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The Management of Information Technologies in Health Promotion: The Cancer Information Service

by

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Abstract

Information technologies are increasingly being used in health promotion to extend the information dissemination activities of organizations. Even the telephone, with its ubiquity, is being utilized to deliver health messages. The Canadian Cancer Society's Cancer Information Service employs a telephone line to provide accurate and up-to-date cancer information.

While many studies have focused on the users of such systems, this study addresses the organizational context for the effective management of this telephone line. Relying on institutional and organizational theory, and a health promotion model, emphasis is given to the structural elements that influence the delivery of health information via the telephone. Two sites were examined--Regina and Manitoba--focusing on organizational documents, staff interviews and diaries.

The cases examined demonstrate that certain structural factors, such as the need for more formative planning in the organizational maintenance of such a system, are required if the service is to function to its full capabilities.

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Contents

List of Figures

Chapter One

INTRODUCTION

1.1 Use of information technologies for the dissemination of health information

Information technologies are increasingly being used by many health organizations in various areas, to expand delivery of health services to their publics. A variety of delivery modes have been employed to reduce expenditures, to save time, to accomplish things more efficiently, to make services more convenient, and to ensure that the latest and most accurate information is available to the public. But the need to use a more diverse range of delivery modes, and the role of these information technologies in the dissemination of health information have become critical for several reasons: first, many health organizations, as information providers, have jumped on to the new media bandwagon. This is understandable, given the need to use as diverse a range of channels as possible and the recognition that the documented increase in the fragmentation of audience is marked in part by diversity in the range of information channels used. Second, if one accepts the McLuhan premise that the medium is also the message, then it is to be expected that different media will have different content and purposes and therefore, may also have to be managed differently. A third rationale for examining the role of information technologies in dissemination of health content is the move toward self-help and public interest in taking charge of one's health. This includes taking a more active role in information-gathering and decision-making.

This concern with wanting greater management over one's health is evident not only among those individuals who simply want to take precautionary measures, but also with those who have been diagnosed with a given illness and who wish to gain a greater sense of

control by acquiring information. The use of information technologies to disseminate health information can play a significant role in these situations. Receiving information and getting questions answered is often one of the greatest concerns of patients, as they seek some form of control over their illness, particularly serious ones. When first diagnosed, the shock, and sense of being overwhelmed certainly prevent many patients from clearly understanding all that is being conveyed to them. They may also not fully understand everything that they are being told, or they may have their own agenda or set of questions that they would like answered, but feel they are getting unsatisfactory responses from their health-care team. In this situation, health information services can provide an alternative for patients who need information, regardless of their scenario. But patients are not the only ones who may require more information. Their family members and friends often would like to take part in the search for more information, but feel that they have nowhere to turn to. Health information services could again be a potential and useful alternative to traditional sources of information, such as nurses and physicians. The general public, or those individuals who are asymptomatic, is yet another population often in need of information, not necessarily for reasons of illness but simply for health maintenance. And as these health information services gain sophistication, an additional group of potential users could be health professionals themselves. Therefore, information technologies used within health services can be extremely useful for those health organizations concerned with the dissemination of health-related information.

1.2 Purpose of the study

This thesis will examine how the information provision role is being carried out by the Cancer Information Service (CIS), and what organizational structure and context enhances this role, in order to provide the most effective services to the users. The CIS, run

by the Canadian Cancer Society (CCS), is a toll-free telephone service which provides accurate and current cancer-related information on a person to person basis through trained health specialists. The general question of interest that will be examined is the following: **How are information technologies used for health information delivery? More specifically, what organizational and environmental context promotes the effective set up and implementation of a national telephone information line?** The more specific questions to be examined complement the main research question and can be divided into two categories:

A. Focus on the information provision processes within the CIS: What are the perceptions of the providers of the efficacy of the service? What areas may be improved? Are CIS operators able to give appropriate, accessible, local information no matter where the call originates from? Under which circumstances are information providers at the National Call Centre more likely to refer callers to local services, programmes, sources, or to send additional material?

B. Focus on the interactive processes between disseminators at a National Call Centre and a local Division: Is information effectively being disseminated from a National Call Centre to a Division and vice versa, and how so? What characterizes the interactive relationship which takes place between the National Call Centre and a Division? Do both of these levels complement each other effectively?

This study is significant for several different reasons. First, most studies that examine health information delivery systems and specifically telephone information services, focus on the users of these services and not on the information provision side, as demonstrated in the following chapter. Therefore, this study is a step towards rectifying a

gap in health information dissemination research. Second, because the Canadian CIS has only recently been implemented, this study will provide a first glance at how efficiently the service has been running on the information provision side, and will also enable the possible improvement of this delivery system, to provide a more effective service for the users. Thirdly, with the increased popularity of the self-help movement, it must be ensured that health dissemination services are of exceptional quality to meet user needs, and this quality is determined in part by the effectiveness of the organizational context. As the next chapter will also demonstrate, individuals are increasingly seeking greater control over their health, whether this be as a patient in terms of treatment, as an asymptomatic person who wants to prevent the onset of illness, or as one willing to help others manage their given condition. And finally, most studies conducted on health information delivery systems have not employed theoretical frameworks, while this study will use institutional theory, organizational theory, and a health promotion planning model.

As mentioned above, dissemination or the information provision processes of health services, is a neglected research issue within health promotion. This is surprising, considering that the effectiveness or usefulness of messages or information for the users may depend on how it is being disseminated. In his article "The Case for Dissemination Research in Health Promotion and Disease Prevention", Farquhar (1996) makes several suggestions as to what should be examined within dissemination research, one of which is the following:

> The channel of health education and health promotion must be considered. Although the "information revolution" and the "information superhighway" are becoming overused terms, the need to do research using advanced communication technologies cannot be denied. The role of the electronic mass media, widely distributed self-help print materials, newspapers, magazines, newsletters, and interactive media technologies are all important topics for dissemination research (Farquhar, 1996, p. S48).

Although the telephone is not specifically mentioned by Farquhar, it could certainly be added to this list. While the telephone has been in use for over a century, it has become an old medium deployed for a new purpose, since its use as a mechanism for health information delivery is relatively recent. Telephone helplines are a very popular mechanism within health promotion, yet they are infrequently examined by researchers. The Cancer Information Service, which will be discussed shortly, is only one example of the range of new media or information technologies being used for information dissemination. However, it provides a useful case example for study because of the ubiquity of the telephone, in contrast to other new technologies which require computers, modems, or other less widely distributed mechanisms.

1.3 Significance of the problem

Cancer is often labelled as one of the most dreaded diseases. "It is also a disease surrounded by myth, stigma and fear, considered by the general public and health care professionals alike as synonymous with death" (Dines & Cribb, 1993, p. 174). This is understandable given the treatments associated with cancer, the loss of confidence from a diminishing self-image, the physical, emotional, mental transitions in the aftermath, the inevitable pain, a less than encouraging prognosis for many types of cancers, and a sense of dependency on others as the cancer progresses. Cancer is a leading cause of death in Canada, placing second after major cardiovascular diseases (Statistics Canada, 1995). The National Cancer Institute of Canada (1997) estimated that in 1997 in Canada, there would be 130,800 new cancer cases and 60,700 deaths resulting from cancer, and that these increases from previous years are due to the changing Canadian population, in terms of size and age. They also state that 891,000 potential years of life lost (PYLL) in 1994 in Canada were the result of cancer for both sexes, and that cancer is the leading cause of premature

deaths in this country (National Cancer Institute of Canada, 1997). It is estimated that in Canada in 1993, $68 billion dollars were used on the "direct costs of illness", and cancer used up a minimum of $3.5 billion dollars of this amount (National Cancer Institute of Canada, 1996):

> Given the large number of cases and the high costs associated with cancer in Canada, and given that these will continue to increase as the population ages and grows, further developments in cancer control are needed, including those that can achieve a reduction in the use of tobacco products (National Cancer Institute of Canada, 1996, p. 11).

The CIS is one attempt at cancer control, although this is not the service's primary goal. However, through the dissemination of cancer-related information, the public has a source available to them to answer their questions and concerns, and this may enable the adoption of certain attitudes and behaviours conducive to a more healthy outlook, if not better health.

Unfortunately, curative research is receiving much more funding than preventive research:

> As one examines the trend over the past few years to find a genetics-based "magic bullet", it becomes clear that the pattern of emphasis on research is not moving wholeheartedly into searching for upstream forces that cause disease and disability and for developing prevention strategies that will reduce the need for curative medicine (Farquhar, 1996, p. S44).

According to Farquhar (1996), in the US, there is a 10:1 ratio favouring curative medical research as opposed to prevention research, which comprises only 1% "of the total health care budget", and within this latter initiative, less than 10% is concerned with dissemination research (dissemination of health promotion) (Farquhar, 1996, p. S45).

Although the Canadian and US health-care systems differ drastically from each other, health promotion and disease prevention still need to be given a greater priority in several countries, including Canada. Some types of cancers, including the more serious ones that often do lead to death, are preventable: "Many, including the National Cancer Institute in the United States in a recent projection, believe that the prevalence of some diseases such as cancer could be reduced by as much as 50% if effective and comprehensive measures of prevention were put in place. The possibility of such achievements should galvanize us into action" (Epp, 1987, p. 414).

1.4 The Cancer Information Service

A Cancer Information Service as a concept originated in the United States in 1975, and was put into place by the National Cancer Institute (NCI) as a way of providing accurate and up to date cancer information to the American public by telephone. The NCI created regional CIS offices that would be better able to respond to user concerns relating to specific, local needs, and to coordinate community outreach programs (Marcus et al., 1993). There exists 22 similar services in European countries.

Implemented in October of 1996 and run by the Canadian Cancer Society, Canada's CIS is a toll-free telephone information line which provides accurate and up to date cancer-related information by trained health information specialists. The service is available throughout Canada in English and in French, from Monday to Friday, 9 am to 6 pm., as well as Mandarin and Cantonese in Vancouver, and several Inuit languages in the Northwest Territories, for limited hours of operation. The service has two National Call Centres, one in Regina and the other in Montreal, as well as the Division offices of the CCS which provide local types of information to callers, regarding financial assistance,

transportation services, and support groups. The National Call Centres provide more specific cancer information such as on specific cancers, statistics, treatment, and clinical trials, which they retrieve from their database known as the Canadian Cancer Encyclopedia.

