result, select the participant, go to edit, click on health care professional tab, print screen the edit page and save. 3) Step3- Add a new Health care professional as primary care provider, select the radio button on the new field, look up for the HCP, search HCP on new window, select, complete all the fields , choose this as primary care provider and save.	1) Result of Step 1- this is for verification of the participant details after we search in the application 2) Result of Step 2 – this should be same as the result of step 1 and this is to compare the result of the participant after editing all the fields mentioned below

4) Step 4 - Repeat step 3 choose this as a physician and save 5) Step 5 - Repeat step 3 choose this as a Nurse Practitioner and save 6) Step 6 - Repeat step 3 choose this as a District Health Authority Registered Nurse and save 7) Step 7 - Repeat step 3 choose this as a Colonoscopist and save 8) Step 8 - Print screen and save 9) Step 9 - go to participant page, search for HCN X, click on edit, open the Health care professional tab, print screen and save. Compare with earlier print screen of step 8 10) Step10 – Delete primary care provider by selecting 'duplicate' click remove and save 11) Step 11 – Delete physician by selecting 'error correct' click remove and save 12) Step 12 – Delete Nurse Practitioner by selecting 'entered on wrong participant' click remove and save 13) Step 13- screen print and save 14) Step 14 – Go to participant page and search HCN X and select the participant and click on edit to view edit page, open the health care professional tab print screen and save. 15) Step 15- Click on the show deleted and check whether everything deleted is in the deleted history, compare with screen print of step 8 with delete reason displayed	3) Result of step 3-7should be able to save 4) Result of step 8 is to compare with the result of step 9 5) Result of Step 9 – Should be same as the result of step 8 6) Result of Step 10- the resulting page should not be having primary care provider details 7) Result of Step 11- the resulting page should not be having primary care provider and physician details 8) Result of Step 12- the resulting page should not be having having primary care provider, physician and Nurse practtitioner details 9) Result of Step 13 – This is to compare with the result of Step 14 10) Result of Step 14 – should be the same as the result of step 13 11) Result of Step 15 should be same as result of step 8 with delete reason

Pass	***Fail***	**Action Taken**	**Priority/Severity**

Test Case Ref #008

Project Name: CRCPP Screening Application

Person(s) Responsible:

Written By: Shamita Bharathan	Executed By:
Date: March 5, 2009	Date:

Conditions To Be Tested

Testing 'add /delete Event history in participant form' in 'Event history' tab

Test Preparation

1. Before going through this test script, the MSI load

Note : Add or delete function is not available now, the events log are created automatically from backend after the

event has run at the backend.

Execution Procedure	Expected Results
1) Step 1 – Log on to MSI and select a health card number from MSI (HCN X), do the search with HCN X, print screen and save.	1) Result of Step 1- this is for verification of the participant details after we search in the application
2) Step 2 - Search with HCN X, see whether the results are the same as step 1 result, select the participant, go to edit, click on health care professional tab, print screen the edit page and save.	2) Result of Step 2 – this should be same as the result of step 1 and this is to compare the result of the participant after editing all the fields mentioned below
3) Step3- Add in event history as CCASPER Root, complete all the fields and save.	3) Result of step 3-10 should be able to save
4) Step4- Add in event history as Determine Population, complete all the fields and save.	4) Result of step 11 is to compare with the result of step 12
5) Step5- Add in event history as Send Invitation, complete all the fields and save.	5) Result of Step 12 – Should be same as the result of step 11
6) Step6- Add in event history as Send FIT, complete all the fields and save.	
7) Step7- Add in event history as Check Fit Results, complete all the fields and save.	
8) Step8- Add in event history as Negative FIT with Risk Notice, complete all the fields and save.	
9) Step9- Add in event history as Load Fit Results, complete all the fields and save.	
10) Step10- Add in event history as Return to Participant Pool, complete all the fields and save.	
11) Step 11 - Print screen and save	
12) Step 12 - go to participant page, search for HCN X, click on edit, open the event history tab, print screen and save. Compare with earlier print screen of step 11	
13) Step 13 – Log on to MSI and select a health card number from MSI (HCN Y), do the search with HCN Y, print screen and save.	6) Result of Step 13- this is for verification of the participant details after we search in the application
14) Step 14 - Search with HCN Y, see whether the results are the same as step 1 result, select the participant, go to edit, click on health care professional tab, print screen the edit page and save.	7) Result of Step 14 – this should be same as the result of step 13 and this is to compare the result of the participant after editing all the fields mentioned below
15) Step15- Add in event history as CCASPER Root, complete all the fields and save.	8) Result of step 14-23 should be able to save
16) Step16- Add in event history as Determine Population, complete all the fields and save.	9) Result of step 24 is to compare with the result of step 25
17) Step17- Add in event history as Send Invitation, complete all the fields and save.	10) Result of Step 25 – Should be same as the result of step 24
18) Step18- Add in event history as Send FIT, complete all the fields and save.	
19) Step19- Add in event history as Send Reminder, complete all the fields and save.	
20) Step20- Add in event history as Check Fit Results, complete all the fields and save.	

