

# **Population Health Informatics: Summer Internship Experience at CDHA**

**By**

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**Performed at**

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**Supervisor: Mr. Neil Ritchie, COO, CDHA**

## Acknowledgement and Endorsement

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

I would like to thank Mr. Neil Ritchie, Chief Operating Officer (COO) of Capital District Health Authority (CDHA), for his supervision and guidance in all the stages of my internship experience; Dr. Grace Paterson, Internship Coordinator of Health Informatics program for regularly monitoring and supporting with valuable ideas; Pam Ciccarelli, Executive Assistant to the COO, for her full support whenever I needed from her and making my stay in CDHA enjoyable; and all the CDHA senior leadership as well as other CDHA staff in giving me the necessary help and support as well as encouragement to have a successful internship experience.

I would like also to acknowledge the effort of my colleague L. Lynn Lowe, the Masters of Health Administration (MHA) resident, by sharing her experience and knowledge in the entire stages and made my entire work fruitful.

Abel M. Gebreyesus

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Signature

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Date

## Executive Summary

Internships give students of Health Informatics opportunities to receive on-the-job training and connect their academic health informatics knowledge with the real world. Furthermore, it gives them an opportunity for networking with future possible employers as well as other related future organizations in the area of health and/or informational technology.

This internship done at CDHA is composed of different parts and tasks. The first one was to develop a campaign design; the second, which is the follow up of the first assignment, to research and develop strategy for CDHA obesity management initiative under population health theme; the third part was, data gathering about CDHA committees; and the last part was consulting communication tool for mid and high level managers. In addition to all these activities, the author also attended a number of board meetings as part of decision making experiences.

The first and the second assignment, the author shared and worked with Masters of Health Administration resident, Mrs. Lynn Lowe. The third and the fourth assignment, however, was an exclusive assignment.

As the experience was multi task and the majority of the activities were done with the MHA student, it was a good experience to work in a multi-task environment with other health professionals. This gives a chance to learn the real world scenario of health informatics, and also it was an opportunity to let others know about health informatics at the same time able to know about their field of expertise and profession.

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## 1. Introduction

According to the 2000 figures of GPI Atlantic study, a non-profit research and education organization, chronic illness costs each resident in Nova Scotia on an average \$3,200 a year. This means, the most common chronic diseases like diabetics, high blood pressure, stroke etc, costs \$3 billion for Nova Scotia's economy. [1] Although the figure is such gloomy in terms of the cost to the province and especially for the health care system, this same study indicated that, 40 percent of these illness and half of premature deaths due to chronic disease are preventable. [2]

In such circumstances, health care system is highly vulnerable and cannot tolerate the pressure from such costs to maintain and improve health care costs. Chronic diseases by definition are conditions that stay with the patient for years, most probably for the rest of the patient's life. These diseases, most of the time but not all the time cannot be cured and thus have to be managed. This persistence makes chronic conditions very expensive and adds greatly to the cost of health care, both directly (through spending on medical products and services) and indirectly (through lost productivity). [3]

The reality for Capital District Health Authority (CDHA) is also the same; and both as public health agency for the district as well as a collection of hospitals, CDHA understands well to take necessary action to reduce the cost of chronic diseases in the province. This can be done in different methods, initiatives and ways through a concerted effort of CDHA and other partners, as the problem is deep rooted and only be tackled with full participation of the partners and the public.

The internship for the author was given on within this context to design a campaign as well as to perform other assignments instructed by the supervisor.

This 16-week internship was done under the direct supervision of Chief Operating Officer (COO) of CDHA and shared with other colleague, a resident from Masters of Health Administration and located at Bethune building of the Victoria General (VG) site.

## 1.2 Introduction to the Organizations

CDHA exists within the largest integrated academic health district in the Maritimes. The Health District is one of nine health districts in Nova Scotia. The Capital Health District comprises of the Halifax Regional Municipality (HRM) and the western portion of Hants County of the province.

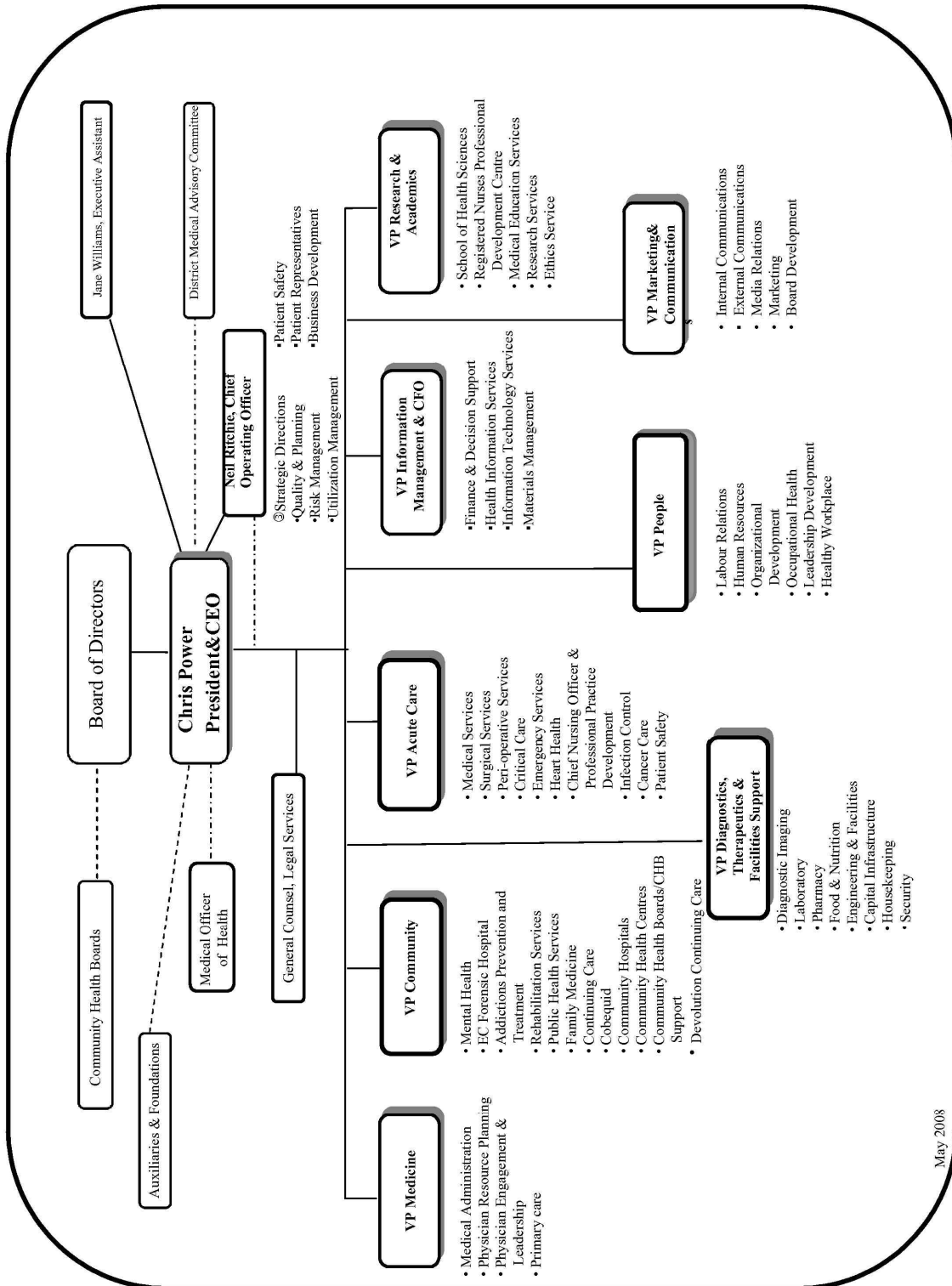
Capital Health provides core health services to 395,000 residents, or in other words, 40 per cent of the population of the Nova Scotia and tertiary and quaternary acute care services to residents of Atlantic Canada. Specialized adult health services are provided to a referral population from the rest of the province of 550,000, and to residents of New Brunswick and Prince Edward Island. Approximately, there are 10,000 staff are working for the Capital District Health Authority (CDHA).

The Capital Health District also encompasses seven volunteer Community Health Boards that advise CDHA through the development of community health plans and encourage public participation in health planning. [4]

According to recent information posted to all CDHA staff by Chris Power, President and CEO of Capital Health, the International Association of Public Participation (IAP2) has selected Capital Health's Strategic Quest as their Project of the Year for excellence in public participation. IAP2 is the only professional association dedicated to improving public participation and has more than 1,000 members from 26 nations, and a 19-member Board of directors from Australia, Canada, United Kingdom, and the United States.

This shows how the organization is in transformation stage to be a world leading haven for care and treatment. Thus, the author had got the internship opportunity within such atmosphere of a new journey to realize the shared vision of healthy communities.

In order to explain, where the author was assigned and what he performed in CDHA, this is the latest organizational chart of CDHA.



May 2008

Thus, the author was working under the direct supervision of Chief Operating Officer (COO) of CDHA, Mr. Neil Ritchie. When the author joined to the office, he was assigned to work in the population health informatics area, with a title as Population Health Informatician.

## **1.3 Description of the work**

### **1.3.1 Developing Design for a Campaign**

According to the assignment given to the author, the main objective of the internship opportunity is to develop a campaign design in order to impact the life style of the community residing in the district for better healthy living.

There are different researches that show Nova Scotia has one of the worst rates of chronic disease prevalence rate. According to the 2000 figures of GPI Atlantic study, a non-profit research and education organization, chronic illness costs each resident in Nova Scotia on an average \$3,200 a year. This means, seven types of chronic diseases, such as diabetics, high blood pressure, stroke etc, costs \$3 billion for Nova Scotia's economy. [5] Still, according to this same study, only four types of chronic diseases kill an estimated 5,800 Nova Scotians every year, account for nearly three-quarters of all deaths in the province, and are the major cause of premature death and hospitalization. [6] Although the figure is such gloomy in terms of the cost to the province and especially for the health care system, this study indicated that, 40 percent of these illness and half of premature deaths due to chronic disease are preventable. [7]

Thus, instead of treating and focusing on individual patients, based on the principle of population health informatics, the idea was to focus on large number of people in order to change their attitude on how they treat themselves daily as well as to bring significant change in the health of individuals, or the community.