1.5 Thesis outline

This study investigates the role of information technologies in health information delivery, with particular attention to: the organizational and environmental contexts, including planning and implementation strategies; use of resources in health information dissemination; the information provision processes; and the interactive processes between disseminators within such a service. These larger issues were examined in a case study of the Cancer Information Service.

To accomplish this, a proposal was submitted to the Sociobehavioural Cancer Research Network (SCRN) which allocates research funding in cancer-related areas. Permission was sought from the Executive Director, Canadian Cancer Society who agreed to the study being conducted on the service. When the proposal was accepted by the SCRN, arrangements were made with the National Call Centre in Regina and the Manitoba Division for site visits to take place.

The following chapter will explore the concepts of health, health promotion, and information technologies and the role that each of these plays in health information dissemination. A literature review of Cancer Information services in Europe, the United States, and Australia is then discussed, as several studies have been conducted on these

systems' users. An examination of the Canadian CIS is then provided, such as background information to the service, how it is organized, and its model of delivery.

The third chapter presents two theoretical approaches, namely, institutional theory and organizational theory. In addition, Green and Kreuter's (1991) health promotion PRECEDE-PROCEED model is utilized for this study. Attempts are made to connect the larger issues being investigated in the CIS with the main concepts of both of these theories and the planning framework.

Chapter four considers the organizational context of a health information dissemination service through a closer examination of the case. The methods employed were a document review, in-depth interviews, and diaries. Extensive findings from both of these sites are then presented.

Finally, chapter five interprets these findings in relation to the research questions and theories used. Recommendations are then provided for the organizational context of the CIS and for future research in this area.

Chapter Two

HEALTH, HEALTH PROMOTION, AND THE ROLE OF INFORMATION TECHNOLOGIES

2.1 Defining health

Health is often considered in relation to two definitions--the biomedical definition and the World Health Organization (WHO) definition--both of which demonstrate that defining health is not an easy task, but rather carries with it several problems that are often overlooked.

The biomedical definition simply states that "health is the absence of disease" (Dines & Cribb, 1993, p. 5). One obvious problem with this definition is that it only focuses on the lack of disease rather than taking the positive side of health into consideration. Simply because an individual is free of a disease does not mean that he/she is healthy. Another problem with this definition is that while some individuals may be diagnosed with a certain disease, they may still lead a fulfilling life and therefore in this sense be considered healthy, while some individuals free of any diagnosed disease may be leading a very difficult, unhappy, and miserable life, and in this sense can be considered unhealthy (Dines & Cribb, 1993). Therefore, according to this definition, health and disease are seen as complete opposites of each other when in reality, they can occur concurrently.

The World Health Organization defines health as follows: "Health is a state of complete physical, mental and social well-being, and not merely the absence of disease or

infirmity" (WHO, 1986, as cited in Rootman & Raeburn, 1994, p. 58). This definition has been criticized by many who argue that the WHO definition is too idealistic and does not take into consideration all sides of health (Dines & Cribb, 1993, p.6; Kemm & Close, 1995, p. 21; Rootman & Raeburn, 1994, p. 58). For example, many individuals who have a certain disease such as cancer may be feeling perfectly fine at some point in the course of their illness, whereas an individual who has no sign of disease could be quite ill, an argument that, as mentioned, is also put forward with the biomedical definition. The WHO definition implies that simply because one has a disease, he/she is then excluded from being healthy. Also, an individual could be considered quite healthy without him/her taking what are considered appropriate measures to be healthy. This definition in essence renders health an unachievable state. However, the WHO definition does mention that health is not just the absence of disease, but also includes an element of well-being, a concept that is lacking in the biomedical definition of health, which focuses only on the absence of disease.

Perhaps a more complete way to look at health is a definition put forward by Downie, Fyfe, and Tannahill (1990), who elaborate on the negative and positive dimensions of the WHO definition. Negative health refers to ill-health, and this can be interpreted in several different ways, which obviously creates much confusion (Downie et al., 1990). As previously explained, ill-health can be seen as illness or disease, which are both very different from each other, for an individual can be diagnosed with a particular disease, yet be fairly healthy, or he/she can be considered healthy, yet feel quite ill. Positive health on the other hand, also referred to as well-being, is based on the notion of having a sense of control and being able to pursue one's goals, which can be reached by learning lifeskills and becoming empowered (Downie et al., 1990). The authors further state that:

> Health has to be seen as the sum or product of all its components, and...we see that the precise quantification of an individual's health is impossible. When we speak of 'improving health' we must be referring to increasing the overall 'quantity' of health, by enhancing positive health, reducing negative health, or both (Downie et al., 1990, p. 24-25).

In this sense, if an individual has a disease but is not ill, he/she could still be considered healthy, whereas if a person is free of disease but ill, he/she could be classified as unhealthy. These distinctions are significant in health promotion in order not to exclude certain populations and instead encourage all to participate more fully in the attainment of healthy states, no matter what their present condition.

At the first International Conference on Health Promotion held in 1986, then Minister of National Health and Welfare, Jake Epp, put forward a document entitled "Achieving Health for All: A Framework for Health Promotion" in which he explains health in the following manner:

> Health is thus envisaged as a resource which gives people the ability to manage and even change their surroundings. This view of health recognizes freedom of choice and emphasizes the role of individuals and communities in defining what health means to them...It becomes a state which individuals and communities alike strive to achieve, maintain or regain, and not something that comes about merely as a result of treating and curing illnesses and injuries. It is a basic and dynamic force in our daily lives, influenced by our circumstances, our beliefs, our culture and our social, economic and physical environments (Epp, 1986, p. 420).

Health according to Epp then, can be achieved by all, as Downie et al. (1990) also claim, because it is often determined by factors under our control.

Kemm and Close (1995) state that these controllable factors are those within the environment and an individual's lifestyle, whereas those that cannot be controlled are

determined by genetics, all three of which interact with each other. The Lalonde Report, drawn by then federal Minister of Health and Welfare, Marc Lalonde, became a very important document and contribution within international health precisely because it took these three factors into consideration, in addition to the health-care system. Pederson, O'Neill, and Rootman (1994) state the following:

> Canada is generally believed to be a world leader in health promotion policy and practice, in part because the Lalonde Report was the first statement by a national government that health resulted from the interplay of biology, environment, lifestyle, and the system of health care (Pederson, O'Neill, & Rootman, 1994, p. 1).

2.2 Defining health promotion

Health promotion is often mistakenly thought of as simply attempting to prevent the onset of disease, parallel to the biomedical definition of health, when in fact it also encourages the pursuit of positive concepts of health, which were previously discussed. The following perspective illustrates this:

> Disease prevention is essentially an activity in the medical field dealing with individuals or particularly defined groups at risk. It aims to conserve health. It does not represent a positive conception of health that moves ahead, but is concerned with maintaining the status quo. Health promotion on the other hand, starts out with the whole population in the context of their everyday lives, not selected individuals or groups. Its goal is to enhance health (Nutbeam, 1986 as cited in Dines & Cribb, 1993, p. 25).

According to the *Ottawa Charter for Health Promotion*, "health promotion is the process of enabling people to increase control over, and to improve, their health" (WHO, 1986, p. iii). The notion of 'enabling' within health promotion, which is of direct relevance to the CIS, is more specifically described as the following: "Health promotion action aims at reducing differences in current health status and ensuring equal opportunities and

resources to **enable** all people to achieve their fullest health potential. This includes a secure foundation in a supportive environment, access to information, life skills and opportunities for making healthy choices" (WHO, 1986, p. iii). The process of enabling individuals to gain greater control over their health is a basic tenet of the CIS. The rationale for the set-up of the service was precisely to enable individuals to gain access to cancer-related information, which was an expressed need by cancer patients. In addition to information, counselling and the opportunity to gain valuable skills are also provided to facilitate decision-making activities. The CIS also ensures equality and accessibility to virtually the entire Canadian population because the service is provided by telephone. Therefore, all individuals are enabled to gain the support, information, and skills to take initiative with their health.

The above view is also present within Jake Epp's (1986) document "Achieving Health for All". Within this framework are embedded health challenges that must be overcome, health promotion mechanisms, as well as implementation strategies. It is this last category, implementation strategies, which contains the notion of fostering public participation, a principle that is very much a part of the CIS. Public participation, according to Epp (1986, p. 415), means "to involve people in taking care of their health" and "to assist them to mobilize their resources in order to improve the conditions that influence health". Dr. Ilona Kickbusch, who was a presenter at the conference, also emphasized this point and further added: "Information and education provide the informed base for making choices. They are necessary and core components of health promotion, which aims at increasing knowledge and understanding about the causes and determinants of health, and teaching new skills" (Kickbusch, p. 441). This emphasis on public participation and personal control is extremely important in relation to the CIS, for this service provides the public with the information needed for them to undertake initiatives

related to well-being. This is especially true for cancer patients who are searching for a greater sense of control over their affliction, treatment, and coping in the face of a much dreaded disease. While the notion of gaining valuable health information is only one aspect of health promotion, it is given more attention here as it is a central feature of the CIS.

When discussing public participation in this thesis, not only are cancer patients implied as the public, but other groups are also included. For example, families and friends of cancer patients can obtain information, whether this is to gain a greater sense of control over their own health (e.g., coping skills to deal with the condition of their loved ones, communication skills to discuss with those afflicted), or to help the patient take initiative. Other publics could also include individuals who do not present symptoms, health professionals, or students, just to mention a few. Although these latter publics may not necessarily be diagnosed with the disease, they may simply want the information for awareness purposes, to take the appropriate measures in terms of prevention, or to assist another person. No matter the reason, gaining information is a step towards increasing control over personal health. References made in this thesis to the 'general public' differ from 'public participation', as the former is specifically used to imply individuals who do not present symptoms and have not been diagnosed with the disease.

There may be several reasons why individuals are wanting to take greater control of their health. Many of today's health-care systems are in transition, and one indicator of this is the dialogue taking place on the notion of directing more public health-care dollars towards "essential health services" (Bryan, 1996, p. 11). This may then prompt many people to seek alternative forms of security, such as taking greater responsibility for their health. Health-care providers are also no longer perceived as the authorities who have the

final say in health matters, and patients now interact to a greater degree with health professionals because they want to inform themselves about their condition (Martin & Lanier, 1996). In addition, many people are now turning to alternative practitioners for resources (Lerner, 1992). Another reason may be that the occurrence of some chronic diseases such as heart disease and cancer is escalating (Statistics Canada, 1995) for reasons which may include an increasing aging population, social-structural inequalities, and environmental hazards, to name a few. This could in turn spark specific populations or interest groups to demand the resources and services necessary to prevent them from acquiring certain conditions, or to help them overcome a disease that they are already faced with.