21) Step21- Add in event history as Negative FIT Notice, complete all the fields and save. 22) Step22- Add in event history as Load Fit Results, complete all the fields and save. 23) Step23- Add in event history as Return to Participant Pool, complete all the fields and save. 24) Step 24 - Print screen and save 25) Step 25 - go to participant page, search for HCN Y, click on edit, open the event history tab, print screen and save. Compare with earlier print screen of step 24 26) Step 26 – Log on to MSI and select a health card number from MSI (HCN Z), do the search with HCN Z, print screen and save. 27) Step 27 - Search with HCN Z, see whether the results are the same as step 1 result, select the participant, go to edit, click on health care professional tab, print screen the edit page and save. 28) Step28- Add in event history as CCASPER Root, complete all the fields and save. 29) Step29- Add in event history as Determine Population, complete all the fields and save. 30) Step30- Add in event history as Send Invitation, complete all the fields and save. 31) Step31- Add in event history as Send FIT, complete all the fields and save. 32) Step32- Add in event history as Lab Package missing Form, complete all the fields and save. 33) Step33- Add in event history as Check Fit Results, complete all the fields and save. 34) Step34- Add in event history as Negative FIT Notice, complete all the fields and save. 35) Step35- Add in event history as Load Fit Results, complete all the fields and save. 36) Step36- Add in event history as Return to Participant Pool, complete all the fields and save. 37) Step 37 - Print screen and save 38) Step 38 - go to participant page, search for HCN Z, click on edit, open the event history tab, print screen and save. Compare with earlier print screen of step 37 39) Step 39 – Log on to MSI and select a health card number from MSI (HCN A), do the search with HCN A, print screen and save. 40) Step 40 - Search with HCN A, see whether the results are the same as step 39 result, select the participant, go to edit, click on health care professional tab, print screen the edit page and save. 41) Step 41- Add in event history as CCASPER Root, complete all the	11) Result of Step 26- this is for verification of the participant details after we search in the application 12) Result of Step 27 – this should be same as the result of step 26 and this is to compare the result of the participant after editing all the fields mentioned below 13) Result of step 28-36 should be able to save 14) Result of step 37 is to compare with the result of step 38 15) Result of Step 38 – Should be same as the result of step 37 16) Result of Step 39- this is for verification of the participant details after we search in the application 17) Result of Step 40 – this should be same as the result of step 39 and this is to compare the