Before any practical steps started the theoretical design should be put on paper. And the author worked to come up with a paper based campaign design, which would be a starting point for



further discussion and next practical steps. *(Please see Appendix A for the paper based campaign design and steps)*

After sketching out the paper based design, the author related the assignment with basic health informatics concept of knowledge management. The assignment was dealt on the Data, Information, Knowledge and Wisdom general theory. According to this theory, decisions and any kind of solutions should be based on the relevant data and build knowledge on the analysis of information that leads to wisdom; and ultimately to practice.

Based on these facts, the author had to gather data and drive some information from there and build knowledge to decide what kind of campaign should be and how it is going to be delivered to whom and the rest details based on the paper design. By definition, design a campaign is an intervention for a certain problem; but in this case for a chronic disease which is prevalent in the province, and it means it also applies to the district. But, in order to answer how it is going to be done, first the question of "who", "what", "where", and "when" questions of the process should be answered. Because, 'knowledge is the combination of data and information, to which is added expert opinion, skills, and experience, to result in a valuable asset which can be used to aid decision making' [8]. Turban, et al also said: 'Knowledge is data and/or information that have been organized and processed to convey understanding, experience, accumulated learning, and expertise as they apply to a current problem or activity' [9].

In order to come up with information based solution, the author in collaboration with a colleague from the Masters of Health Administration resident tried to gather data. But, it was not successful to get local data and without such data, information and knowledge, there is no likely wisdom to design. After about two months of work to design a campaign to reduce chronic disease in Capital District Health Authority, the author and his colleague invited to present their findings (the so far result, challenges and recommendations) to the CDHA Board of Directors Population Health Committee on 18 June, 2008.

*(Please see Appendix B)*

The population health committee discussed the issue and recommend based on the presentation.  
(Please see Appendix B)

### **1.3.2 Developing CDHA Obesity Management Strategy**

The presentation and the recommendations of CDHA Board of Directors Population Health Committee led the author and his colleague to focus on a related activity. Based on this assumption, the author did a one-to-one discussion with Mary Russell, director of CDHA Community Health, on July 2<sup>nd</sup> 2008 about what can be done to this latest task, i.e developing CDHA obesity management strategy. Following also the team (the author and his colleague) had a meeting with Mr. Neil Ritchie on July 16<sup>th</sup> 2008 regarding the next steps. Hence, the author focused on developing “CDHA Obesity Management Strategy”. Obesity is selected, because for the population health problem, managing obesity is the fundamental issue.

The objective of this effort is to set up a system to monitor the indicator based on better performance. As obesity is challenging public health problem, CDHA had to come up with a strategy or action plan to tackle it.

In collaboration with L. Lynn Lowe (the MHA intern), the author worked to come up with a strategy and general frame work for a capital health for a September regular meeting of CDHA Board of Directors Population Health Committee. Accordingly, some of the questions to be answered were:

- What does the health status data tell about obesity as a public health problem?
- What are the district’s Community Health Board (CHB) plans and recent updates? (This can include review plans; interviewing the coordinators; possibly some CHB members).
- What are others across Canada doing about obesity?
- What are other District Health Authorities (DHAs) in NS doing about the issue?
- What is the community readiness and organizational readiness of CDHA?
- What would an action plan to move forward look like -would have components/ working groups-Physical activity, healthy eating, community health team etc

In order to answer some of the questions and other related activities, the author and his colleague of the MHA resident interviewed different people from CDHA as well as from Dalhousie University, who did extensive research in the area. Some of the people interviewed were:

- Susan Dunn, Coordinator, Community Health Board
- Mark Embrett, Summer Resident, Community Health
- Dr. Sara Kirk, Canada Research Chair in Health Services Research, Applied Research Collaborations for Health, School of Health Administration, Dalhousie University
- Tarra Penney, Research Analyst at Applied Research Collaboration for Health (ARCH)
- Monique Mullin –Roberts, Coordinator, Dartmouth Community Health Board
- Dr. Michael Vallis, Psychologist and working actively in obesity
- Geoff Wilson, Senior Advisor, Corporate Communications
- Dawn Burstall, Healthy Workplace Leader of CDHA Healthy Work Place
- Caroline Carr, Coordinator, Primary Care Program

Based on an extensive discussion, the author and his colleague come up with a product that they intended to be a discussion paper for future CDHA Board of Directors Population Health Committee members. (*Please see Appendix C* for the version of the full discussion paper).

As part of this discussion paper, one of the activities the author focused was to develop a logic model, so that it can show the components of the action plan, in terms of ideas (input), outcomes (output), activities, until the evaluation stage. This logic model can show the link between the components, activities and resources and the outcomes.

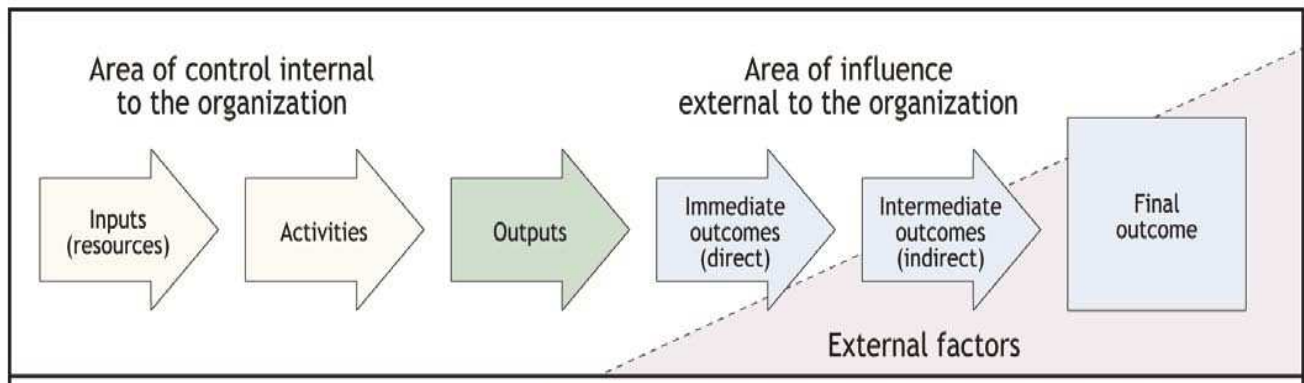
Thus, the author comes up with this logic model:

**Why Capital Health Make Obesity A Priority**

Obesity is a global epidemic, according to World Health Organization (WHO). The story is also the same in Canada; and especially, Nova Scotia has one of the highest obesity rates in the country. This means, chronic diseases related to obesity is also high. The Capital District Health Authority has also the same alarming trend. Some of the facts are:

- Maternal weights have increased dramatically over the last 20 years in Nova Scotia
- In Nova Scotia, deliveries in severely obese women have more than **tripled** since 1988
- These trends have implications for population health and health care delivery
  - *Maternal and child health*
  - *Staffing*
  - *Resources*

Therefore, as part of putting obesity in the forefront of population Health Strategy, the following idea puts the strategy in the descriptive logic framework model.



**Vision**

Attain and keep a healthy weigh of CDHA residents

**Mission**

Based on the current baseline data, to decrease the percentage of obesity and obesity related disease

<b>Inputs</b>	<b>Activities</b>	<b>Outputs</b> Participation	<b>Outcomes – Impact</b> Short Term    Long Term
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<p><b><i>What Kind of investments can be done?</i></b></p> <ul style="list-style-type: none"> <li>• Organizational Initiative</li> <li>• Financial resources</li> <li>• Material resources</li> <li>• Human resources</li> </ul>		<p><b><i>Who are the players?</i></b></p> <ul style="list-style-type: none"> <li>• CDHA through its board/committee/leadership</li> <li>• Business</li> <li>• Educational Institutions</li> <li>• Government/Health Policy Makers</li> <li>• Community-Health Team</li> </ul>	<p><b><i>What is going to be done?</i></b></p> <ul style="list-style-type: none"> <li>• Mobilizing and engaging all partners</li> <li>• Involvement of decision makers, educational institutions (including schools), service sector, private sector, health care workers</li> <li>• Engagement of mass media</li> <li>• Involvement of Business (private) sector,</li> <li>• Regular Data and Surveillance</li> <li>• Aggressive Social Marketing</li> </ul>	<p><b><i>What the short term results are:</i></b></p> <ul style="list-style-type: none"> <li>• Change of Knowledge, Attitude and Practice towards healthy eating and physical activity</li> <li>• Availability of organizational policies, framework, Indicators</li> <li>• Monitoring Data and surveillance availability</li> </ul>	<p><b><i>That the ultimate results are:</i></b></p> <ul style="list-style-type: none"> <li>• Decrease high BMI prevalence</li> <li>• Decrease chronic diseases</li> <li>• Sustainable health care system</li> </ul>
<p align="center"><b>Assumptions</b></p> <p>The background research done to highlight the seriousness of obesity in relation to CDHA organizational readiness.</p>			<p align="center"><b>External Factors</b></p> <p>This initiative to prioritize obesity in CDHA success depends on a number of factors, mainly on the active participation of partners and political will</p>		

	from policy makers.
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***Evaluation - How will measure and report the outcomes?***

- Based Line Data
- Linking of Population Health/Obesity Indicators with the Dataset/Data
- Sample of BMI vs. age, BMI vs. Gender, BMI vs. socio demographic factors etc.
- Prevalence of Diabetes, Cancer, Cardiovascular Disease, High blood pressure, etc
- Periodical Monitoring/Surveillance:
  - *Knowledge*
  - *Attitude*
  - *Practice*

### 1.3.3 Systematic Analysis of CDHA Committees

A committee is usually a small deliberative gathering, with a common purpose to solve problem, discuss issues or decide on a matter affect the health care system. The term, which is now widely popular in health care organizations derived from the Middle English word 'committee', trustee and also from the Anglo-Norman 'comité'. [10]

There are over 50 million organized committees in North America alone in different organizations from business to government or to non-governmental organizations. Every day there are over 11 million committee meetings held in the United States alone; however, the sad story is, research indicates 50% of committee meetings time is wasted and unproductive. [11] Undoubtedly, a huge portion of these 50 million committees found in the health care system. As health care system is complex in its structure, institutional management of all the committees is vital for their effectiveness, so that to meet the satisfaction of patients and the larger community; and ultimately, to the effectiveness of the health care system. Such organized approach is vital to CDHA, especially at this time, as the organization is in its transition period to become to be a world leading haven for care and treatment.

Too often, committee meetings are poorly organized and unstructured; members are unprepared or are lacking clear goals and objectives resulting in poor general committee performance.