Lerner (1992) provides a comprehensive explanation of why cancer patients are increasingly seeking to play a greater role in relation to their health, as he points to some very specific 'trends':

> These trends include cultural shifts towards healthier lifestyles, interest in human consciousness and human potential, awareness of mind-body interactions, and renewed interest in spiritual aspects of human experience. No less important are the developments of research in psychoneuroimmunology, caution about the unintended consequences and trade-offs of technological interventions, greater acceptance of the positive values of pluralistic medical systems in many cultures, as well as growing tolerance for many forms of complementary health care and increasing consumer sophistication. All these aspects are part of the environment in which the eclectically oriented, informed and pragmatic cancer patient, independent of orthodoxies of the medical establishment and of the medical counterculture, has emerged as a growing force (Lerner, 1992, p. 118-119).

These trends have implications for cancer patients who are often left with a bleak prognosis and little or no sense of hope, in which case taking a more active role in managing one's fate, so to speak, becomes even more meaningful.

2.3 Communication and information technologies

Previously within health promotion, the mass media, such as radio, television, and printed materials have played an important role in the communication of information to large audiences (Fodor, 1996). While they still do, there is a current move towards employing other technologies for information dissemination, such as computer technology (Fodor, 1996; Jennett & Premkumar, 1996). These mass media will not be reviewed here as the medium of interest in this study is a personal telephone information line.

Health organizations are employing more public education mechanisms and are using a wider range of channels. What all of these have in common is the ability for individuals to take matters into their own hands, rather than having to solely rely on medical professionals. While some information technologies are more linear, one-way forms of communication, such as television, radio, magazines, publications or pamphlets, they nevertheless have played a role in health promotion history, or more specifically, are important measures that have been used, and are expected to continue to do so in the face of increased public initiative. Other efforts, such as those involving the internet and the telephone, are much more interactive and provide the user with greater freedom over the direction that he/she would like to take.

An exploratory study by Health and Welfare Canada explains that "providing information and support over the telephone has the potential to stimulate the practice of self-care and mutual aid, the first two mechanisms of health promotion" (Health and Welfare Canada, 1993, p.2). This study described nine health information lines, which showed heavy use of these services and provision of a wide range of health information. As the authors observed: "Health information and support telephone services are a reality

throughout Canada...they have arisen out of a shared desire by numerous public and volunteer bodies to help people take charge of their health" (Health and Welfare Canada, 1993, p. 28). Many useful suggestions were drawn from the cases observed. For example, after evaluating the Drug Helpline, the authors found that the organization addressed several important issues such as promotion of the service, and "the need to strengthen the central coordination and support (training, access to expert advice, development of materials, etc)" (Health and Welfare Canada, 1993, p. 51). Those responsible for the Health Extension line suggested to anyone wishing to start a telephone health information system that they should work with the community, educational systems, agencies, as well as the providers of health and social services, and that information needs should be determined and access to these provided (Health and Welfare Canada, 1993). Finally, the AIDS Information Hotline sponsored by the Newfoundland and Labrador AIDS Committee Inc., was found to be successful because of several different factors: the volunteers, training and updating, effective promotion, a dedicated organization, community support, and collaboration (Health and Welfare Canada, 1993).

Seven future challenges in the field of health promotion and health information telephone services are worthy of consideration (Health and Welfare Canada, 1993):

- collaboration between those in the health field (eg, sharing of resources)
- ensuring that the information is current
- computerized technology and costs
- promotion of the service
- ensuring that the service is compatible with other health information services available to the public
- provision not only of information, but also of support

- the need for more "process research", which is the evaluation of usage, message development, training, and promotion, as well as for "impact evaluation", which is determining the long-term impact of the service

One could add the element of community support to the above list of challenges, which was a feature of the AIDS Information Hotline, and that future planners of information lines should take into consideration.

The above challenges identified by Health and Welfare Canada (1993) will be examined in relation to the CIS, since many of these play a role in organizational practices and structure. It will be determined whether the CIS already addresses these challenges and which ones the service should pay closer attention to, in order to provide the best possible service to its callers.

2.4 Cancer Information Services in other countries

An examination of studies conducted on Cancer Information Services is provided to look at their focus in relation to this study, and to determine any indicators of how information delivery processes can be improved.

The US CIS, which has been in existence for over twenty years, is present in 19 regions and reaches 50 states, as well as Puerto Rico. Callers can be served in English or Spanish, and the line is also accessible to the hearing impaired (CIS Communique, May 1996). Several studies have been conducted on the US CIS, although almost all of these focus exclusively on the users of this service or some related issue, and most do not adhere to any theoretical framework. No study has been found on the information provision side

of the CIS. The following is a very brief overview of some of the studies that have been conducted on the US CIS: the information needs of significant others who call the CIS (Meissner et al., 1990); use of treatment information from the CIS by callers (Manfredi, Czaja, Buis et al., 1993); differences in cancer knowledge between Whites and African Americans, determined from calls to the CIS (Freimuth, 1993); use of the CIS to increase patient participation in clinical trials (Crosson et al., 1993); the evaluation of a booklet developed by the National Cancer Institute on Clinical Trials, which is used by the CIS to answer caller questions (Davis et al., 1993); inclusion of the CIS telephone number on public service advertisements to promote calls to the CIS (Pierce et al., 1992); use of mass media to encourage calls to the CIS (Bratic Arkin, 1993); the role of outreach programs within the CIS (Morra et al., 1993); type of information cancer patients request from the CIS (Manfredi et al., 1993); encouraging a specific population to call the CIS, after the service was promoted on an antismoking media campaign (Cummings et al., 1993); use of the CIS by specific ethnic groups in the US (Ward et al., 1993); efforts by the NCI and the CIS to reach illiterate individuals with cancer education mechanisms (Brown et al., 1993); older populations who make calls to the CIS (Rimer et al., 1993); the potential use of information-management technology within the CIS (Wooldridge et al., 1993); the use of the "Cancer Information Service Telephone Evaluation and Reporting System (CISTERS) to determine quality-assurance issues (Kessler et al., 1993).

The following study, which again focused mainly on the users of the CIS, was much more comprehensive than the previous ones in terms of the study's scope, its duration, and the number of calls analyzed. During a four-year period, Freimuth, Stein and Kean (1989) analyzed all 1,380,925 calls to the US CIS, and a survey was administered to 7500 of these users, who were randomly selected among those who had been sent follow-up information. A "call record form" was used for every user, which asked what kind of information was

being requested, what kind of information was given, demographics, and administrative information. After analyzing the data, Freimuth et al. (1989) found that CIS users consist of three different groups: the general public, symptomatic individuals, and cancer patients and their family and friends. Finally, the researchers found that there was a high level of satisfaction with the CIS; that most users called for explanations and to verify information from other sources; that most thought the information was useful; that many passed the information along to others, thereby reaching a much larger population; that most users had followed some form of action after the call; and that people are most influenced by relatives and friends in regards to health behaviour (Freimuth et al., 1989). The high level of satisfaction found, as well as the actions taken after the call, suggest that caller needs were met.

In Europe, there are 22 CIS lines from eighteen countries and in sixteen languages, mainly modelled on the US CIS, but most of these are not toll-free as in the US and in Canada (Vaucrosson, 1992). The chairperson for the Dutch line has stated that each service is tailored to the culture which it serves in the specific country (Vaucrosson, 1992). It was also mentioned that stress among the information specialists is frequently reported, and that worksite support was an important unmet need (Vaucrosson, 1992). The following is a brief discussion of a few of these information lines.

Lechner and DeVries (1996) looked at the Dutch Cancer Information helpline in terms of the quality of the information given to callers, the communication skills of the information specialists, and the telephone as a medium for communicating cancer information. The Dutch Cancer Information Helpline was established in 1982, and is one of the largest helplines in the Netherlands (Lechner & DeVries, 1996). These researchers found that patients evaluated satisfaction mainly in terms of the communication skills of

the information specialists, whereas the general public and the family and friends of cancer patients placed information received as a priority (Lechner & DeVries, 1996). Overall, callers evaluated the service highly in terms of information given, communication skills of the information specialists, and the telephone as a medium to provide cancer information (Lechner & DeVries, 1996). Further, the authors state: "Not only the information itself predicts the outcomes but also the way the information was communicated to the callers" (Lechner & DeVries, 1996, p. 156).

CancerLink is a telephone helpline in London and Edinburgh which was established to have trained individuals provide information and support to cancer patients, as well as their family and friends. Venn, Darling, Dickens, Quine, Rutter and Slevin (1996) discuss another similar service in the United Kingdom that provides cancer information and counselling, called BACUP, the British Association of Cancer United Patients, which has been in existence for twelve years. These researchers asked callers, including patients, their relatives and friends, and the general public, about their perceptions of the service, in terms of the information that they were given, the communication, emotional impact of the call, and their overall satisfaction (Venn et al., 1996), which is very similar to the study conducted by Lechner and DeVries (1996). Their findings indicate that callers were satisfied with the information received, communication, and emotional impact (Venn et al., 1996). They also state that the determinant of overall satisfaction for patients is the communication skills of the information providers, whereas for family and friends, overall satisfaction was determined by both information received and communication skills (Venn et al., 1996).

The following study on a European CIS can be compared to that conducted by Freimuth et al. (1989) in the US. Carlsson, Strang and Lindblad (1996) conducted a study

in Uppsala, Sweden on their telephone helpline, which seeks to provide cancer-related information and play a counselling role. The purpose of their study was to evaluate the telephone line after three years of service, and to compare findings with other studies from different countries on telephone helplines. During the first three years of the telephone service, 735 calls were received from patients and their families, from symptomatic individuals, and from nurses staffed in smaller facilities who did not work with cancer patients on a regular basis (Carlsson et al., 1996). These researchers found that families of cancer patients, who called the most frequently, asked primarily about psychosocial concerns; patients, who were the second most frequent callers, asked mainly medical questions and those pertaining to psychosocial problems; symptomatic individuals called in regards to their various symptoms; and nurses from smaller facilities inquired mainly about treatments (Carlsson et al., 1996). One notable difference found by Carlsson et al. (1996) is that in their study, calls from patients, family, and symptomatic individuals were the most frequently received whereas in the US, the majority of calls were received from "others" or the general public, and the least frequent callers were patients and symptomatic individuals. Callers from the US also often asked for referrals, while this was a question that was rarely asked in Sweden (Carlsson et al., 1996).