fields and save. 42) Step 42- Add in event history as Determine Population, complete all the fields and save. 43) Step 43- Add in event history as Send Invitation, complete all the fields and save. 44) Step 44- Add in event history as Send FIT, complete all the fields and save. 45) Step 45- Add in event history as Lab Package missing FIT, complete all the fields and save. 46) Step 46 - Print screen and save 47) Step 47 - go to participant page, search for HCN A, click on edit, open the event history tab, print screen and save. Compare with earlier print screen of step 46 48) Step 48 – Log on to MSI and select a health card number from MSI (HCN B), do the search with HCN B, print screen and save. 49) Step 49 - Search with HCN B, see whether the results are the same as step 48 result, select the participant, go to edit, click on health care professional tab, print screen the edit page and save. 50) Step 50- Add in event history as CCASPER Root, complete all the fields and save. 51) Step 51- Add in event history as Determine Population, complete all the fields and save. 52) Step 52- Add in event history as Send Invitation, complete all the fields and save. 53) Step 53- Add in event history as Send FIT, complete all the fields and save. 54) Step 54- Add in event history as Check Fit Results, complete all the fields and save. 55) Step 55- Add in event history as Positive FIT Notice, complete all the fields and save. 56) Step 56- Add in event history as Load Fit Results, complete all the fields and save. 57) Step 57- Add in event history as DHARN Task Initiation, complete all the fields and save. 58) Step 58 - Print screen and save 59) Step 59 - go to participant page, search for HCN C, click on edit, open the event history tab, print screen and save. Compare with earlier print screen of step 58 60) Step 60 – Log on to MSI and select a health card number from MSI (HCN C), do the search with HCN C, print screen and save. 61) Step 61 - Search with HCN C, see whether the results are the same as step 60 result, select the participant, go to edit, click on health care professional tab, print screen the edit page and save.	result of the participant after editing all the fields mentioned below 18) Result of step 41-45 should be able to save 19) Result of step 46 is to compare 47 20) Result of Step 47 – Should be same as the result of step 46 21) Result of Step 48- this is for verification of the participant details after we search in the application 22) Result of Step 49 – this should be same as the result of step 48 and this is to compare the result of the participant after editing all the fields mentioned below 23) Result of step 50-57 should be able to save 24) Result of step 58 is to compare with the result of step 59 25) Result of Step 59 – Should be same as the result of step 58 26) Result of Step 60- this is for verification of the participant details after we search in the application 27) Result of Step 61 – this should be same as the

62) Step 62- Add in event history as CCASPER Root, complete all the fields and save.	result of step 60 and this is to compare the result of the participant after editing all the fields mentioned below
63) Step 63- Add in event history as Determine Population, complete all the fields and save.	28) Result of step 62-67 should be able to save
64) Step 64- Add in event history as Send Invitation, complete all the fields and save.	29) Result of step 68 is to compare with the result of step 69
65) Step 65- Add in event history as Send FIT, complete all the fields and save.	30) Result of Step 69 – Should be same as the result of step 68
66) Step 66- Add in event history as Send Opt out Written, complete all the fields and save.	
67) Step 67 Add in event history as Exit Program Population, complete all the fields and save.	
68) Step 68 - Print screen and save	
69) Step 69 - go to participant page, search for HCN C, click on edit, open the event history tab, print screen and save. Compare with earlier print screen of step 68	
70) Step 70 – Log on to MSI and select a health card number from MSI (HCN D), do the search with HCN D, print screen and save.	31) Result of Step 70- this is for verification of the participant details after we search in the application
71) Step 71 - Search with HCN D, see whether the results are the same as step 60 result, select the participant, go to edit, click on health care professional tab, print screen the edit page and save.	32) Result of Step 71 – this should be same as the result of step 70 and this is to compare the result of the participant after editing all the fields mentioned below
72) Step 72- Add in event history as CCASPER Root, complete all the fields and save.	
73) Step 73- Add in event history as Determine Population, complete all the fields and save.	33) Result of step 72-76 should be able to save
74) Step 74- Add in event history as Send Invitation, complete all the fields and save.	34) Result of step 77 is to compare with the result of step 78
75) Step 75- Add in event history as Send FIT, complete all the fields and save.	35) Result of Step 78 – Should be same as the result of step 77
76) Step 76- Add in event history as Send Opt out Verbal, complete all the fields and save.	
77) Step 77 - Print screen and save	
78) Step 78 - go to participant page, search for HCN E, click on edit, open the event history tab, print screen and save. Compare with earlier print screen of step 77	36) Result of Step 79- this is for verification of the participant details after we search in the application
79) Step 79 – Log on to MSI and select a health card number from MSI (HCN E), do the search with HCN E, print screen and save.	37) Result of Step 80 – this should be same as the result of step 79 and this is to compare the result of the participant after editing all the fields mentioned below
80) Step 80 - Search with HCN D, see whether the results are the same as step 79 result, select the participant, go to edit, click on health care professional tab, print screen the edit page and save.	
81) Step 81- Add in event history as CCASPER Root, complete all the fields and save.	38) Result of step 81-85 should be able to save
82) Step 82- Add in event history as Determine Population, complete all the	