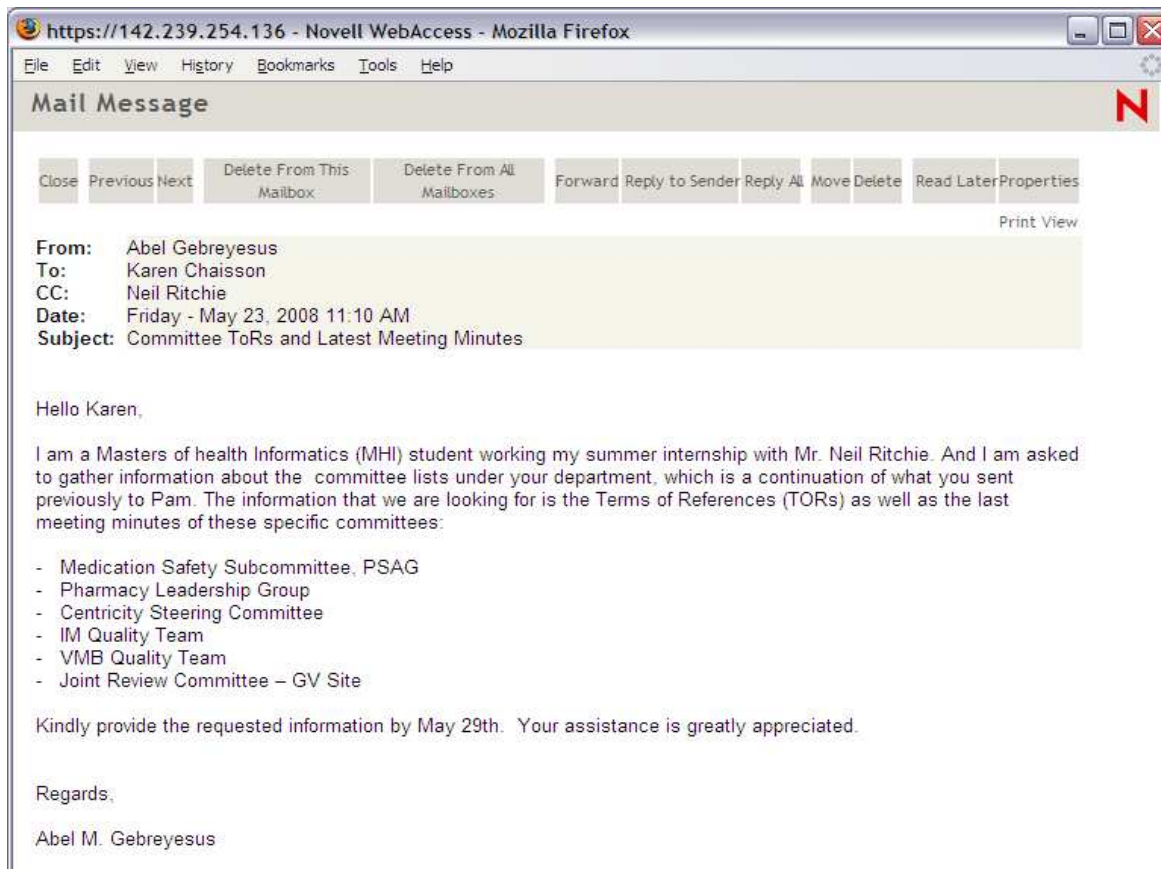
Serious attempts to improving committees' effectiveness can cost in all areas of the organization.[12]

Hence, based on such reality of pros and cons, it was imperative for CDHA to track committees and gather data about their activities, who sits in each committee, what the committees TORs are, the frequency of their meetings, to mention some of them; and ultimately to measure their contribution to the organizations performance. Hundreds of committees at different levels (VP, Directors, Managers, program heads etc...) are set up. Most of these committees are built within the structure of the CDHA, and others are also set up in partnership with outside organizations, like Dalhousie University or other government and private departments. Since Committees are directly responsible to the organization that created them, CDHA had to evaluate on how their performance and their contribution to the effectiveness of the organization.

As committee analysts mentioned, significant organizational change occurs, for example, when an organization changes its overall strategy for success, adds or removes a major section or practice, and/or wants to change the very nature by which it operates. Organizations often undergo significant change at various points in their development. [13] The process of making CDHA committees more productive and acknowledge their contribution is also known by introducing significant change.

As per the instructions and discussions with Mr. Neil Ritchie, COO of CDHA, on June 06. 2008, the author sent a letter to all Vice President Assistants of the departments asking TORs of the selected committees, which a Vice-President or a director seats with the latest minutes, namely:

- VP of Clinical Care (Barb Hall):
- VP of Acute Care (Kathleen Graham):
- VP of Diagnostics, Therapeutics and Facilities support (Ken Baird):
- VP of Research and Academic Affairs (Dr. Raymond LeBlanc):
- VP of Medicine (Dr. Brendan Carr):
- VP of Administration (Kathy MacNeil):



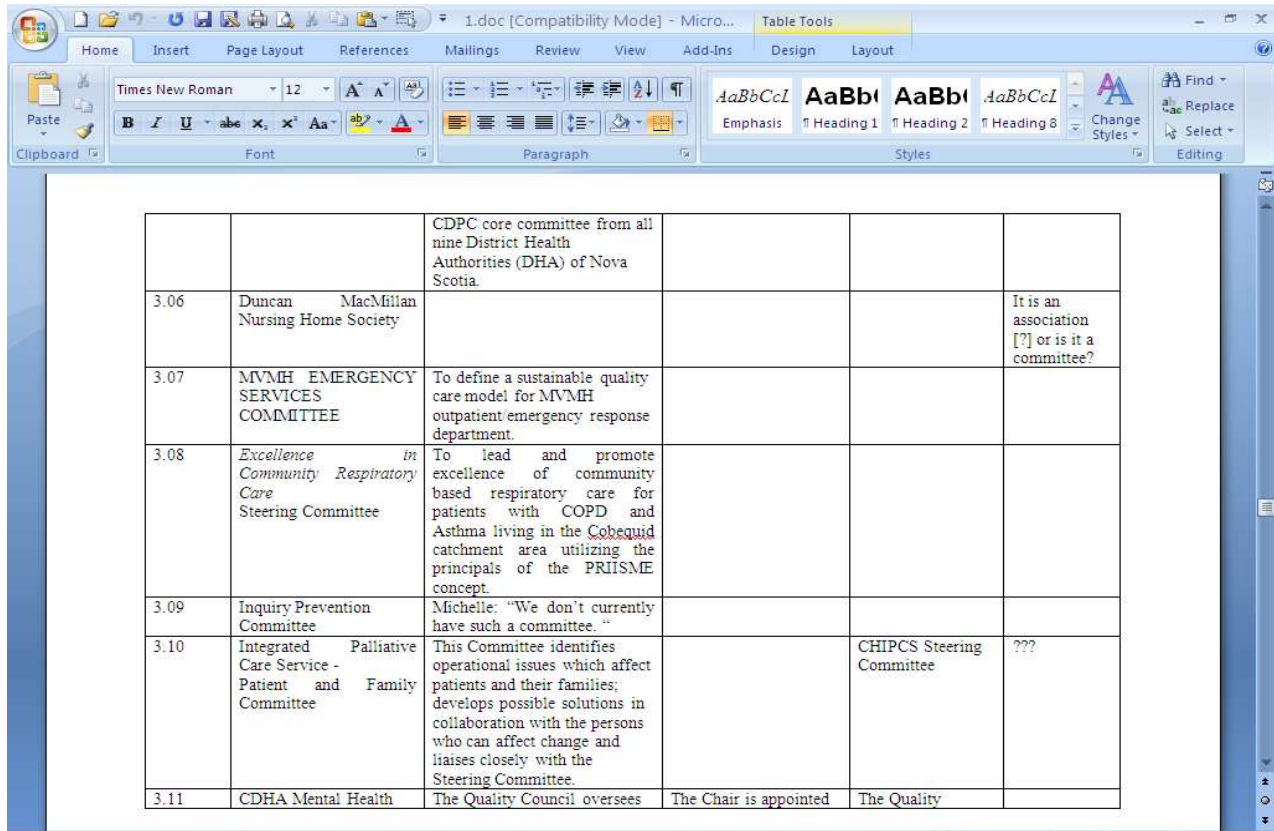
After such request, with the active help of all assistants of the VPs, information about the selected committees started to flow, though the author couldn't get requested data for all the requested committees. As the data was too much to handle, the author agreed with the supervisor, on the format to be guided. From the letter sent to the VPs, a basic starting format was prepared; and accordingly, twenty five pages of data gathered. However, still there are plenty of committees that they didn't send the information requested, probably with different reasons. Some of the reasons are that, unreported committees might no longer exist, or the responsible staff doesn't have any clear TORs to answer the questions required or since many staffers was out for summer vacation, the timing might affect the rate of the response not to have full response rate.