Australia's Cancer Information Service exists in four states in that country. The information providers retrieve cancer-related information from the ACCCIS database, which has been "Canadianized" for the CIS in Canada (CIS Communique, December 1995 and May 1996).

All of the above studies have contributed to the efficacy of information services but also underline the need for more studies whose goal is to examine the information provision side of the CIS system and organization. More specifically, they demonstrate that

the focus of existing research on Cancer Information Services is in the following areas: the kind of information requested by callers; the services offered to callers; demographic differences between the callers; promotion of the service to the public; and caller satisfaction and perceptions of the service. Other than basic findings on demographic differences, overall outcomes indicate that users are satisfied with the service along several dimensions, including information received, usefulness of information, and communication skills of the information providers. Therefore, in relation to this study, it appears that the organizational context for the information provision side of the CIS has not been given the attention that it deserves, although addressing this aspect of the service is just as important as examining user needs. There are, however, some implications from studies on the users of information lines that organizational factors can help to explain in terms of user satisfaction. For example, quality and usefulness of the information received may well depend on how effectively the organization can mobilize its resources and adapt technology-wise to provide such information. Another example is the communication skills of the information providers, which are greatly influenced by the training that the organization may have provided them with. Therefore, the structural features of such a service, its set-up and implementation, and the decision-making processes can have great bearing on the efficiency and effectiveness of information delivery, which can in turn have an impact on the users.

2.5 The Canada-wide Cancer Information Service

The Canadian CIS was implemented in October of 1996 and has already demonstrated the need for cancer information among Canadians. The Cancer Information Service is a toll-free telephone information line which provides accurate and up to date cancer-related information, including different kinds of cancers, drugs and clinical trials,

statistics, local services, support groups, prevention, screening, diagnosis, treatment, rehabilitation, continuing care, complementary therapies, emotional and financial support, and much more. The information providers on this line are trained specialists who disseminate this information to cancer patients and their family and friends, the general public, health professionals, and students. The service is available throughout Canada in English and in French, from Monday to Friday, 9 am to 6 pm, as well as Mandarin and Cantonese in Vancouver, and several Inuit languages in the Northwest Territories, for limited hours of operation.

BC and Ontario were the first two provinces to initiate such a telephone line, the former being run by volunteers and the latter as a joint project delivered by professionals. When it was decided by the Canadian Cancer Society that a similar method of disseminating information was required for the country as a whole, a Canada-wide information line was proposed. The model of delivery for this National service is now as follows: Regina and Montreal are the two National Call Centres, operated by professionally hired staff, who employ the same centralized database, called the Canadian Cancer Encyclopedia. The BC and Ontario Call Centres cater to their respective provinces, while still being part of the Canada-wide line and having access to the centralized database. If the user is interested in specific, local, community services, his/her call is then transferred to the designated Division office of the CCS for his/her province. These Division offices have their own database of local services available, which are not necessarily specific to the cancer society, but also include other organizations (support groups, physicians, resource centres, treatment facilities, etc). Although each province is connected to the Canada-wide information service, the aim of each Division, as well as that of the CIS, is to collaborate and customize information to specific caller needs. The National Cancer Institute of Canada and the CCS central office in Toronto work with the service

personnel/volunteers in each province through consultation and consensus-seeking, to ensure that the needs of callers are being met.

As mentioned, the information provided to callers at the four Call Centres is taken from the Canadian Cancer Encyclopedia, which is "a comprehensive database that will represent the most complete compilation of cancer-related information in the country" (CCS Press Release, 1996). The information housed in the database is gathered by various sources who take part in the research process to continually keep the database updated. Divisions compile their own information on local resources and enter this into their database, which they refer to when the National Call Centre transfers callers to them.

The CIS estimated that in their first year, a total of 55,000 calls would be received, that 20% of these calls would be referred to Divisions, and that the total number of calls would increase by 50% by the service's third year. From October 1996 to September 1997, a total of 56,977 calls were made to the service, mainly from the general public, cancer patients, and their family and friends (CIS Call Statistics, October 1996 to September 1997). Most of these callers were females calling to inquire about breast cancer. This demonstrates the need for, and the success of the service in its first year of operation. The fact that the majority of callers are from the general public and that their primary reason for calling is to receive information shows that Canadians have a need for a service that provides cancer-related information. The CIS is convenient, accurate, and up to date. It is extremely accessible since most Canadians have a telephone, it protects a caller's privacy and confidentiality, it provides support to callers for a topic that is of a highly sensitive nature, the information is conveyed by health information specialists in a manner that the general public will comprehend, as opposed to using highly technical and medical jargon that often confuses people. All of these elements can be implemented in such a health

dissemination service in part because of the information technology being used--the telephone. Although this medium has existed for over a century, it is now being revived within health promotion for different purposes, that is, for the provision of support and information to those seeking to play a larger role, and wanting greater control over their health.

2.6 Summary

This chapter examined concepts such as health, health promotion, the use of information technologies, and the role that each of these plays in health information dissemination services. Cancer Information Services in other countries were explored, and a literature review of studies conducted on these confirmed that most consider the efficiency of these services from the user's perspective rather than an information provision and organizational perspective. An introduction to the Canadian CIS was also provided, including what this service is, its purpose, and how it is currently established. The following chapter will discuss two theoretical approaches and a planning model that will be used for this study, namely, institutional theory, organizational theory, and Green and Kreuter's (1991) PRECEDE-PROCEED model of health promotion.

Chapter Three

THEORETICAL AND PLANNING APPROACHES

3.1 Introduction to theoretical and planning frameworks

The last chapter examined health, health promotion, and information technologies, and how these are related to the Cancer Information Service. This chapter will explore two theoretical frameworks and a planning model, and their application to this research project. As previously mentioned, most research conducted on the dissemination of health information through the telephone, primarily the CIS, tended to be descriptive, and without benefit of a theoretical framework.

Social theory is "a system of interconnected abstractions or ideas that condenses and organizes knowledge about the social world" (Neuman, 1997, p. 37). If research is to contribute to our knowledge about any given phenomenon or social problem, theory must be used to make sense of it. As one author claims:

> Theory frames how we look at and think about a topic. It gives us concepts, provides basic assumptions, directs us to the important questions, and suggests ways for us to make sense of data. Theory enables us to connect a single study to the immense base of knowledge to which other researchers contribute...Theory increases a researcher's awareness of interconnections and of the broader significance of data (Neuman, 1997, p. 56-57).

Two theoretical approaches will be presented to frame our research question: institutional theory and organizational theory. A planning model for health promotion will also be introduced, namely, the PRECEDE-PROCEED model.

The rationale for employing institutional theory in this study is to examine larger environmental factors and how they may influence the structure and context of an organization. The CIS will be examined in terms of which of these environmental variables may have played a role in shaping the structure that the CCS has adopted for this health dissemination service. The following is a brief sketch of this approach:

> In general terms institutionalization theory is a theory of information acquisition, manipulation, and use. The core assumption of the theory is that the environment specifies the way rational organizations should look. In turn, a successful organization responds by developing a structure that is deemed appropriate/rational by its environment. An organization is considered legitimate and successful to the extent that it communicates to the environment that it is a modern, rational organization (Euske & Roberts, 1987, p. 58-59).

While there exists several forms of institutional theory, all of which are quite elaborate and complex, this study will focus on those elements of the theory that have direct relevance to information services, such as the concepts of organization, institutional environments, isomorphism, rational myths, and legitimation.

Organizational theory is being utilized to examine what implications the organizational structure may have on the internal communication processes of the organization. A distinction is made between mechanistic and organic systems, the former generally characterized by a vertical nature and circumscribed by roles, while the latter emphasizes network patterns of communication within organizations and the sharing of information. Consideration is also given to the role of information and communication technologies within this theoretical approach.

While this thesis focuses primarily on organizational issues, and thereby pays greater attention to institutional and organizational theory, it was felt that a health

promotion model should be included to consider some of the planning aspects of the CIS. The PRECEDE-PROCEED model is an inclusive framework for examining the health promotion process, encouraging analysis of individual-level as well as environmental-structural factors. At the macro level of analysis, Green and Kreuter's (1991) recommendation to focus on administrative and organizational factors is relevant to our research. While we know quite a bit more about how service users respond to messages, we know very little about the contextual factors surrounding message production and use of delivery channels, an area to which this study will contribute. Altogether, Green and Kreuter (1991, p. 24) claim that "PRECEDE-PROCEED is...a theoretically robust model that addresses a major acknowledged need in health promotion and health education: comprehensive planning".

3.2 Institutional theory

Institutional theory is only one of a handful of theories which considers the environment as having a significant influence on the structure, function, and organizational context of an organization. Rather than simply observing and explaining the internal relationships of organizations, such as communication networks, increasing efficiency, and supervisor-employee relations, like so many organizational theories do, institutional theory is interested in what impact external factors in the environment, such as the influence of other organizations, social processes and norms, have within the organization. This is not to say that institutional theorists are not interested in the internal workings of organizations; on the contrary, they also look at these phenomena, but claim that they cannot be studied as separate entities apart from their environments. In other words, the environment (and everything that it encompasses) that organizations live in, has a crucial impact on the form

and functioning of the organization. Hence, organizations and environments are not independent.

First, the concept of organizations will be discussed, followed by the concepts of institutional theory, including institutionalized environments, isomorphism, rational myths, and legitimation.

Organizations

Before exploring institutional theory in greater detail, it is important to first look at the concept of organizations, which forms the basis of this study, and which is obviously a recurring element within institutional theory. It should be noted from the start that there is a difference between organizations and institutions. The former is more closely associated to a state of action of organizing. Examples of organizations are present everywhere, and the public must deal with these on a regular basis, such as businesses. Institutions are more descriptive of social processes, needs, rules, norms, and order within society, and are not as concrete as an organization. For example, marriage, the family, education, religion, and law are all institutions. As will be demonstrated shortly, institutional theory considers both of these--organizations and institutions--as interdependent.