fields and save. 83) Step 83- Add in event history as Send Invitation, complete all the fields and save. 84) Step 84- Add in event history as Send FIT, complete all the fields and save. 85) Step 85- Add in event history as Send Opt out Representative, complete all the fields and save. 86) Step 86 - Print screen and save 87) Step 87 - go to participant page, search for HCN D, click on edit, open the event history tab, print screen and save. Compare with earlier print screen of step 86. 88) Step88 – Do systematic deleting and search with HCN see whether it is displaying the deletes	39) Result of step 86 is to compare with the result of step 87 40) Result of Step 87 – Should be same as the result of step 86

Pass	*Fail*	**Action Taken**	**Priority/Severity**

Test Case Ref #009

Project Name: CRCPP Screening Application

Person(s) Responsible:

Written By: Shamita Bharathan	Executed By:
Date: March 5, 2009	Date:

Conditions To Be Tested

Testing 'HCP search in 'HCP' tab

Test Preparation

1. Before going through this test script, the MSI load

Note :

Execution Procedure	**Expected Results**
1) Step 1 – From the http://www.cpsns.ns.ca website, find information of 5 physicians. Print Screen and save. 2) Step 2 – Select any HCP number (X) from the physician list from step 1. Search with HCP number X, see whether the results are the same as the result of that number in step 1, print screen and save. 3) Step 3 - Select any last name(Y) from the physician list from step 1. Search with that last name, see whether the results are the same as the result of that number in step 1, print screen and save. 4) Step 4- Select any first name (Z) from the physician list from step 1. Search with that first name, see whether the results are the same as the result of that number in step 1, print screen and save.	1) Result of Step 1- this HCP list is for verification of the HCP details after we search in the application 2) Result of Step 2 – result should be same as the details of the searched HCP in Step1 3) Result of step 3 result should be same as the details of the searched HCP in Step1 4) Result of step 4 result

5) Step 5- Select any specialty (A) from one of the physicians from step 1. Search with that specialty, see whether the results have that physician listed, print screen and save. 6) Step 6- Select any last name (B) from the physician list from step 1. Search with the couple of starting letters of last name B and '%', see whether the results have that physician listed, print screen and save. 7) Step 7- Repeat step 6 with any first name instead of last name, print screen and save. 8) Step 8 – Search with % and couple of numbers in the middle of one selected HCP number and % 9) Step 9 - Search with % and couple of last numbers of a selected HCP number 10) Step 10 - Search with couple of first numbers of a selected HCP number and %	should be same as the details of the searched HCP in Step1 5) Result of Step 5 – result should be same as the details of the searched HCP in Step1 6) Result of Step 6 result should be same as the details of the searched HCP in Step1 7) Result of Step 7 - result should be same as the details of the searched HCP in Step1 8) Result of Step 8- result should be same as the details of the searched HCP in Step1 9) Result of Step 9 – result should be same as the details of the searched HCP in Step1 10) Result of Step 10 – result should be same as the details of the searched HCP in Step1

Pass	***Fail***	**Action Taken**	**Priority/Severity**

Test Case Ref #010

Project Name: CRCPP Screening Application

Person(s) Responsible:

Written By: Shamita Bharathan	Executed By:
Date: March 6, 2009	Date:

Conditions To Be Tested	
Testing 'participant form and FIT result' in 'Form Entry' tab and 'topic'	
Test Preparation 1. Before going through this test script, the MSI load **Note to me** :	
Execution Procedure	**Expected Results**
1) Step 1 – Log on to MSI and select a last name (N) from MSI, do the search with last name, print screen and save. 2) Step 2 – Log on to the application, go to the form entry tab, search with	1) Result of Step 1- this is to compare the result of last name search from the application.