The following is an example of the prepared descriptive data set for future analysis and a base for tracking system:

**CDHA COMMITTEE DETAILS**

Item No	Name of the Committee	Brief Description of the Committee	Chair person	Reports to	Comments
<b>Acute</b>					
1.01	Medicine Teaching Unit (MTU) Management Committee	This group will function as a management team to identify and implement operational and academic issues regarding the MTUs	the Clinical Service Chief MTU, Department of Medicine	- Department of Medicine Executive Committee - Department of Medicine Residency Training Committee - Vice President, Acute Care, Capital Health - Vice President, Medicine, Capital Health - Vice President, Academic Affairs, Capital Health	
1.02	Bed Management – HI Site	1) Improve patient flow through EMERG, OR, PACU, ICU, IMCU and			We were looking for VG site Bed

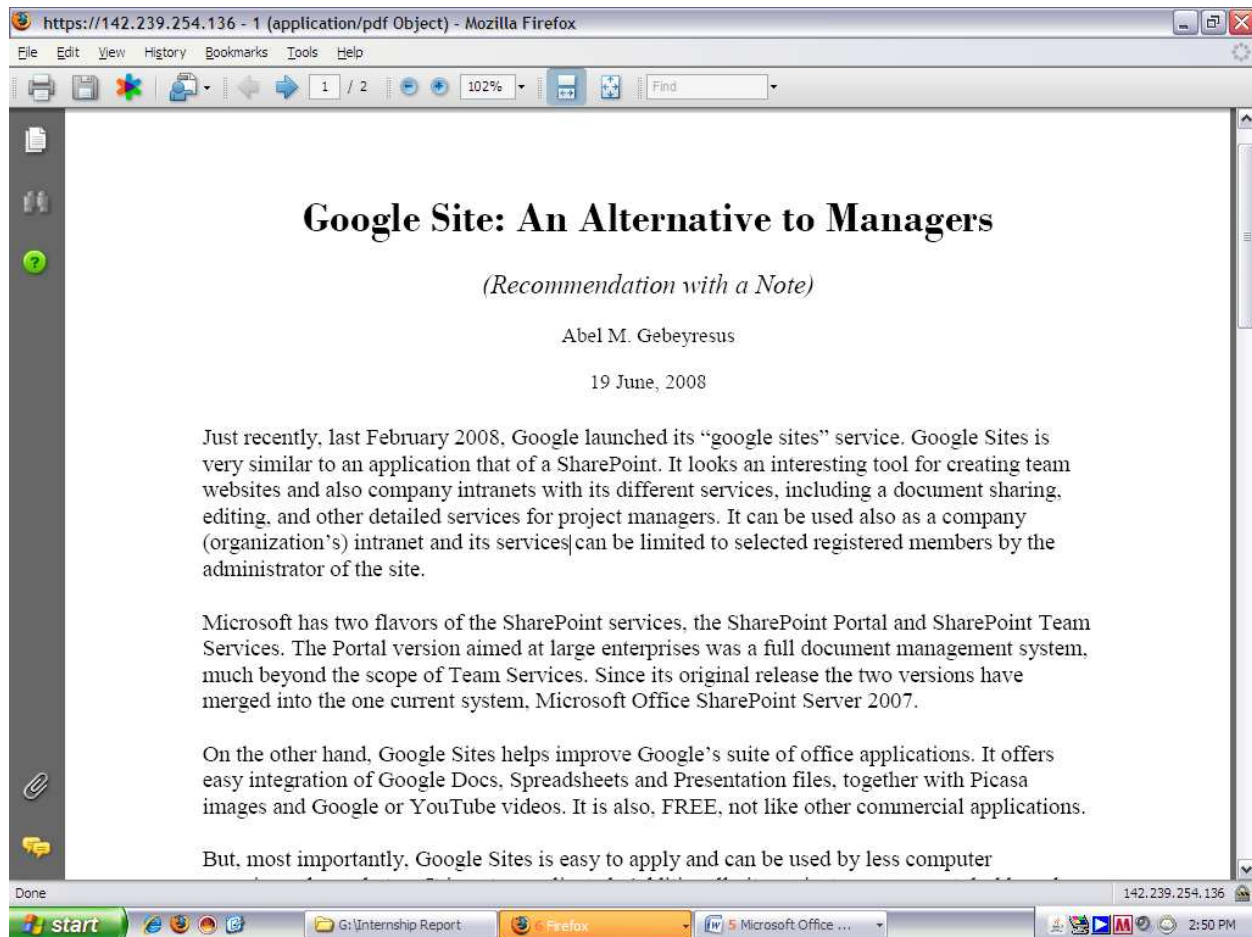


		CDPC core committee from all nine District Health Authorities (DHA) of Nova Scotia.			
3.06	Duncan MacMillan Nursing Home Society				It is an association [?] or is it a committee?
3.07	MVMH EMERGENCY SERVICES COMMITTEE	To define a sustainable quality care model for MVMH outpatient/emergency response department.			
3.08	<i>Excellence in Community Respiratory Care</i> Steering Committee	To lead and promote excellence of community based respiratory care for patients with COPD and Asthma living in the Cobequid catchment area utilizing the principals of the PRIISME concept.			
3.09	Inquiry Prevention Committee	Michelle: "We don't currently have such a committee."			
3.10	Integrated Palliative Care Service - Patient and Family Committee	This Committee identifies operational issues which affect patients and their families; develops possible solutions in collaboration with the persons who can affect change and liaises closely with the Steering Committee.		CHIPCS Steering Committee	???
3.11	CDHA Mental Health	The Quality Council oversees	The Chair is appointed	The Quality	

### 1.3.4 Consulting Communication Tool for Mid and High Level Managers.

This task is part and continuation of the previous task to gather data and put the basics to track CDHA committees. As part of changing CDHA to “become a world-leading haven for people-centered health, healing and learning”, the organization needs to have an effective mechanism for sharing information among managers at different levels. Hence, it is vital to have a communication tool that can fit the needs of the organization.

For this purpose, previously, CDHA was planning to set up a MS share point tool. However, later on, the author was asked to search other similar tool(s) used for communication for mid and high level managers. This communication tool or software should be an instrument of accountability, efficiency and update information exchanging among all registered users. By encouraging to use the recommended tool, CDHA leaders can save resources by avoiding duplication and leads to better coordinated effort to change the organization.



(For full note, please refer to Appendix D)

### 1.3.5 Attending Board Meetings and Events

This is not a specific task or a problem to come up with a solution. But, it was an essential part of the internship process. As part of the student internship/residency program, there is an encouragement from all the CDHA senior management staff to invite interns or residents to attend board or other senior committee meetings. With this privilege, the author had a chance to attend as an observer such high level meetings and learn how the discussions were handled, the way CDHA leaders share ideas and pass decisions. As an observer, attending CDHA meetings

helped the author to understand issues that affect the organization and to get to know with the leaders of this largest district health authority in the Atlantic Provinces.

## 2. Health Informatics Relevance

### 2.1 Develop campaign design

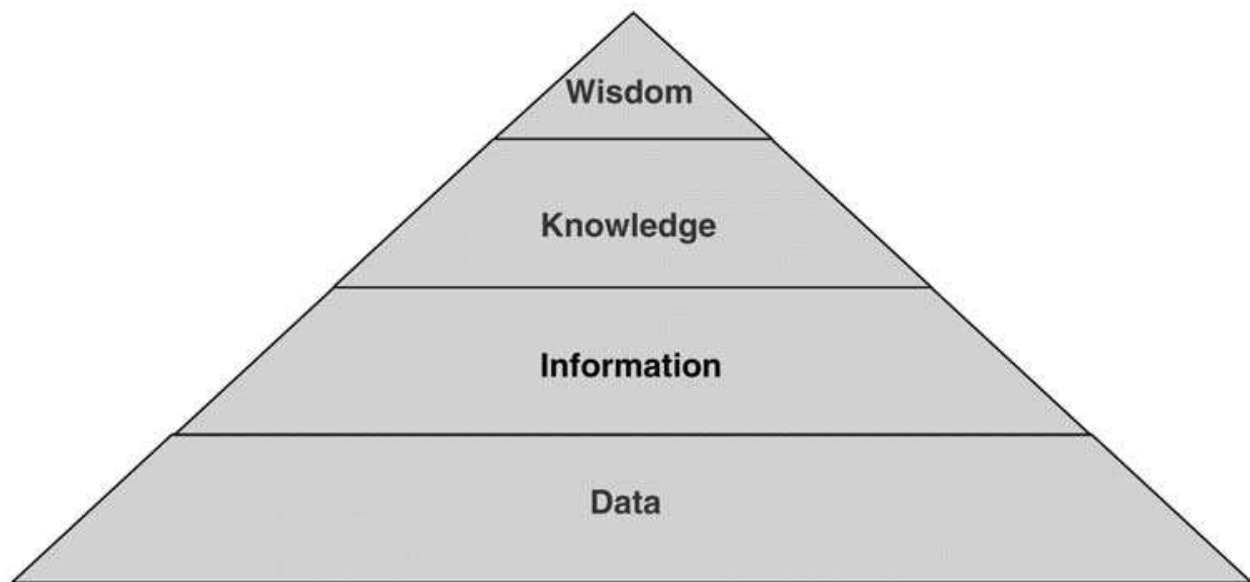
Health informatics has a key role in assisting general practice in improving population health strategies. General practices that have an information management strategy in place and staff who promote clean data protocols can use informatics principles to retrieve population health statistics from their own practice. Health informatics strategies in the form of recalls and reminders can also assist general practices to engage in population health activities such as Pap tests and preventive health activities. [14]

Effective public health practice requires timely, accurate, and authoritative information from a wide variety of sources. [15] As the author and his colleague presented to the CDHA Population Health Committee, however, the inconsistencies of data as well as absence of accessible, timely data made the task challenging. In point of fact, this challenge makes it clear that lack of health informatics at all levels of health care system make difficult to have timely, accurate and authoritative information. With the rapid advent of information technology and with the high involvement of health informatics professionals, such challenge can be minimized. This is a challenge; and this is not solved with a single shot, rather with consistent effort and from the bottom-up.

Ackoff offers the following definitions of data, information, knowledge and wisdom, and their associated transformation processes [16]:

- Data are defined as symbols that represent properties of objects, events and their environment. They are the products of *observation*. But are of no use until they are in a useable (i.e. relevant) form. The difference between data and information is functional, not structural.
- Information is contained in descriptions, answers to questions that begin with such words as who, what, when and how many. Information systems generate, store, retrieve and process data. Information is inferred from data.

- Knowledge is know-how, and is what makes possible the transformation of information into instructions. Knowledge can be obtained either by transmission from another who has it, by instruction, or by extracting it from experience.
- Wisdom is the ability to increase effectiveness. Wisdom adds value, which requires the mental function that we call judgment. The ethical and aesthetic values that this implies are inherent to the actor and are unique and personal.



Ackoff said: “there can be no wisdom without understanding and no understanding without knowledge” [17] Thus, in order to make a campaign design specific to the Capital District Health Authority, the interventions should be based on the relevant data to have information about the populations and the specific problem in a specific age, gender, social group, location and further its relations to a number of factors to gain substantial knowledge on healthy living and to change their attitude on how they treat themselves daily as well as to bring significant change in the health of individuals, and the community.

Unlike the business sector, the health sector is not such rich in these basic structure of DIKW flow, at least it is not yet fully managed. While airlines or fast food companies have extensive data that usually turn into information and knowledge, run their business wisely, health care is lagging behind in having accessible data to design, formulate and figure out appropriate

decisions. That's why after the Canada National Forum on Health recommendation said in its report: "The health care community came to realize that there was still limited information available to support decision making related to clinical care of individuals and groups of patient/clients of the health systems" [18], a huge investment to upgrade the Canadian health information system was dedicated. However, still there is a long way to go to make health care information system effective and generate accessible information for better decision making or academic purposes, all for the better health care system at all levels.