All organizations are characterized by central features, such as the social structure, the participants, goals, technology, and the environment (Scott, 1992b). Organizational theorists will approach these organizational phenomena depending on which definition of "organization" they adhere to: the rational system, natural system, or open system definition. The organization as rational system views organizations as rational, formal, and seeking to reach specific goals. The natural system metaphor claims that actors within the

organization seek to maintain their unit through shared activity and an informal structure (Scott, 1992b). Institutional theory derives from the open system definition, which states: "Organizations are systems of interdependent activities, linking shifting coalitions of participants; the systems are embedded in--dependent on continuing exchanges with and constituted by--the environments in which they operate" (Scott, 1992b, p. 25). This definition differs from the previous two in that it focuses specifically on the interactive relations between the environment and the organization. According to Scott (1992b) there is a growing interest in the merger of open and natural systems definitions, the more specific grouping which institutional theory belongs to. Scott says: "These new models place great emphasis on the importance of the environment in determining the structure, behavior, and life chances of organizations: they are clearly open system models" (Scott, 1992b, p. 107-108). The reason why institutional theory falls within this definition is because it focuses on the impact that environments have on the organization, in getting them to adapt to common norms or expectations within society as a result of "social and cultural pressures", and not simply to seek out efficiency (Scott, 1992b, p. 118). Therefore, most theories of open systems stress the impact of the environment, but institutional theory moves a step further and is also concerned with how societal forces influence an organization's willingness to conform to society's beliefs, and to meet their expectations.

Organizations within society are often classified into specific domains, which Scott and Meyer (1991) refer to as "societal sectors". Organizations that belong to the same domain, also share the same environments, and therefore conform to the same common beliefs that are expected from them. These authors state that:

> A *societal sector* is defined as (1) a collection of organizations operating in the same domain, as identified by the similarity of their services, products or functions, (2) together with those organizations that critically influence the

> performance of the focal organizations...The adjective *societal* emphasizes that organizational sectors in modern societies are likely to stretch from local to national or even international actors. The boundaries of societal sectors are defined in functional, not geographical terms: sectors are comprised of units that are functionally interrelated even though they may be geographically remote (Scott & Meyer, 1991, p. 117-118).

The societal sector, in relation to this study, would be the health sector. A number of organizations take part in this sector, such as hospitals, clinics, non-profit organizations, private firms that have an interest in health matters, research settings, any types of support networks, just to name a few. All of these organizations operate in the same environment, for they are all concerned with matters that relate to health. Therefore, the Canadian Cancer Society, and more specifically the CIS would fall within this domain. The different levels at which organizations have established themselves can be at the national, regional, provincial, inner-provincial, as well as local levels (Scott & Meyer, 1991). But, as the definition also points out, these units or organizations within each sector are not necessarily laid out in a geographical manner, but rather in terms of function and utility. The CCS has a Division office for each province and territory for practical reasons, to serve the needs of clients. Organizations within sectors are also classified according to their likeness in products, services, other organizations that they are interdependent with, where their funding comes from, associations, as well as any other influential determinants, such as "nonlocal as well as local connections, vertical as well as horizontal ties, and cultural and political influences as well as technical exchanges" (Scott, 1991, p. 174). For example, the CCS is often classified within the health sector as a non-profit organization. The identification of societal sectors allows researchers to determine common norms, expectations, and beliefs that exist within a given environment, and to then examine the impact that these have on organizations.

Concepts of institutional theory

There are concepts within institutional theory that are particularly relevant to this study. In the previous section, we saw how organizations are classified into distinct societal sectors depending on their similarities with other units that belong to the same environment. Institutional environments contain rules or norms that organizations must adhere to in order to receive support and compensation, as well as to be perceived as legitimate, and these expectations can arise from a host of elements and bodies such as governments, associations, and "belief systems" (Scott & Meyer, 1991, p. 123). More specifically, institutional environments have been defined as:

> ...including the rules and belief systems as well as the relational networks that arise in the broader societal context...an important category of the rules and belief systems that arise are sets of "rational myths". The beliefs are rational in the sense that they identify specific social purposes and then specify in a rule-like manner what activities are to be carried out (or what types of actors must be employed) to achieve them. However, these beliefs are myths in the sense that they depend for their efficacy, for their reality, on the fact that they are widely shared, or are promulgated by individuals or groups that have been granted the right to determine such matters. We argue that the elaboration of these rules provides a normative climate within which formal organizations are expected to flourish (Scott, 1992a, p. 14).

These formal organizations develop in institutionalized environments, where any new or existing organizations must include common "practices and procedures" that determine how things should be done, or how things should work within the organization, if they are to be seen as legitimate by society and increase their chances of survival, irrespective of the organization's effectiveness in adopting these elements (Meyer & Rowan, 1992, p. 21). Therefore, institutional environments include organizations that

conform to norms to increase their legitimacy and support, and they are in turn compensated for utilizing the proper structures and functions (Scott, 1992b).

Some authors, such as Meyer and Rowan (1992) discuss the same phenomenon but use the concept of isomorphism to describe organizations reflecting what is going on in their environments. As organizations come to resemble their environments or become isomorphic with them, several outcomes occur: organizations accept certain processes not because they are necessarily efficient for them, but because they are perceived as legitimate by others; organizations use "external or ceremonial assessment criteria to define the value of structural elements"; and by relying on their environments, these organizations remain stable because they, in turn, receive increased legitimacy and support (Meyer & Rowan, 1992, p. 30). They further argue that:

> ...institutional isomorphism promotes the success and survival of organizations. Incorporating externally legitimated formal structures increases the commitment of internal participants and external constituents. And the use of external assessment criteria--that is, moving toward the status in society of a subunit rather than an independent system--can enable an organization to remain successful by social definition, buffering it from failure (Meyer & Rowan, 1992, p. 30).

Therefore, isomorphism, or the need for an organization or subunit to conform to its environment, will put organizations in a better position to receive support, whether this is funding, membership in associations, or legitimacy. By doing this, organizations can also increase their chances of persisting in their environment, for they are meeting the common expectations that society has of organizations in a given sector. In addition, as these authors comment, they are not independent entities within their environments, but rather receive support from all other subunits which also make up a specific institutionalized environment.

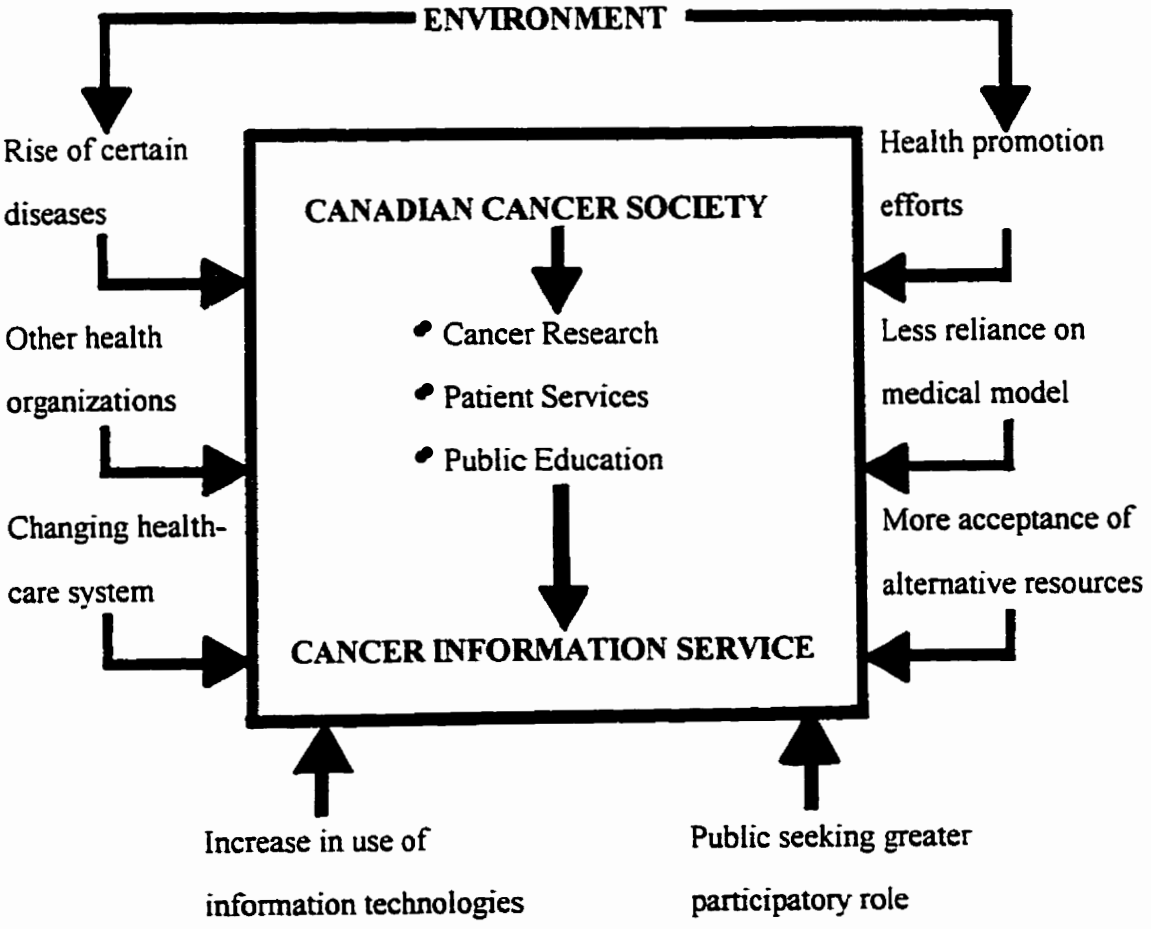
Throughout the discussion thus far, references have been made to rational myths, which form the basis of institutionalized environments. It is these rational myths that organizations must conform to if they are to receive support and be perceived as legitimate. Scott (1992b) argues that these myths are rational because they define what the organizational tasks are, but they are myths because they are defined by individuals, groups, organizations, and institutions which hold the power to set these 'rules', and which other organizations feel they must conform to. Scott (1992b) cites Meyer and Rowan, who state that rational myths can influence organizational structure:

> Many of the positions, policies, programs, and procedures of modern organizations are enforced by public opinion, by the views of important constituents, by knowledge legitimated through the educational system, by social prestige, by the laws, and by the definitions of negligence and prudence used by the courts. Such elements of formal structure are manifestations of powerful institutional rules which function as highly rationalized myths that are binding on particular organizations (Meyer & Rowan, 1977, as cited in Scott, 1992, p. 118).