the last name (N), select participant form, select couple of options, choose an ethnicity, date of entry and screen print and save to the testing doc. Click save the form. 3) Step 3 – Log on to the application, go to the form entry tab, search with the last name (N), select FIT result, choose couple of option, try to save 4) Step 4 – Continue with the step 3, complete all the fields; screen print and paste on your test document then click save the form. 5) Step 5 – Log on to the application, go to participant tab, search with the last name (N), select, edit, and go to topic, choose participant form from the drop down, select the entry, click on edit to view the form. Screen print and save. 6) Step 6 – Log on to the application, go to participant tab, search with the last name (N), select, edit, and go to topic, choose FIT result from the drop down, choose FIT result, select the entry, check the lab, click on edit to view the form. Screen print and save. 7) Step 7 – SYSTEMATIC DELETING and checking 8) Step 8 – Log on to MSI and select a last name (N) from MSI, do the search with last name, print screen and save. 9) Step 9 – Log on to the application, search the last name under participant, and click on edit to open the participant form. Open topic, select participant questionnaire from pull down menu, fill in the form, select couple of options, choose an ethnicity, date of entry and screen print and save to the testing doc. Click save the form. 10) Step 10 – Log on to the application, search the last name under participant, and click on edit to open the participant form. Open topic, select FIT result from pull down menu, fill in the form, and screen print and save to the testing doc. Click save the form. 11) Step 11 – Continue with the step 10, complete all the fields; screen print and paste on your test document then click save the form. 12) Step 12 – Log on to the application, go to participant tab, search with the last name (N), select, edit, and go to topic, choose participant form from the drop down, select the entry, click on edit to view the form. Screen print and save. 13) Step 13 – Log on to the application, go to participant tab, search with the last name (N), select, edit, and go to topic, choose FIT result from the drop down, choose FIT result, select the entry, click on edit to view the form. Screen print and save. 14) Step 14 – SYSTEMATIC DELETING and checking	2) Result of Step 2 – result to compare to the result of step 5 3) Result of Step 3 Should not be able to save but a list of mandatory fields which are not filled in should appear 4) Result of step 4 result to compare to the result of step 6 5) Result of step 5 result should be same as the results of Step2 6) Result of step 6 result should be same as the results of Step4

Pass	*Fail*	Action Taken	Priority/Severity

Test Case Ref #011

Project Name: CRCPP Screening Application

Person(s) Responsible:

Written By: Shamita Bharathan	Executed By:
Date: March 6, 2009	Date:

Conditions To Be Tested			
Testing 'lab entry' in 'lab' tab			
Test Preparation 1. Before going through this test script, the MSI load **Note** :			
Execution Procedure 1) Step 1 – Log on to MSI and select a last name (N) from MSI, do the search with last name, print screen and save. 2) Step 2 – Log on to the application, go to the lab tab, click on look up, search with the last name (N), select participant, select 'Lab Package missing Form', date of entry. Before saving screen print, save in the doc. 3) Step 3 – Log on to the application, go to the lab tab, and click on look up. Search with the last name (N), select participant, select 'Lab Package missing FIT', and date of entry. Before saving screen print, save in the doc. 4) Step 2 – Log on to the application, go to participant tab, search with the last name (N), select, edit, and go to event history. See whether the forms you entered are displayed with correct date, compare with screen prints.		**Expected Results** 1) Result of Step 1- this is to compare the result of last name search from the application. 2) Result of Step 2 – screen print before saving will allow to compare with step 4 3) Result of step 3 screen print before saving will allow to compare with step 4 4) Result of step 4 result should display the lab entries from the step 2 and step 3 screen prints	
Pass	***Fail***	**Action Taken**	**Priority/Severity**

Test Case Ref #012

Project Name: CRCPP Screening Application

Person(s) Responsible:

Written By: Shamita Bharathan	Executed By:
Date: March 9, 2009	Date:

Conditions To Be Tested
Testing 'contact' in 'contact log' tab
Test Preparation

1. Before going through this test script, the MSI load

Note :