This task showed the author, the real world challenge on the scarcity of data and information for specific area. Without specific data, information, there can not be specific knowledge and wisdom. May be different from other fields, health care is both an opportunity and a challenge. It is an opportunity, because everyday there are abundance of data from patients, doctors, or other health care workers within the system. However, it is a challenge, because, there is high need of managing these data and turn to better decision making process, and in this case to design an effective design.

## **2.2 Developing CDHA Obesity Management Strategy**

In its simplest form, the logic model analyzes the work into four categories or steps: inputs, activities, outputs, and outcomes. These represent the logical flow from:

1. inputs (resources such as money, employees, and equipment) to
2. work activities, programs or processes, to
3. the immediate outputs of the work that are delivered to customers, to
4. Outcomes or results that are the long-term consequences of delivering outputs.

A logic model is a representation or a pictorial diagram that shows the relationship between an intended program components and activities and desired health outcomes. This is part of information-based logic development. The components and activities as well as the background information are all data based information turned out to be knowledge and further wisdom. A logic model provides members of program staff, collaborators, stakeholders, and evaluators with

a picture of the overall program including the background. It also shows how the program operates, and what it intends to accomplish.

As any basic knowledge component, developing health logic model traces with adequate data and information synthesized. Hence the CDHA Obesity Logic Model is derived from research findings, interviews or discussions with different CDHA staff working with obesity issues as well as researchers from Dalhousie University. Gathering all the facts help to formulate what should be the inputs in order to have the intended outputs with the proposed short term-long term outcomes.

As the research (secondary source of knowledge) and the discussions (primary source of knowledge) were mature enough, they gave the author to figure out the external factors; so that it was stated as “The success of the initiative to prioritize obesity in CDHA depends on a number of factors, mainly on the active participation of partners and political will from policy makers.” This analysis comes from the gathering of the tacit and explicit knowledge from the secondary readings as well as from the discussions.

### **2.3 Data Gathering of CDHA Committees**

While an organization might not operate without the help of committees, it is an ongoing challenge for every organization to keep each committee focused and operating efficiently. Health care organizations, as in other sectors, are suffering from “committee-itis” or too many committees. Theoretically, “they are used to save time at general meetings. Matters can be discussed and reviewed in detail by a committee and recommendations brought to the general meeting or to board or executive body for decision. By having effective committees to discuss issues in detail and come up with relevant solution or decision, the work of the organization becomes more efficient. The specialized skills and interests of members are used to their full advantage.” [19]

However, at a time their effectiveness is not managed, committees can be a meeting place for a group of people assigned by the organization, and have a very limited contribution to their Terms of Reference (TOR) when initially set up.

The author's work in this specific issue is an initial step for CDHA to gather relevant data about the committees, which a number of staff participated and extensive decisions are passed. By having this initial 25-page data, it can be a base to set up a database system for tracking committees within CDHA. Monitoring and evaluating purposefulness of committees is one of the challenges in health informatics field across Canada. However, as part of decision supporting system (DSS), gathering initial data is the best starting point on how the organization wants to proceed with the rest of the process. This is also important for future tasks for health informatics professionals to set up a mechanism or a tool which can be used as a health care decision supporting system. Previously, the focus of healthcare DSS is generally to monitor and enhance financial performance. Similar to other disciplines, DSS in healthcare are used for operational, managerial and strategic hospital decision-making. Operational decision-making includes resource allocation, activity-based costing and patient care decisions. Managerial decision-making in healthcare includes cost containment, evaluating profitability of departments, and integrating services among departments. [20]

### **2.3 Consulting Communication Tool for Mid and High Level Managers**

Obviously, this is the meeting place of health care and information technology. As the core purpose of health informatics, consulting on better information technology to enhance the capacity of health care system was the author's successful work in short period of time. As the task is also a learning experience about different communication tools, with their advantage and drawbacks, this opportunity was typical health informatics duty. The only limitation for this task was time factor. With more time and resources, different tools can be examined with a number of criteria, such as privacy and security, cost, technical support availability, user friendliness etc.... But, generally, taking into account and the purpose of having an alternative to MS share point software, Google Sites was the best option to offer as choice to be used in CDHA.



## 2.3 Attending Board Meetings and Events

Part of the health informatics is to be a leader of health care system at different level and be part of a key meeting place between information technology and health care. The experience the author gained by participating in some high level meetings as an observer showed him the real experience that he gained in courses like “health care project management” “Nursing Leadership” and other courses in the program. This is the best real world experience how health care decisions pass and run the everyday business.

## 3. General Discussion

Health care is both a challenge and an opportunity. It is a challenge because it deals with everyday problems of human kind, with thousands, if not millions of diseases, human knowledge not yet treated or can not cure. Everyday, people come to health services with a number of problems. This is a challenge for health scientists, physicians and other different forms of care givers. And most importantly, this is a challenge for health care leaders, who are working every day, for better of human kind in their respective places in whatever positions they are.

At the same time, health care is an opportunity, because it deals with massive information and data, be it quantitative and qualitative. The massive data that is flowing everyday makes it an opportunity to be a source of knowledge. A number of healthcare challenges are not solved, mainly due to lack of information.

Population health challenge and opportunity is also falling in this category. Effective public health practice requires timely, accurate, and authoritative information from a wide variety of sources. [21] As the author and his colleague presented to the CDHA Population Health Committee, however, the inconsistencies of data as well as absence of accessibility of timely data made the task challenging. In point of fact, this challenge makes it clear that lack of health informatics at all levels of health care system created difficulty to have timely, accurate and authoritative information.

Data exchange among hospital facilities, laboratories, and community care facilities—provides the opportunity for meaningful population health assessments. Smarter and more targeted interventions can offer more targeted health education and improve the ability of CDHA, as a public health agency, to identify and communicate health risks in the community.

One of the main issues to be mentioned in the entire process of the internship, there is a great opportunity of learning from the author's colleague. Working in a multi professional environment is an opportunity to gain more from others. This was reflected in the entire process. And this made the opportunity more enjoyable.

#### **4. Conclusion**

The major work assigned at first was to develop a campaign design for decreasing chronic diseases in the district. As this was expected to go through a population health informatics area, it was an opening of opportunities to work in public health informatics area, but also the challenges made it difficult to proceed without having further data. After sketching out the campaign design on paper and the steps to be followed, the practical steps were challenging. Specifically, the main challenge for this assignment was lack of the data for the target population. This made it difficult to develop a design and obliged the team to focus on developing obesity management for CDHA, based on the discussion and recommendation of Population Health Board committee. This later work could be a possible discussion paper for CDHA population health committee for September.

The other two activities, namely data gathering as well as consulting communication tool for mid and high level managers of CDHA were brief assignments. The data gathering for committee work is still open to make further analysis and make different decisions based on what is gathered. The communication tool is also one of IT related tasks, which come up with a precise recommendation for future communication among mid and high level managers of CDHA.

Last but not least, the participation of different meetings as an observer was a real experience of how health care decision makers discuss, analyze and decide. This experience is the best experience an intern can get from any health care decision making process.

## 5. Recommendations

- As the main challenge of this internship experience was lack of accessible and timely data, it is vital to address the data issue by investing on its applications.
- The author observed, due to CDHA commitment and interest, there are different initiatives and program in addressing the issue of obesity, healthy living and similar activities. However, there is less communication among executors. Investing in web 2.0 tools is vital and needs continues commitment.
- The data gathered to track the committee performance and effectiveness, can be further analyzed and be developed within a tool for further regular tracking as decision support system; and incorporated with other indicators of effectiveness within CDHA.

## References

- [1] Ronald Colman, *The Cost of Chronic Disease in Nova Scotia*, October 2002, GPI Atlantic
- [2] Ibid
- [3] David Nganele, *Managing health care costs: chronic disease and minority employees* Sep 2002, EAP Association Exchange
- [4] <http://www.cdha.nshealth.ca/default.aspx?Page=CoreSubPage&category.Categories.1=351&centerContent.Id.0=5829>
- [5] Ronald Colman, *The Cost of Chronic Disease in Nova Scotia*, October 2002, GPI Atlantic
- [6] Ibid
- [7] Ibid
- [8] D. Chaffey and S. Wood, *Business Information Management: Improving Performance Using Information Systems* (FT Prentice Hall, Harlow, 2005)., p. 223, quoting the European Framework for Knowledge Management
- [9] E. Turban, R.K. Rainer and R.E. Potter, *Introduction to Information Technology* (Wiley, New York, 2005)
- [10] <http://www.blurtit.com/q248931.html>
- [11] <http://www.mycommittee.com/Company/tabid/129/Default.aspx>
- [12] <http://www.mycommittee.com/Solutions/ForBusiness/tabid/214/Default.aspx>
- [13] [http://www.managementhelp.org/org\\_chng/org\\_chng.htm](http://www.managementhelp.org/org_chng/org_chng.htm)
- [14] <http://www.racgp.org.au/scriptcontent/curriculum/pdf/informatics.pdf>
- [15] Committee for the Study of the Future of Public Health, Division of Health Care Services, Institute of Medicine, *The Future of Public Health*. Washington, DC: National Academy Press, 1988
- [16] R.L. Ackoff, From data to wisdom, *Journal of Applied Systems Analysis* 16 (1989) 3–9.
- [17] Ibid
- [18] National Forum on Health, 1997, February
- [19] [http://www1.agric.gov.ab.ca/\\$department/deptdocs.nsf/all/agdex1333?opendocument#making](http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/agdex1333?opendocument#making)
- [20] R. Kohli and S. Devaraj, Contribution of institutional DSS to organizational performance: evidence from a longitudinal study, *Decision Support System* 37 (2004)
- [21] Committee for the Study of the Future of Public Health, Division of Health Care Services, Institute of Medicine, *The Future of Public Health*. Washington, DC: National Academy Press, 1988.