Institutional theory applies itself very well to this study because there are surely forces within the environment that have played a role in, and promoted the adoption of the CIS within the Canadian Cancer Society. Factors within the environment that were described in chapter two such as health promotion agendas, the increased use of information technologies, the citizen participation movement, the changing health-care system, the rise of certain diseases, the greater acceptance of complimentary medicine, and less reliance on medical professionals as ultimate experts in health matters, have surely influenced the organizational structure of the CCS to some extent, which in turn played a role in how the CIS was also structured. All of these factors within the environment demand that organizations conform to them in one way or another in order to be perceived as legitimate, to be compensated, and to persist. The CCS, without necessarily being aware of it, may have conformed to several of the rules from its

institutionalized environment to be perceived within the health sector as a legitimate non-profit organization. The CCS may also be rewarded for following such rules through increased donations, sponsorships, government assistance, a greater pool of volunteers, as well as more acceptance from medical professionals and other health organizations (Figure 1).

Figure 1: Institutional theory applied to the CCS and CIS



3.3 Organizational theory

Consideration of organizational theory is important in this study, as it connects the individual micro perspective with the larger social-structural macro approach. In this case, the interpersonal communication occurring within the CIS is interconnected to the organizational structure of this service. Interpersonal communication therefore gives meaning to organization since it relates to structure (Weick, 1987).

According to Weick (1987), the theoretical concepts of organizational theory must be examined within organizational contexts to determine their appropriateness. He states: "To make assumptions explicit, we apply the property as originally stated to actual or imagined organizations and pay close attention to where it fits, where it fails to fit, and what adjustments, additions, and specifications we must make to improve its fit" (Weick, 1987, p. 109). In this study, the elements of organizational theory will be applied to the organizational structure of a health information dissemination service, but more specifically, the CIS will be examined in relation to Weick's (1987) application of communication processes and practices to Burn's and Stalker's mechanistic and organic systems.

There are a number of organizational theories that could have been employed for this study: psychological perspectives emphasize how communication is influenced by individual attributes; the interpretive-symbolic perspective holds that people can create their "social reality"; the systems-interaction perspective examines external behaviour patterns and the role that these play within a communication system (Krone, Jablin, & Putnam, 1987). While all of these consider internal organizational practices, this study

will only be drawing from mechanistic and organic systems as one way of examining this issue within the CIS, because of their focus on structure.

Weick asserts that the main differences between these two systems or forms of organization are in regards to "management systems", which are influenced by "(1) the rate of technical or market change; (2) the strength of individual commitments to political or status-gaining ends; and (3) the capacity of directors to lead, interpret, and prescribe" (Weick, 1987, p. 110). In addition, Weick explains that while mechanistic systems are better suited for stable structures, organic systems are more efficient for unstable ones (Weick, 1987). These two systems will now be explored in greater detail.

Mechanistic systems

Weick states that "the essence of a mechanistic system is definition and dependence" (Weick, 1987, p. 114), meaning that it is very much circumscribed by roles and hierarchical structure. As previously mentioned, mechanistic systems are the appropriate form for environments characterized by predictability, and its structural features include the following (Weick, 1987):

- Task orientation and differentiation
- Concern with the accomplishment of individual tasks rather then a common goal
- Employer self-interest in assuring that individual tasks contribute to one's own responsibilities
- Rigid definition of roles and responsibilities
- A hierarchical structure where information is controlled at the highest levels

- Vertical and one-way forms of communication, originating from the highest levels and flowing to the lowest
- Compliance with employers or those working at higher levels
- Greater concern with inner matters than more universal ones

In this sense, a mechanistic system is composed of a hierarchical structure where there is clear role and task definition, individual self-interest, and one-way communications to give directions. There is less emphasis on team-playing, on having a common goal for the organization as a whole, on the sharing of ideas and information, and on interdependence. As will be demonstrated, the organic system stands at the opposite end of the spectrum along the same dimensions.

Organic systems

Organic systems are more typical of uncertain environments, and are characterized by the following structural features (Weick, 1987):

- Interdependence and contribution of one's specialization to the common goals
- Individual tasks are dictated by the given situation, and change as the situation does
- Responsibility is held by all those involved
- Commitment to the common goals
- Lack of hierarchical structure where higher levels dictate matters, but rather specialization determines the control of tasks
- Lateral and two-way forms of communication among those from all levels, involving the sharing of information and discussion

- Responsibility to the principles or goals, as well as to growth
- Networking and sharing of information with external agents who can potentially offer solutions to problems

According to Weick (1987), an organic system is conducive to informal decision-making, and therefore functions best within a "dependably constant system of shared beliefs about the common interests of the working community and about standards and criteria used in it to judge achievement, individual contributions, expertise and other matters by which a person or a combination of people are evaluated" (Burns & Stalker, 1961, as cited in Weick, 1987, p. 117-118). Weick refers to this as corporate culture, and further explains that "as environmental change has accelerated, a relatively greater number of organic organizations held together by culture have survived" (Weick, 1987, p.118). Therefore, organic systems which reside within unstable environments adapt through interdependence not only between internal members but also external agents, they have a common agenda supported by those within the organization who work more as a team, they have roles and responsibilities that can adapt to environmental change, and they have network patterns of communication where information and advice is shared freely among all members.

The above is a structural model of organization which, as discussed, has clear implications for organizational practices. There are a number of organizational theories that are in the literature but this one is most relevant for discussing how an organization connects with its environment and, at the micro level, the relationship between structures and practices.

Organizational communication and information and communication technologies

The information and communication technologies of organizational structures can significantly influence the internal communication activities within the organization, as Culnan and Markus (1987) explain by offering an approach taken by O'Reilly and Pondy (1979 as cited in Culnan & Markus, 1987):

> In their framework, *communication outcomes*, such as group relations (consensus, leadership emergence, and coalition formation), emerge from *communication process*, a conceptual category that included filtering (cues filtered out), accuracy, and overload, among others. Communication process, in turn, is strongly constrained by *communication structure*, which is formed of networks, communication directionality, information channels (including communication media), and roles (Culnan & Markus, 1987, p. 435).

In terms of networks within a communication structure, the authors state: "The hypothesis that electronic media may create new intraorganizational communication networks raises concerns about the individuals and groups excluded either intentionally through organizational policy and politics or accidentally through inadequate access to technical resources" (Culnan & Marcus, 1987, p. 436). Networks are perhaps the most obvious feature of this service, since several different levels are involved and information flows between all of these. In addition, having access to the communication is key to taking part in the service, therefore availability of the technology becomes an even greater concern. Information and communication technologies as part of the communication structure can also play a role in the direction of the communication (Culnan & Markus, 1987). As was discussed previously, mechanistic systems are characterized by vertical communication, whereas organic systems involve more lateral forms of communication. In terms of information channels within organizations, there is an interplay of modern

information and communication technologies, with more traditional forms of communication, such as the telephone (Culnan & Markus, 1987). The authors maintain that insufficient attention has been paid to theoretical concepts including organizational variables and communication structure, which "shape and constrain the communication processes and outcomes" (Culnan & Markus, 1987, p. 435). In this study we will be examining the structural environment of an information line--analysis at the macro level--and communication processes at the micro level, such as the interactive processes among the different levels of the service. The study provides an opportunity to analyze the interplay between structural and interpersonal factors.

3.4 Green and Kreuter's PRECEDE-PROCEED model

A number of theories underpin Green and Kreuter's PRECEDE-PROCEED model. One such model is the Health Belief Model, which states that health outcomes and behaviours are determined by beliefs which arise from several different factors (Green & Kreuter, 1991). Social learning, another theory which the model draws from, claims that not only does the environment influence individuals, but people can also control their surroundings (Green & Kreuter, 1991). The theory of reasoned action asserts that a behavioural intention must be made prior to initiating a behaviour (Green & Kreuter, 1991). These theories have greater relevance for studies which direct their focus at the individual level, such as the targets and recipients of a given health promotion programme. They have only been briefly described here because of **this study's focus on the organizational context of information delivery.**

Overall, the model is a framework designed to set up, implement, and evaluate health promotion planning, which is accomplished in two processes (Figure 2). The first,

the PRECEDE stage, is concerned with the appraisal of needs and is comprised of the following: "*p*redisposing, *r*einforcing, and *e*nabling *c*onstructs in *e*ducational/ environmental *d*iagnosis and *e*valuation" (Green & Kreuter, 1991, p. 1). Therefore, this stage applies to the given variables that determine an individuals' health, and how these can be addressed (Green & Kreuter, 1991). The PROCEED stage relates to the planning, implementation, and evaluation of the given health promotion objective, and is composed of the following: "*p*olicy, *r*egulatory, and *o*rganizational *c*onstructs in *e*ducational and *e*nvironmental *d*evelopment" (Green & Kreuter, 1991, p. 1). This process allows for policy development, as well as the steps to be taken to implement and evaluate a programme (Green & Kreuter, 1991).

> The promotional, regulatory, and organizational components of PROCEED take the student or practitioner beyond educational interventions *to the political, managerial, and economic actions* (emphasis added) necessary to make social systems and environments more conducive to healthful lifestyles and a more complete state of physical, mental, and social well-being for all (Green & Kreuter, 1991, preface xx).

It is this latter phase which will be given greater attention as it examines the larger organizational issues framing the research question, namely, the decision-making processes for setting up the service, the steps involved in its implementation, and the effectiveness of such a service and its organizational context for the delivery of health information.

The PRECEDE-PROCEED model contains nine phases within the two processes, outlining a step-by-step approach to the given health promotion issue, which in this case will be applied to cancer and the CIS. The first phase of the model, social diagnosis, concerns evaluating the "quality of life" of a certain population, by looking at some of the problems or risks which they identify within their community (Green & Kreuter, 1991).

These are usually very general concerns, and in this instance could be unnecessary exposure to cancer risk factors. The second phase, epidemiological diagnosis, involves the identification of health outcomes that may relate to the problems that were identified in the first stage (Green & Kreuter, 1991). If we apply this to the issue of cancer, some of the problems which could be identified by a community could be "smoking, alcohol misuse, diet, solar radiation, ionizing radiation, worksite hazards, environmental pollution" (Green & Kreuter, 1991, p. 131).