Execution Procedure	**Expected Results**
1) Step 1 – Log on to MSI and select a last name (N) from MSI, do the search with last name, print screen and save. 2) Step 2 – Log on to the application, go to the contact tab, click on look up, search with the last name (N), select participant, enter couple of options on the contact subject and save. 3) Step 3 – continue with step 2 enter the date and save 4) Step 4 – continue with step 2 enter call duration. Screen print and save. 5) Step 5 – Click on the 'go' button, click open the contact history and check to see the contact details are recorded.	1) Result of Step 1- this is to compare the result of last name search from the application. 2) Result of Step 2 – should not be able to save and message indicating the mandatory fields should be there 3) Result of step 3 should not be able to save and message indicating the mandatory fields should be there 4) Result of step 4 should be able to save , screen print to copare with Step 6 5) Result of Step 5 compare with result of step 4 , should be same.

Pass	***Fail***	**Action Taken**	**Priority/Severity**

Test Case Ref #013

Login to the system with user name 'datamanag' and password 'password'

REPEAT ALL THE TEST SCRIPTS from Test # 001- Test #12

Test Case Ref #014

Login to the system with user name 'regsen' and password 'password'

REPEAT ALL THE TEST SCRIPTS from Test # 001- Test #12

Test Case Ref #015

Login to the system with user name 'reguser' and password 'password'

REPEAT ALL THE TEST SCRIPTS from Test # 001- Test #12

Test Case Ref #015a

Login to the system with user name 'manag' and password 'password'

REPEAT ALL THE TEST SCRIPTS from Test # 001- Test #12

Test Case Ref #016

Login to the system with user name ‘spo’ and password ‘password’

REPEAT ALL THE TEST SCRIPTS from Test # 001- Test #12 EXCEPT test #10 and test#11

Test Case Ref #017

Login to the system with user name ‘dharn’ and password ‘password’

REPEAT ALL THE TEST SCRIPTS from Test # 001- Test #12 EXCEPT test #10, 11 and test#12

Test Case Ref #017a

Login to the system with user name ‘lab’ and password ‘password’

Test Case Ref #018

Project Name: CRCPP Screening Application

Person(s) Responsible:

Written By: Shamita Bharathan	Executed By:
Date: March 6, 2009	Date:

Conditions To Be Tested

Testing ‘lab entry’ in ‘lab’ tab with lab login

Test Preparation

2. Before going through this test script, the MSI load

Note :

Execution Procedure	**Expected Results**
1) Step 1 – Log on to MSI and select a last name (N) from MSI, do the search with last name, print screen and save.	1) Result of Step 1- this is to compare the result of last name search from the application.
2) Step 2 – Log on to the application, go to the lab tab, click on look up, search with the last name (N), select participant, select ‘Lab Package missing Form’, date of entry. Before saving screen print, save in the doc.	2) Result of Step 2 – screen print before saving will allow to compare with step 4
3) Step 3 – Log on to the application, go to the lab tab, and click on look up. Search with the last name (N), select participant, select ‘Lab Package missing FIT’, and date of entry. Before saving screen print, save in the doc.	3) Result of step 3 screen print before saving will allow to compare with step 4
4) Step 2 – Log on to the application with IT support log in, go to participant tab, search with the last name (N), select, edit, and go to event history. See whether the forms you entered are displayed with correct date, compare with screen prints.	4) Result of step 4 result should display the lab entries from the step 2 and step 3 screen prints

Pass	***Fail***	**Action Taken**	**Priority/Severity**

BACK-END TESTING - PHASEI

Test Case Ref #019

Project Name: CRCPP Screening Application

Person(s) Responsible:

Written By: Shamita Bharathan	Executed By:
Date: March 9, 2009	Date:

Conditions To Be Tested

Testing security levels

Test Preparation

1. Before going through this test script, the MSI load

Note:

Execution Procedure	Expected Results
IT Support 1) Step 1 – test system maintenance 2) Step 2 - Create new reports 3) Step 3 - Create new function 4) Step 4 - Create new user roles and privileges 5) Step 5 - Login as the new user created in Step 4 and check all the privileges assigned available 6) Step 6 - Delete the created function in step 3 7) Step 7 - Delete the new user role and privileges in created in Step 4 8) Step 8 – Login as the new user created in Step 4 **Data Management Supervisor** 1) Step 1 - Create system reports 2) Step2 - Create new user roles and privileges 3) Step 3 - Delete the created function in step 4) Step4 - Login as the new user created in Step 2 and check all the privileges assigned available 5) Query/Print from security log 6) Step 4 – Make two identical files and merge the files **Registry Senior** 1) Step 1 – Make two identical files and merge the files **Registry User** **Management** 1) Step 1 - Create system reports 2) Access to all workflow management screens or events (access to be defined…) 3) Query/Print from security log **Screening Project Officer** 1) Access to SPO workflow management screen	1) Result of Step 1-7 Should be able test create and delete the steps

2) Query/Edit/Add/Delete/Print for the contact log, participant search form, participant edit form and associated tabbed forms 3) Query/Print access to participant topic form, participant topic edit form and associated forms 4) Query/Edit/Add/Print functions for the HCP search form and the HCP edit form and associated tabbed forms 5) Query/Print participant log **DHARN** 1) Access for each DHARN to be defined by their referred participants (by DHA/Postal Code) 2) Access to DHARN workflow management screen 3) Query/Edit/Add/Delete/Print access to participant topic form, participant topic edit form - DHARN form 4) Query/Print for participant log **Lab** 1) Query/Print participant information in the lab entry form 2) Add/delete event information in the lab entry form 3) Add/edit/delete event date in the lab entry form	

Pass	*Fail*	Action Taken	Priority/Severity

Test Case Ref #020

Project Name: CRCPP Screening Application

Person(s) Responsible:

Written By: Shamita Bharathan	Executed By:
Date: March 9, 2009	Date:

Conditions To Be Tested **Testing the events from 'resend FIT kit'**	
Test Preparation 2. Before going through this test script, the MSI load **Note:**	
Execution Procedure **1. Resend FIT kit** 1) Step1 – Run the batch on Monday, March 30, 2009 to select the participants, whose birth week is on the week of March 15th, age between 50-74, who were born in odd year and from GASHA, CBDHA	**Expected Results** 1) Result of Step1 - odd year of birth from 1935-1959, Birth week of Mar 15- Mar21 and from the three DHAs 2) Result of Step 2 is to

and SSDHA.	check whether the rules worked
2) Step 2- Run the batch script, select participants	3) Result of Step 3 – the event should be logged as determine popln and send invitation letter in the event history
3) Step3 - Search the participants, go to edit, open the event history and see the event is logged as determine population and send invitation letter with the event date.	4) Result of step 4 the polpln shd satisfy the rules set to generate the popln.
4) Step 4 – Check for the birth dates, postal codes to see whether the population generated is satisfying the conditions applied.	**Opt Out**
2. Opt Out	5) Result of Step 5 to check the results of following steps
5) Step 5 - Select 2 participants from the verified list and change their status to opt out written screen print and save these participants details for further reference as OW1population	6) Result of Step 6 - should generate the Thank you/ information letter
6) Step 6 - Check the written opt out thank you/ information letter is generated for the participants for OW1 population.	7) Result of Step 7 should not include OW1
7) Step 7 – Check the status of the participant	8) Result of step 8 – shd have generated the invitation letter for the determined popln
8) Step 8 - Check whether the invitation letter is generated	9) Result of Step 9 is to compare the results for the following steps
9) Step 9- Select 2 participant and opt out these people through 'opt out written' in the participant program screen print and save these participants details for further reference as OW2population.	10) Result of Step 10 is to compare the results for the following steps
10) Step 10 Select 4 participants and opt out through 'opt out verbal' in the participant program screen print and save these participants details for further reference as OV1population	11) Result of Step 11 is to compare the results for the following steps
11) Step 11- Select 4 participants and opt out through 'opt out representative' in the participant program and screen print and save these participants details for further reference as OR1population	12) Result of Step 12 - should generate the Thank you/ information letter
12) Step 12 - Check the written opt out thank you/ information letter is generated for the participants for OW2 population.	13) Result of Step 13 - should generate the Verbal Opt out confirmation letter
13) Step 13 - Check the verbal opt out confirmation letter is generated for the OV1 population.	14) Result of Step 14 - should generate the rep. Opt out confirmation letter
14) Step 14 - Check the representative opt out confirmation letter is generated for OR1 population	**Send FIT and Part form**
3. Send FIT and Participant form	15) Result of Step 15 - should not include OW1, OW2, OV1 and OR1 popln
15) Step 15 - Run the batch to retrieve the Send FIT event and check the participants and screen print the details.	16) Result of Step 16 – the event should be logged as determine popln and send FIT in the event history
16) Step 16 – Search couple of participants, go to edit, open the event history and see the event is logged as determine population and send FIT with the event dates.	17) Result of Step 17 - – shd have generated the part form for the
17) Step 17 - Check whether the participant form is generated	