## Appendix

### Appendix A (paper based campaign design and steps)



# CAMPAIGN DESIGN TO REDUCE CHRONIC DISEASES IN HALIFAX REGION

CAPITAL HEALTH DISTRICT AUTHORITY

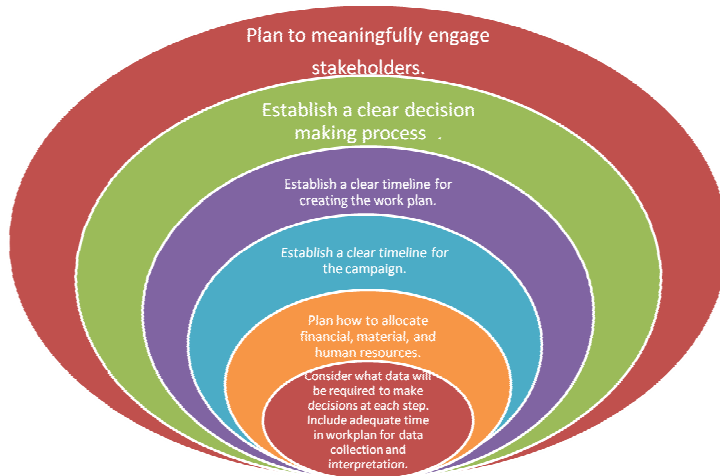
## A Step By Step Plan to “Our Promise”

Our  
Promise

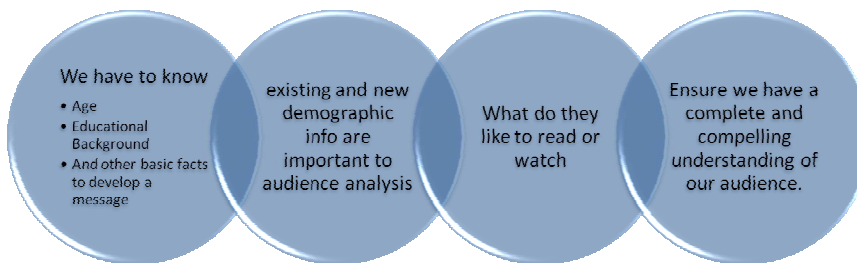
Our Promise is the work of many hands, many minds, and many hearts. It's about an intense cultural transformation within the community of Capital Health that calls on every one of us to make a continuous commitment to show up differently every day. This site belongs to all of us who are dedicated to Living Our Promise. To learn. To share. To inspire. Enjoy.



## Step One Where Do We Want to Go?









## Step Two Who is the Audience?




### Step Three

## Let's Define the Objectives

-  Identify the changes you hope to accomplish.
-  Consider all four levels (individuals, networks, organizations, and communities/societies).
-  Limit yourself to two to three objectives per level.
-  Describe a change rather than an action step.
-  Ensure objectives are SMART.
-  Ensure objectives are a strategic priority.

### Step Four

## Channels and Vehicles

- 
- Chose vehicles that will carry our message(s).
  - Assess the message delivered through these resources.
  - Choose the best channels and vehicles based on reach, cost, and effectiveness.
  - Use a mix of short- and long lived channels and vehicles.

## Step Five Mind the Timing and Event

Combine and sequence channels and vehicles across timeline.

Hold a big event first or build to a grand finale.

Include activities with both high and low visibility.

Be aware of special events and holidays.

Try to fit activities with the season.

### Cont...

Build in existing events but be ready for the unexpected.

Balance your timing so that you get repetition but avoid fatigue.

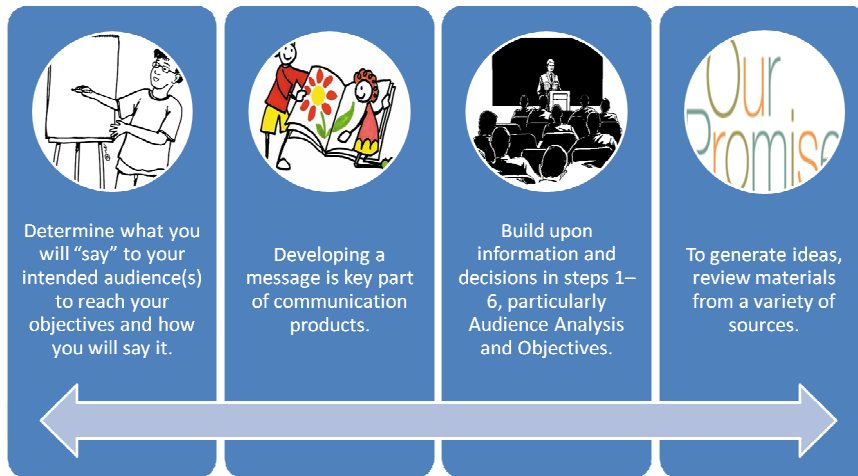
Apply the rule: 3 messages, 3 times, 3 different ways.

Link with large issues that are capturing the public agenda.

Opportunities to integrate activities are important.



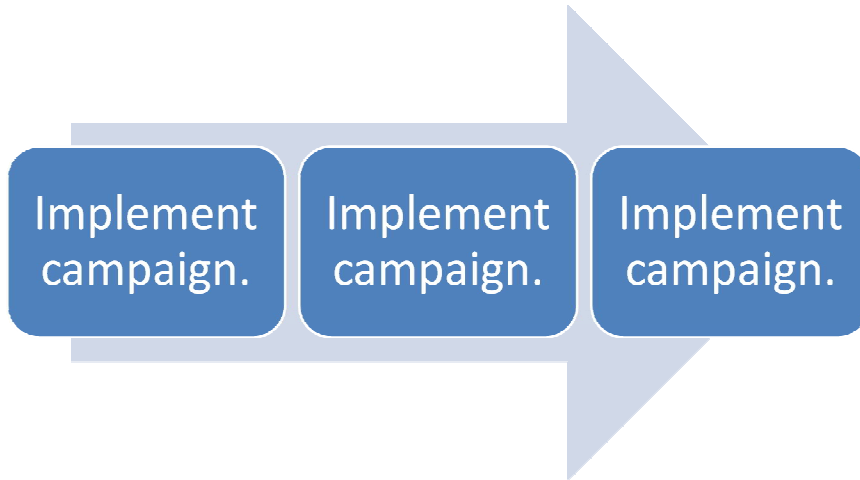
## Step Six Message Development – close to the Front



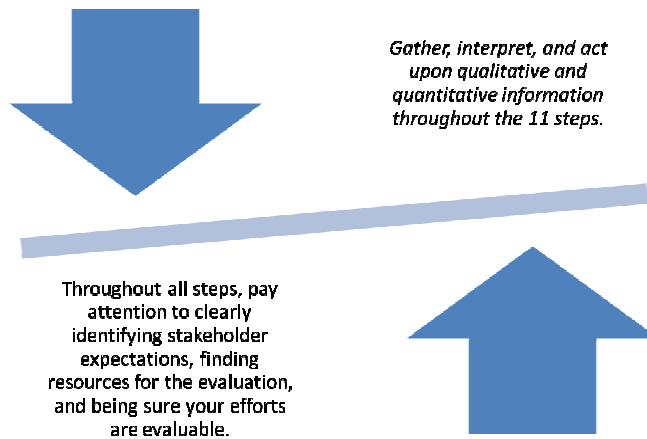
## Step Seven Let's Develop the Right Materials



## Step Eight The Front Line



## Step Nine Evaluation



## References

- Mainly adapted to CDHA situation from **Overview of Developing Health Communication Campaigns Workshop Tool Kit**, The Health Communication Unit at the Center of Health Promotion of University of Toronto Version 2.4 April 26, 2005.
- [http://www.publicaffairs.ubc.ca/facultystaff/diy/commstrat/create\\_comm\\_plan.pdf](http://www.publicaffairs.ubc.ca/facultystaff/diy/commstrat/create_comm_plan.pdf)
- <http://www.cdc.gov/youthcampaign/partners/scorecard/index.htm>

Appendix B (Population Health Standing Committee Meeting Minutes and Presentation of the Author with his colleague)

## Appendix B

**Population Health Standing Committee Meeting Minutes  
June 18, 2008  
Keating Board Room, HI Site**

**Present:** Ed Kinley, Neil Ritchie, Mary Russell, Tara Isenor, Merek Jagielski, Alan Ellis, Janice Townsend, Carissa Martin, Lyn Cleveland, Barb Hall, Abel Gebreyesus, Lynn Lowe

**Regrets:** Dallas Moore, Mike Marentette, Karen MacTavish, Gaynor Watson-Creed, Linda Young, Jean Menzies-Newton

**1.0 Call to Order:**

The meeting was called to order at 305.

**2.0 Approval of Agenda:**

The agenda was approved as circulated.

Ed introduced Tara Isenor, who is the new Board Coordinator. She will be attending all CDHA Board Committees for the coming year.

Merek was thanked for chairing the last meeting.

A copy of the poster of Mary Russell's work on population health indicators was presented by Ed Kinley and Leslie Anne Campbell at the recent CPHA National Conference. It highlighted the work that has been done to date on indicators.

*Note: Parking passes will be available for committee members who do not get reimbursed for parking. Please see Carol if you need one.*

**3.0 Approval of minutes from May 28, 2008:**

The minutes were approved as circulated.

**4.0 Presentation – Student Population Health Project (Lynn Lowe, Abel Gebreyesus):**

Neil introduced the 4 grad students, Lynne Lowe, Abel Gebreyesus, Janice Townsend and Carissa Martin (the two latter students have been attending our meetings on a regular basis).

Ed welcomed them on behalf of the committee and indicated that they are welcome to come to all our meetings. One of Capital Health's strengths is its link with the academic

community. He noted that the work students do is work that needs to be done, it is great experience for them and is a great retention strategy.

It was noted by Janice that she is working on poverty data within Halifax and she would like to present her work at our September meeting.

Lynn started the presentation and noted that it is based on their observations on population health in Capital Health. Some observations:

- There seems to be much energy, but not sure what to do.
- There seems to be pockets of information but nothing coordinated
- Is population health a mandate? Because it was noted as a priority in the Promise, should it be rolled out across the system?
- The data collected is not good enough to be used to make comparison
- How can we access other departments/providers data and expertise?