The third phase, behavioral and environmental diagnosis, involves the identification of factors that may be related to the health concerns that were specified in the second phase (Green & Kreuter, 1991). In this case, these could be economic or social circumstances that an individual is faced with. This is directly relevant to the discussion of health that was offered in the previous chapter, namely, that health can be determined by environmental and lifestyle factors, and this is precisely what Green and Kreuter's model accounts for. In the fourth phase, educational and organizational diagnosis, all of the factors that were identified in the third stage are classified into groups depending on which methods should be used to make changes (Green & Kreuter, 1991), such as whether they should be classified as issues for individual citizens, communities, industries, businesses, or the government, and who will be sought to target the problem. In this case relating to cancer, individuals, tobacco industries, the Canadian Cancer Society, and the government could all be targeted, just to mention a few examples.

The fifth and sixth phases take the model from the PRECEDE to the PROCEED stage. **Although both stages and all nine phases are important pieces of the model, not all are relevant to this study. Therefore, as mentioned, this latter stage, especially the fifth, sixth, and seventh phases, will be given greater attention because of their focus**

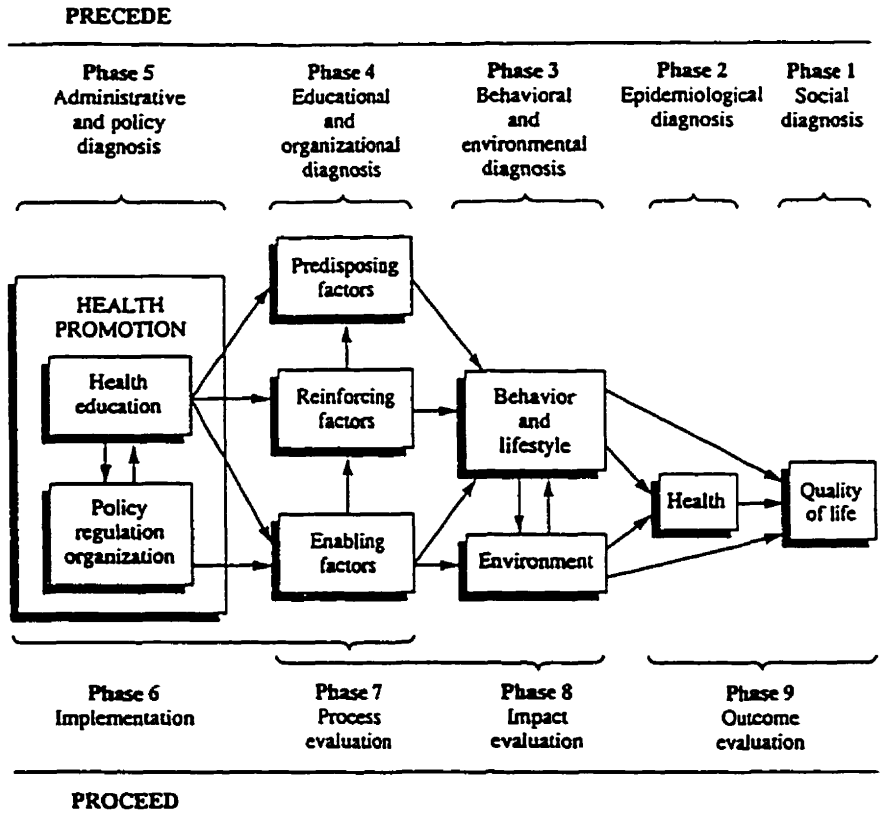
on organizational issues. The fifth phase, administrative and policy diagnosis, as well as the sixth phase, implementation, are concerned with the direction and execution of the plan (Green & Kreuter, 1991). They relate to how the designated agents will carry out the changes, such as implementing a service like the CIS. Green and Kreuter (1991) state:

> Administrative diagnosis refers here to an analysis of the policies, resources, and circumstances prevailing in the organizational situation that could facilitate or hinder the development of the health promotion program. Policy refers to the set of objectives and rules guiding the activities of an organization or an administration. Regulation refers to the act of implementing policies and enforcing rules or laws. Organization refers...to the act of marshalling and coordinating the resources necessary to implement a program (Green & Kreuter, 1991, p. 189-190).

Within administrative diagnosis, one would consider issues pertaining to resources needed, those available, and any obstacles to these, such as time, personnel, and budget (Green & Kreuter, 1991). Policies that set up the framework for the organization's activities are also analyzed, as are the processes for managing the people and resources required to carry out these activities.

Green and Kreuter (1991) list policies, regulations, the organization, and political forces as what policy diagnosis would be concerned with. Because the CIS is embedded within, and run by the Canadian Cancer Society, the larger organizational context has to be given consideration. This service undoubtedly has the potential for influencing the position and standing of the CCS, its donations, and other funding possibilities. Therefore, guidelines surely had to be put into place to assure the reputation of the organization as a whole, as a legitimate player within the health domain.

Figure 2: "The PRECEDE-PROCEED model for health promotion planning and evaluation"



(Source: Green, L.W. & Kreuter, M.W., 1991, p. 24)

The last phases of the model are process evaluation, impact evaluation, and outcome evaluation, or, the overall evaluation of the programme (Green & Kreuter, 1991). **The only evaluation phase which will be expanded upon is process evaluation, as this study examines only one dimension of the CIS, considering the organizational aspects of the line.** Impact and outcome evaluation are related to the effects of a programme on the recipients. Process evaluation is concerned with assessing programme policies, goals and objectives, resources, and organizational processes (Green & Kreuter, 1991), which are all issues that pertain to the decision-making processes that were involved in the set-up and implementation of the CIS.

This study will precisely be examining the model's focus on administrative and policy diagnosis, as well as implementation and decision-making procedures that were undertaken in the set-up of the CIS, as these specifically relate to the larger organizational issues being considered in this research.

3.5 Summary

This chapter described two theoretical approaches and a planning model taken for this study, and their relevance to the role of the organizational and environmental contexts in the set-up and implementation of a health information dissemination service. Institutional theory asserts that the social processes and norms in the environment play a large role in influencing the structure that an organization such as the CCS and ultimately the CIS will adopt. This theory is specifically being used to look at the links between the environment and the organization. Organizational theory pays particular attention to the internal communication processes of organizations, and is employed to examine the implications that organizational communication might have for the organizational structure. The PRECEDE-PROCEED model is an inclusive framework for examining the health promotion process as it considers analysis of individual and environmental-structural factors that influence health. Its consideration of administrative and organizational factors within health promotion efforts are directly relevant to this study, as they focus on organizational issues for the development of programmes.

The following chapter presents the case study of the CIS, and more specifically, the methodology employed for the research and findings from the site visits at the National Call Centre in Regina and the Manitoba Division in Winnipeg.

Chapter Four

THE ORGANIZATIONAL CONTEXT FOR HEALTH INFORMATION DISSEMINATION SERVICES

4.1 The case study approach and methodology

The methodology used in this research project is the case study, which is defined as:

> The detailed observation of a particular person, process or social event characterized by in-depth analysis, interviewing, and detailed empirical research. The case study provides detailed and specific information about one situation or event, and then suggests general links between this material and wider issues. Case studies can therefore provide both illustrative and comparative material (Saunders, 1994, p.36).

This case study specifically examines the organizational development, and the information dissemination and interactive processes of a telephone line--the CIS. Detailed information about this particular service was gathered at two sites and connections were made to the larger issues being looked at, namely, how the information provision role is being carried out and the function of the organizational context in health information delivery.

According to Yin (1994), case studies can be used to address both exploratory questions, which answer "what" type of questions, as well as explanatory questions, which answer "how" and "why" type of questions, although they are more commonly used for these latter inquiries. This study addresses both types of questions since it is interested in what the role of the organizational context is in health information dissemination services,

as well as how the information provision role is carried out in such a setting. Yin adds that case studies are useful when the researcher cannot direct the circumstances, and when the study deals with up-to-date occurrences in actual settings (Yin, 1994). "The essence of a case study, the central tendency among all types of case study, is that it tries to illuminate a decision or set of decisions: why they were taken, how they were implemented, and with what result" (Schramm, 1971, as cited in Yin, 1994, p. 12).

The CIS was examined in its actual setting, and the decision-making processes that planners went through to implement the service are of particular importance. This case study will specifically be examining two CIS sites within the Canadian Cancer Society organization, namely, the Saskatchewan Call Centre, as well as the Manitoba Division, to observe the information dissemination process from a National Call Centre (Regina) to a local Division (Winnipeg), and the interaction that occurs between these two units for such a service to operate.

To recall from chapter one, the general question of interest that was examined at both of these sites is the following: **How are information technologies used for health information delivery? More specifically, what organizational and environmental contexts promote the effective set up and implementation of a national telephone information line?** The more specific questions examined complement the main research question and can be divided into two categories: **a focus on the information provision processes within the CIS, and a focus on the interactive processes between disseminators at a National Call Centre and a Division.**

Case methods

The connections between the above research questions and the theoretical frameworks discussed in the previous chapter revolve around the organizational issues considered. In relation to institutional theory, emphasis is given to environmental influences on the structure of this service. The analytic questions suggested by the theory pertain to issues of how the line came into being and what contextual factors help us understand its development. Organizational theory allows a closer look at the internal organizational practices and communication issues within such a setting, and would be concerned with what structural and process factors help us understand communication patterns, how roles are structured, and how communication flows occur. In the case of Green and Kreuter's PRECEDE-PROCEED model, the administrative and organizational factors within health promotion efforts are examined within the CIS. The analytic questions in relation to this model, and more specifically the fifth and sixth phases of the PROCEED stage which this study is concerned with, would ask what resources are required to set up such a service, which obstacles may come in the way of its implementation, what implications the programme may have with organizational policies, which objectives were developed for the programme, and what planning procedures took place.

A triangulation method of data collection was used, including in-depth interviews, document analysis, and a diary method, to permit a more complete picture of the information provision role of the CIS, as well as the interactive processes that occur between disseminators at a National Call Centre and a Division. Each method complements the others in a way that allows the examination of the research questions from different perspectives. According to Yin:

> The use of multiple sources of evidence in case studies allows an investigator to address a broader range of historical, attitudinal, and behavioral issues. However, the most important advantage presented by using multiple sources of evidence is the development of *converging lines of inquiry*, a process of triangulation...Thus any finding or conclusion in a case study is likely to be much more convincing and accurate if it is based on several different sources of information, following a corroboratory mode (Yin, 1994, p. 92).

Analysis of CIS documentation was used to better comprehend background information, rationale for the service, and objectives. Yin (1994, p. 81) states: "For case studies, the most important use of documents is to corroborate and augment evidence from other sources". The documentation for this research, most of which was collected at the Regina National Call Centre, complements findings from the other methods used, but in addition, it also provided an important historical context for the rest of the study.