	determined popln
4. Opt Out and send FIT continues	**Opt Out continues**
18) Step 18–Change the status of two of the opt outs from OV1popln as opt out written, screen print and save these participants details for further reference as OW3 population.	18) Result of Step 18 – to check the follo: steps
19) Step 19 - Run the batch and see whether opt out written letter is generated for the OW3 population.	19) Result of Step 19 - should not generate the Thank you/ information letter for OW3
20) Step 20 - Change the status of two of the opt outs from OR1to opt out written, screen print and save these participants details for further reference as OW4 population.	20) Result of Step 20 - is to compare the results for the following steps
21) Step 21 - Run the batch and see whether opt out written letter is generated for the OW4 population.	21) Result of Step 21 - should not generate the Thank you/ information letter for OW4
22) Step 22 – Select one participant each from OW1, OW2, OW3, and OW4 and check their program status.	22) Result of Step 22- the program status shd be exit program
23) Step 23 - Run the batch to retrieve the Send FIT event and check the participants and screen print and save as O_FIT population.	23) Result of Step 23 Participants from verbal and rep pool whose status hasn't changed to opt out written should be in the batch to send the FIT kit
5. Send Result Letter	**Send Result Letter**
24) Step 24 – Enter FIT results for 10 participants who are not opted out by any method, screen print and save the details of these participants (SR1 population)	24) Result of Step 24 - is to compare the results for the following steps
25) Step 25 – Run the batch for send result letter	25) Result of Step 25- SR1 popln shd be selected, the program status of SR1 shd be send FIT result letter
6.Send Reminder Letter and continuation of O_FIT popln	**Send Reminder Letter & O_FIT popln**
26) Step 26- Run the batch for reminder letter, screen print and save the population as RL1	26) Result of Step26 – shd include all the participants except who has not opted out by any method and who has FIT result in place.
27) Step 27- Select two participants from O_FIT population (one each through verbal and representative pathway) and change their status to opt out written, screen print and save as OW5	27) Result of Step 27 - is to compare the results for the following steps
28) Step 28-Run batch to generate the opt out written letter	28) Result of Step 28 - should not generate the Thank you/ information letter for OW5
29) Step 29 - Check the status of the OW5	29) Result of Step 29 – The status shd be exit program
OR	

30) Step 30 - Select two participants from O_FIT population (one each through verbal and representative pathway) and enter FIT results for these two participants, screen print and save the population as SR2 31) Step 31 – Run the batch to generate the send result letter **7. Reminder Letter Population** 32) Step 32 – Select 5 participants from RL1 population and enter FIT results , screen print and save these participant details 33) Step 33 – Run the batch to generate the send result letter 34) Step 34 – Select randomly 5 participants from RL1 population and check the status	30) Result of Step 30 - is to compare the results for the following steps 31) Result of Step 31- SR2 popln shd be selected, the program status of SR2 shd be send FIT result letter 32) Result of Step 32 - is to compare the results for the following steps 33) Result of Step 33- RL1 popln shd be selected, the program status of RL1 shd be send FIT result letter 34) Result of Step 34 – the status should be exit program except for the 5 participants in Step 32

Pass	***Fail***	**Action Taken**	**Priority/Severity**