.It was noted by Lynn and Abel that they would be happy to come back and work on a future project for us

**The floor was opened for questions/comments from the committee:**

- Although Public Health has been involved in research for population health as an area of expertise, the rest of the health care system has just come on stream. What is interesting, in the early days of medical treatment, there was a lot of risk taking and assumptions. We are at that stage right now with population health. The work of CHBs in community engagement. They have been doing this for a long time. It was noted that we don't need all the answers to every question, let's take a risk and create an intervention to contribute to the body of knowledge.
- The formation of this committee was made to introduce population health into the acute care system. Should this committee have some responsibility in educating on population health? We need to focus in creating a prevention mindset. The district is too focused on the acute care model. We don't have a model for population health. Perhaps that could be a venue for the students to create one. Perhaps this is something that we can move forward within community engagement.
- Community Development Funds (CDF) – a great way to target research on specific indicators. Perhaps the CHBs could be approached through the Council of Chairs (CoC), giving the CHBs a project to gather data from communities and provide the feedback for projects. This would be a great way to utilize the community engagement abilities of the CHBs. It was noted that the data collected by the CHBs is qualitative data. How do we take the work they do, triangulate it to give measurement to the data? It was noted we need to be aligned with provincial initiatives. At a recent GPI Atlantic presentation, the data collected in small communities was reviewed. How often would you measure the outcomes? If you have targets, you may only want to do every 3-5 years. Perhaps lower level indicators would be looked at every year.
- It was noted that our subcommittee, Indicator Group, (Mary is the chair) developed some indicators, but there is no surveillance to measure them. The provincial government measures communicable diseases and some acute care indicators. It was noted that we need to put some money into this.
- It was noted that some folks don't know where population health fits. This presentation reflects some of the issues our committee has been dealing with. CPHA annual meeting – the need to avoid silos was noted. Need for regional data, not national. Some of the indicators you look for are different.

- Ultimately, the responsibility for indicators falls under the COO. Part of the challenge is that it is not just Capital Health, but the IWK as well. Then we have Public Health. We need to ensure we understand what we are collecting and why. Linking with activities within the organization and outside. It was noted that decision support focuses only on acute care data and it will require a reallocation of resources and an understanding of why we are doing this. Really interesting area, we need to knit it together and focus to move forward. The area to focus on seems to be obesity as it impacts health. We need to convene a round table of interested parties to focus our attention on an obesity strategy and what we can do at the district level to contribute to that strategy.

*Action: Neil will meet with Mary Ellen Hiltz and Gaynor Watson-Creed to ensure we are on the same page to collect general indicators.*

The students were thanked for their thought-provoking presentation.

## 5.0 Business Arising:

**5.1 Committee evolution and future:** The committee (an innovation) has been going for almost 2 years and it is time to evaluate and introduce outcome measurements. Since developing, we have to consider the CHBs, a new strategic plan and a series of promise councils (citizen engagement), and the HPP department in provincial government. We have a good representation, but we need to look and see how we can evolve to become more effective. We look at the social determinants of health. Do we need to be restructured? How do we move forward?

### Comments:

- This committee is charting new waters and it takes a while. We have tried to tackle some issues, and we are providing a venue to discuss topics.
- We need to be careful that we are not just established to be downloaded upon.
- It is important that the role of the committee between CDHA and CHBs is kept. It is the foundation of the committee. We have left the boards abandoned with no framework from CDHA/IWK so they have developed their own agenda. The CHBs focus on huge socioeconomic issues. They do excellent work, especially with community engagement and CDF's, developing excellent networks. We need more links to encourage and better support them to benefit our citizen engagement stream. New concepts, how to be more effective in reaching more communities. We need to develop a strategy which is not only linked to acute care and we need to translate what that means to Capital Health. What are the recommendations and expectations? The new service model has to be less clinical, providing outreach. We don't seem to have a power structure to make it happen.
- Our linking with the IWK is very innovative. We would like to see our committee membership enhanced with more IWK reps.
- We have been all over the map trying to focus on too many things for one committee.
- It was suggested that we link with HPP to align our priorities and focus on a project with them.

- We need to pick 3 topics to focus on. We need a framework for action. It was commented that at Trillium they developed a very high level committee, and did a plan selecting priorities. Each member of the committee championed for moving it forward. Neil has the declaration of health, which speaks to population health. We should have HRM sign as a call to action.
- Healthy workplace does great work. How do we engage them in this conversation?
- Should we have a series of ad-hoc committees to work on a particular focus? This may be more effective. Then, every quarter, the committees would report on their particular progress.
- We need to coordinate an expert advisory group. We should have people from Chamber of Commerce, United Way, HRM, Greater Halifax Partnership, Community Colleges and Universities on this committee.
- Can we get the provincial goals from HPP for our first meeting in September? We need to agree on population health indicators and measure them. We need to maximize our time, perhaps have rotating committees who do not have to attend all other meetings. The standing committee reports every quarter, not every month. This would be a more workable timetable. Who do we partner with? We will take the lead in collaborating. We need to draw up an agenda for the September meeting. We need to develop looking at collaboration of health issues and action plan to guide us in making the work relevant.
- It was asked if one of the students is not working on a project, is there some way they could help us by thinking about some ideas to move our agenda forward? Perhaps take stock/inventory on who is leading initiative.

**Actions:**

- *Neil, Ed, Mary and Barb will get together over the summer to discuss how to move forward, choosing priorities and focus for next year.*
- *Ed to consult with board members, other committee members and stakeholders to discuss the same.*

**6.0 Adjournment:**

The meeting adjourned at 440

Recorded by,

Carol Hindle



# Population Health in Capital Health

Context, Status, Initiatives, Challenges  
(Students' Perspective)

Abel M. Gebreyesus and Lynn Lowe  
June 18, 2008

## CHRONIC DISEASE IN NOVA SCOTIA

The highest rate of death from cancer  
and respiratory disease

Among the highest rates of  
circulatory death

The 2nd highest self-reported rate  
of diabetes, and fair or poor health

The highest rate of hospitalization  
for chronic disease

## Cost of Chronic Disease

Estimated cost to Nova Scotia taxpayers more than \$3 billion a year

\$1.2 billion a year in direct costs for Nova Scotia.

\$1.8 billion indirect cost

Human cost immeasurable

## Chronic Disease Risk Factors



Risk of developing a chronic disease, especially diabetes, is known to increase markedly with increasing BMI



WHO suggests 80% of premature heart disease, stroke and type 2 diabetes, and 40% of cancer could be prevented

**INACTIVE**

Through healthy diet, regular physical activity and avoidance of tobacco products.

## Responsibility?

- Create a quality health care system that will improve the health status of generations of Nova Scotians.
- Decrease reliance on facility care through health and wellness promotion and self-care in the community.
- Instill prevention mindset that spans before birth and continues through life.

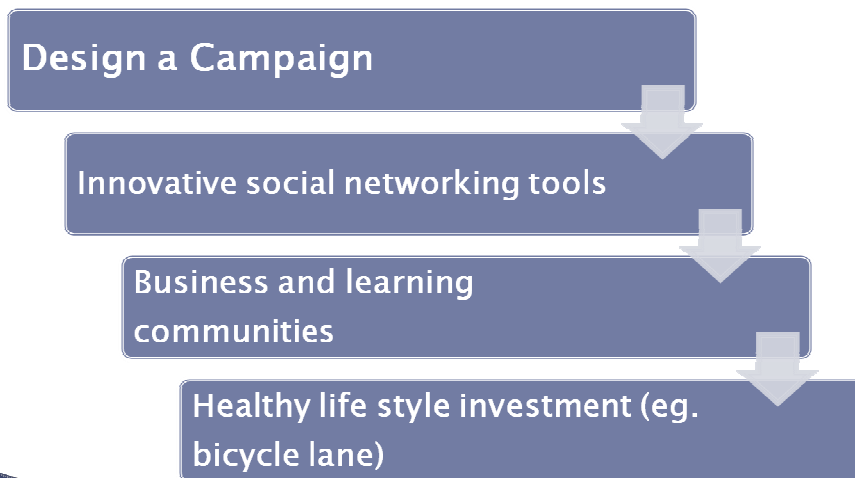
## Population Health in Capital Health

- Well entrenched concept within Public Health
- Well developed population health indicators
- Priority population health indicators identified for four age groups across the lifespan
- Several initiatives in disparate parts of the organization
- Organizational readiness to address chronic disease through targeted approaches on weight management, physical activity and healthy eating appears high

## Gaps in Population Health

- Coordinated (non-siloed) approach to population health across the system and continuum of care
- System program area for support, expertise, resources
- Endorsement and dissemination of population health indicators and age priorities
- Targets developed for focused approach on priority areas
- Indicators, or proxy indicators, for various system levels
- Comprehensive approach to data collection and analysis

## Objectives and Assumption :



## Challenges

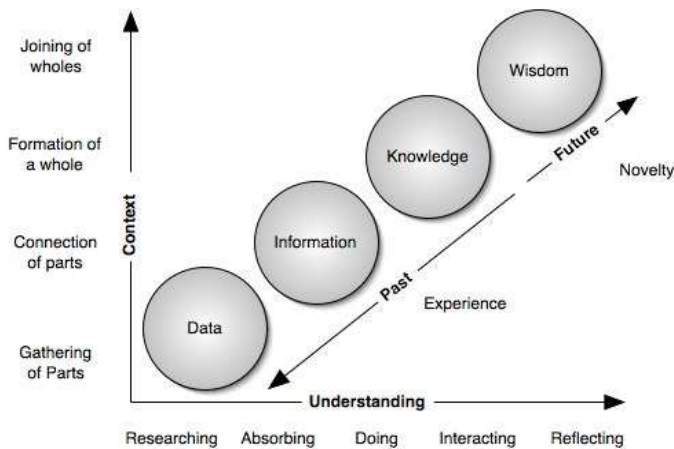
- But, “if you can not measure it, you can not manage it”
- An indicator is something that points to an issue or condition. So, where are the indicators..... can be developed and there are good indicators
- Its purpose is to show you how well a system is working. If there is a problem, an indicator can help you determine what direction to take to address the issue.

## Common Characteristics of Indicators

- Effective indicators are **relevant**;
- Effective indicators are **easy to understand**;
- Effective indicators are **reliable**;

*Effective indicators are based on accessible data; the information is available or can be gathered while there is still time to act.*

## From Data to Wisdom...

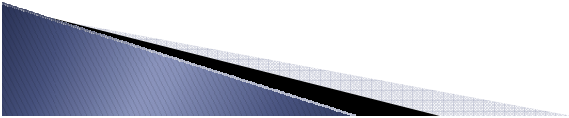


view of the DIKW hierarchy (Clark, 2004)

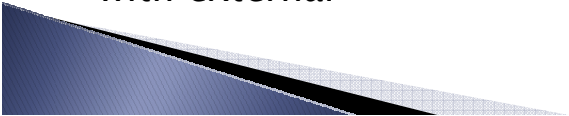
## CHDA Population Health Data Challenges

- Data from multiple sources
- Data not easily accessible
- Data from multiple points in time
- Data not easily comparable
- Data not always reproducible
- Limited capability to analyze data

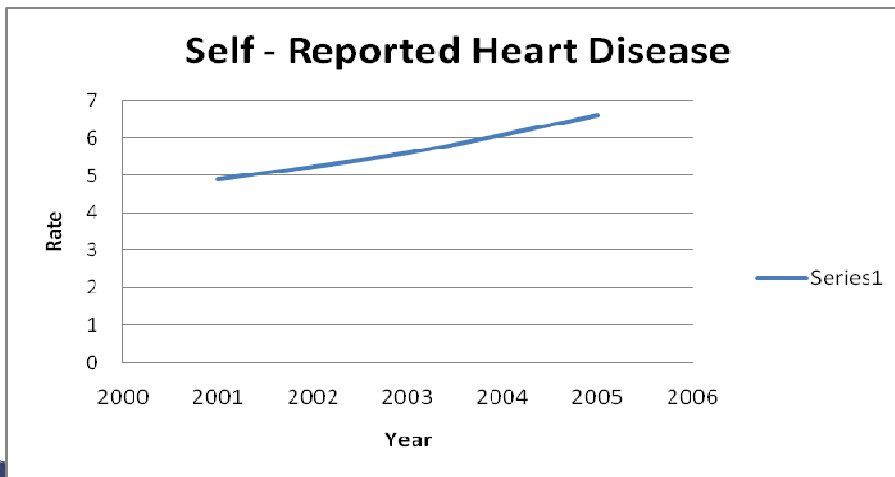
## Questions for Consideration

- Are the population health indicators data sources « good enough »?
  - Is statistical analysis a critical success factor for population health?
  - How can departments/providers efficiently access data/expertise?
- 

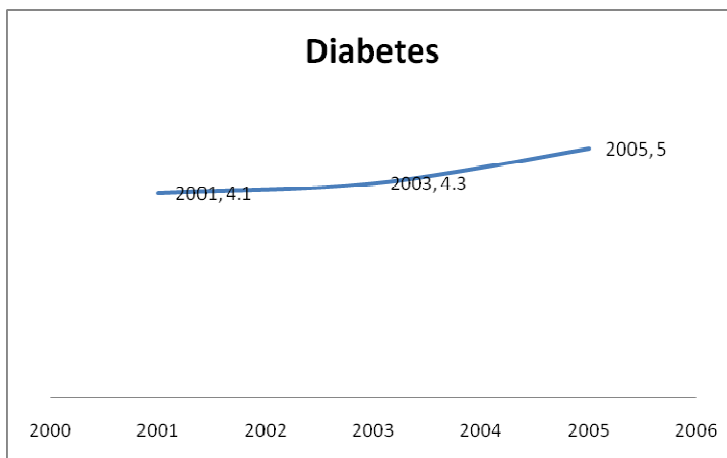
## Questions Con't

- What is the role of health care providers in disease prevention?
  - Where should the leadership and coordination be for a system wide population health strategy?
  - How can expertise in population health be disseminated throughout the organization?
  - Should internal policies/initiaitives align with external
- 

## CHRONIC DISEASE TRENDS IN CAPITAL HEALTH

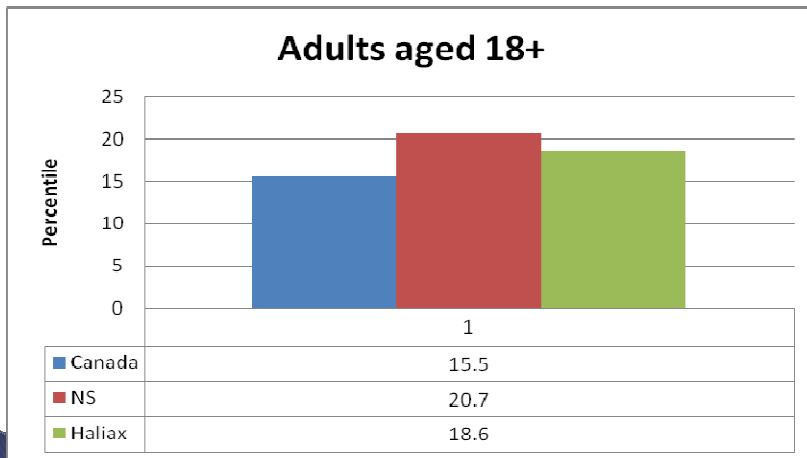


## CHRONIC DISEASE TRENDS IN CAPITAL HEALTH

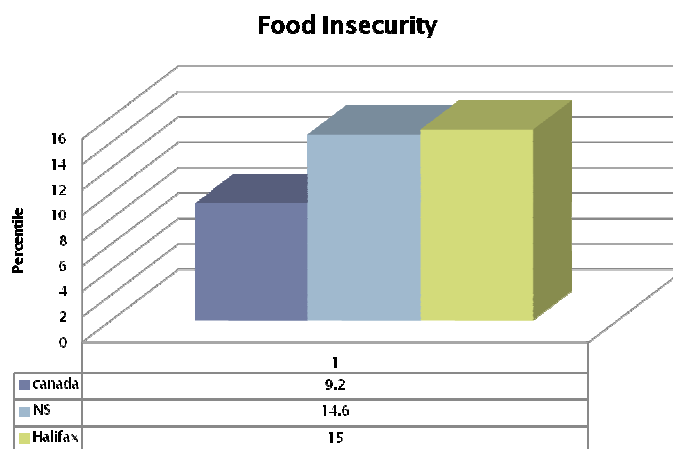




## Obesity in Capital Health



## Food Insecurity Indicator for Poverty Reduction?





**Appendix C (Discussion paper – Obesity: Prepared for the CDHA Board of Directors  
Population health Committee)**

*Please see at the end of this report, due to document format, unable to insert here.*

Appendix D (Google Sites: An Alternative to Managers)

## Google Site: An Alternative to Managers

(Recommendation with a Note)

Abel M.  
Gebreyesus

19 June,  
2008

Just recently, last February 2008, Google launched its “google sites” service. Google Sites is very similar to an application that of a SharePoint. It looks an interesting tool for creating team websites and also company intranets with its different services, including a document sharing, editing, and other detailed services for project managers. It can be used also as a company (organization’s) intranet and its services can be limited to selected registered members by the administrator of the site.

Microsoft has two flavors of the SharePoint services, the SharePoint Portal and SharePoint Team Services. The Portal version aimed at large enterprises was a full document management system, much beyond the scope of Team Services. Since its original release the two versions have merged into the one current system, Microsoft Office SharePoint Server 2007.

On the other hand, Google Sites helps improve Google’s suite of office applications. It offers easy integration of Google Docs, Spreadsheets and Presentation files, together with Picasa images and Google or YouTube videos. It is also, FREE, not like other commercial applications.

But, most importantly, Google Sites is easy to apply and can be used by less computer experienced people too. It is not complicated. Additionally its project management dashboard service is easily managed by any mid or high level managers with basic training.

### **Just a Note:**

With the introduction of Google Site, there is also one risk: the privacy and security issue. Although Google Sites is free, easy to use and much flexibility, but big organizations, like CDHA, should be cautious on what kind of documents are uploaded or downloaded. Yet, this issue of privacy and security can be further studied and the importance of Google Sites might weigh than the hesitation to introduce it.

Generally, before apply “Google Site” or any other software solution, further study should be done to determine and weigh its opportunities and risks.

## Further Reading:


<http://bits.blogs.nytimes.com/2008/02/27/google-goes-after-another-microsoft-cash-cow/index.html>

<http://blogs.zdnet.com/microsoft/?p=1227>

<http://blogs.zdnet.com/Greenfield/?p=206&tag=rbxccnbzd1>

<http://blog.thinkworx.com/2008/03/01/google-sites-vs-ms-sharepoint/>

http://sites.google.com - Home (Project Eggplant) - Mozilla Firefox


Project Eggplant

Search Site

**Navigation**

- [Home](#)
- [Sitemap](#)
- [Statement of Direction](#)
- [Eggplant Team](#)
- [Releases](#)
- [Calendar](#)

**Project Goals**

- Bringing Widgets to the Masses
- Happy Users
- Flexible Platform

## Home


**Reference**

[Functional Designs](#) ([Releases](#), [Designs](#), [Product Overview](#))


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[Technical Docs](#)


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 [Project Calendar](#)


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 [Mailing Lists](#) (Product feedback to [projects@altostrat.com](mailto:projects@altostrat.com))


**Team Files**

 [RequestedFeatureList.xls](#) 33k - 02/24 by Mandy Sladden (v1)

 [PresentationTemplate.ppt](#) 12k - 02/28 by Mandy Sladden (v4)  
Default template for any presentation (contains our company logo)


 [EngPreso.ppt](#) 14k - 02/14 by Mandy Sladden (v3)  
Basic Presentation for Customers

 [Eggplant.jpg](#) 10k - 02/14 by Mandy Sladden (v3)  
I uploadaed our project image to include in the preso

 [PublishedStandards.pdf](#) 75k - 02/14 by Mandy Sladden (v3)

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**Project Status**



**Next Release: [3.0](#)**


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**Next Major Milestone:** Widget Roadshow


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More details -> [Releases](#)  
Direction -> [Statement of Direction](#)


**Project Announcements**

 [Release 2.5](#) Our mini release is finally out to widget users world wide with great feedback already. I take a look at some of the kind words on TechCrunch.  
Posted 02/14 by Mandy Sladden

 [Statement of Direction](#) I have added to our statement of direction after our offsite last week - I think we should all be very proud of our road map and the challenges we have ...  
Posted 02/14 by Mandy Sladden

 [Martin Luther King Jr.](#) Don't forget that we have Martin Luther King Jr. day as a company holiday. That means you will need to get your code in before the end of the ...  
Posted 02/14 by Mandy Sladden

 [Team Offsite](#) Thanks to everyone who participated in the offsite last week - I was extremely impressed with the presentations and all of your brilliant ideas. I put up the presentations that were ...  
Posted 02/19 by Mandy Sladden

 [Offsite at the Mountain Winery](#) We have decided to have the offsite at the Mountain Winery (thanks for the feedback). Please be there on time and ready to rock and roll!More information >  
Posted 02/14 by Mandy Sladden

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Summer Health Informatics Internship Report  
20th August, 2008

## Declaration

I, the undersigned, hereby declare that the work contained in this report is my own original work and has not previously in its entirety or in part been submitted at any university for a degree.

\_\_\_\_\_  
©2008 Abel Medhanie Gebreyesus

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Date