In-depth interviews were conducted to gain different perspectives on the issues to be examined. "Most commonly, case study interviews are of an *open-ended nature*, in which you can ask key respondents for the facts of a matter as well as for the respondents' opinions about events" (Yin, 1994, p, 84). Yin discusses another kind of interview, which was used for this study:

> A second type of interview is a focused interview (Merton et al., 1990), in which a respondent is interviewed for a short period of time-an hour, for example. In such cases, the interviews may still remain open-ended and assume a conversational manner, but you are more likely to be following a certain set of questions derived from the case study protocol (Yin, 1994, p. 85).

Interviews for this study were open-ended but still followed a given set of questions. These had been carefully designed following a pilot test at the Alberta CCS Division, which examined the clarity and relevance of the questions. At both the Regina and

Winnipeg sites, the following individuals were interviewed: the Director of the CIS Call Centre in Regina (Trish Picherack), the Assistant to the Executive Director of the Manitoba Division in Winnipeg (Lynne Billings), seven front-line health information providers in Regina and three in Winnipeg, as well as the Division Executive Director of the CCS Division for Saskatchewan. In addition, an interview was also held with Maaike Asselbergs, Executive Director, Canadian Cancer Society. The interview questions used were the following, although a few of these were modified for individuals to whom they did not apply. The following areas were explored (see Appendix A for complete list of questions):

- **Questions on sense of efficacy in the information provider's role**
- **Questions on communication processes between Call Centres and Divisions**
- **Questions on differences in the types of information given at each level**
- **Questions on expectations that each Call Centre or Division has of the other**
- **Questions on improvements recommended**

Finally, a five-day diary method was implemented, encouraging the same front-line health information providers who were interviewed from the National Call Centre and the Division to write brief notes at the end of the day, observations of their tasks, as well as any other pertinent observations which they felt would contribute to the overall research. In addition to this, information providers were asked to write about specific cases that they had handled with callers. The diaries were implemented after the interviews had been conducted. A five-day period was selected, as there was concern that this method may potentially be time-consuming for the staff. The diary entry information requested from these individuals included the following:

- **What kinds of tasks were you handling today?**
- **Could you provide an example or scenario of a call that you handled today (without mentioning specific caller details) and the response given, action taken, transfers made, resources referred to, difficulties that you may have encountered?**
- **Are there any other pertinent observations that you have made today that you feel would contribute to the research, in relation to your role as an information provider?**

An ethics proposal/certification was submitted and accepted by the university ethics committee. Consent letters were used for the interviews and the diary method, explaining the purpose of the study, participation, as well as issues of confidentiality and anonymity (see Appendix B for consent forms). Support for this study was obtained from the board of the Canadian Cancer Society at the National level, Trish King, Director of the CIS National Call Centre in Saskatchewan, as well as Lynne Billings, assistant to the Executive Director of the Manitoba Division.

4.2 The case–The Cancer Information Service

The Canadian Cancer Society

The CIS is a service of the Canadian Cancer Society, which warrants a brief overview of the structure of this organization. The following information was obtained from the CIS Personnel Training Manual. The CCS is a national organization which was established in 1938 with the priorities of conducting cancer research, patient services, public education programmes, decreasing the use of tobacco, increasing the quality of life

of those who have cancer, fundraising, and developing volunteerism . It's mission statement is the following: ***"The Canadian Cancer Society is a national, community-based organization of volunteers, whose mission is the eradication of cancer and the enhancement of the quality of life of people living with cancer".***

The CCS structure has several components, including one National office, ten Divisions, over 600 Units, over 3,000 contact points, over 300,000 volunteers, and approximately 350 full-time staff. The National office is responsible for the "operational, administrative and organizational support to the National Board of Directors and its committees" (CIS Personnel Training Manual), screens incoming information, and creates policies on a national level. The Divisions oversee the administration of services in each province, and are managed by a provincial Board of Directors and Committees. Some Divisions have Units, which are largely run by volunteers who are responsible for the delivery of CCS programmes and services, and are considered the "grass roots" and the "heart" of the society. Sections can be attached to the Unit, and are made up of a few volunteers who carry out the tasks of the CCS in smaller communities.

History, set-up, and implementation of the CIS

According to Judy Birdsell (Personal Communication, March 2, 1998), President of the CCS, three factors contributed to the initial idea of creating the CIS. The first is "a conscious organizational approach to setting priorities and planning", which arose at the fiftieth anniversary of the CCS a decade ago. The second factor is "the needs studies which indicated information was a high need" among cancer patients, which will be discussed in greater detail shortly. And the third is "a champion", namely, Norm Achen, then President

of the Ontario Division, who firmly believed that the CCS should embark on the information highway (Birdsell, 1998).

The strategic plan element is elaborated further below in the following portrait and history of the CIS, most of which was obtained from a "CIS Communique" (August, 1996) newsletter and a document entitled "History of Canada-wide Cancer Information Service" (Asselbergs, 1995). It serves to demonstrate the steps that an organization went through to establish a health information dissemination service.

A CCS strategic plan was developed and endorsed in 1988, with National Priority Groups put into place to devise "Canada-wide priorities" for the CCS. In the early 1990's, several groups involved in different projects, such as the Cancer 2000 report (working groups in different provinces who put together recommendations for cancer control by the year 2000), four "Patient Needs" studies conducted by the CCS, and the Quality of Life Priority Working Group, identified the need that cancer patients had for cancer-related information, which led to planners considering an information service as a priority. In 1993, the National Planning and Coordination Committee agreed on this need, which led to the CCS's exploring and assessing the practicality of having a Canada-wide Cancer Information Service, and the National Board of Directors allocating $25,000 to accomplish this assessment.

In July 1994, a "Request for Proposals" was launched with the Divisions by the Planning and Coordination Committee, to decide on which model would be used for the CIS, these proposals having to meet certain criteria already established. A bidder's conference was held August 31 1994, and on September 1, the choice was announced of

one national service. A review panel responsible for looking at the proposals was established in September 1994.

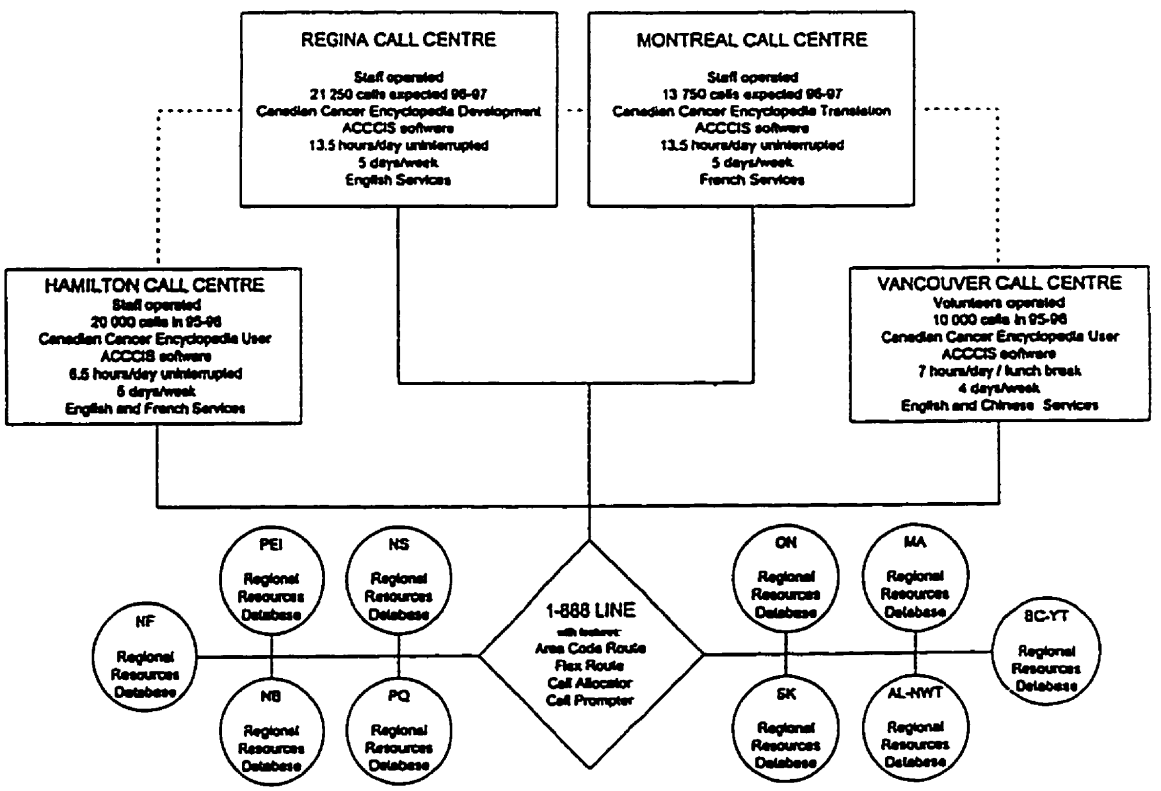
In December 1994, two proposals were submitted, one from the Saskatchewan and Quebec Divisions, and the other from the BC and Ontario Divisions. BC and Ontario each had similar services in place before the CIS was implemented, the service in BC being run by volunteers and the one in Ontario by paid staff. These two provinces chose to submit a proposal together because they already had Call Centres in place. In February of 1995, the Review Panel recommended the Saskatchewan and Quebec proposal as the model for the CIS, based on requirements fulfilled, and the National Board of Directors approved this proposal. At this time, these two Divisions were also requested to create an implementation team made up of several different representatives of key players, and to submit an implementation plan and five year operating budget to the National Board that summer.

In March and April of 1995, the Saskatchewan and Quebec Divisions carried out talks with the BC and Ontario Divisions on how they could work together for the delivery of the service. The original CIS plan consisted of having two National Call Centres, namely, Regina and Montreal, but then compromises were introduced so that BC and Ontario could keep their own Call Centres, while still being part of the National service. It was decided in June 1996 that the CIS would include all four Call Centres and all provincial Divisions (Figure 3).

Other changes were also introduced to the original plan. The ten CCS Divisions were initially supposed to be electronically linked to the service, but the budget did not allow for this concept. They now take part in the CIS by assisting transferred callers from

the Call Centres and providing local-types of information. In October 1996, the CIS was fully established and received its first calls.

Figure 3: Structure of the Call Centres and Divisions

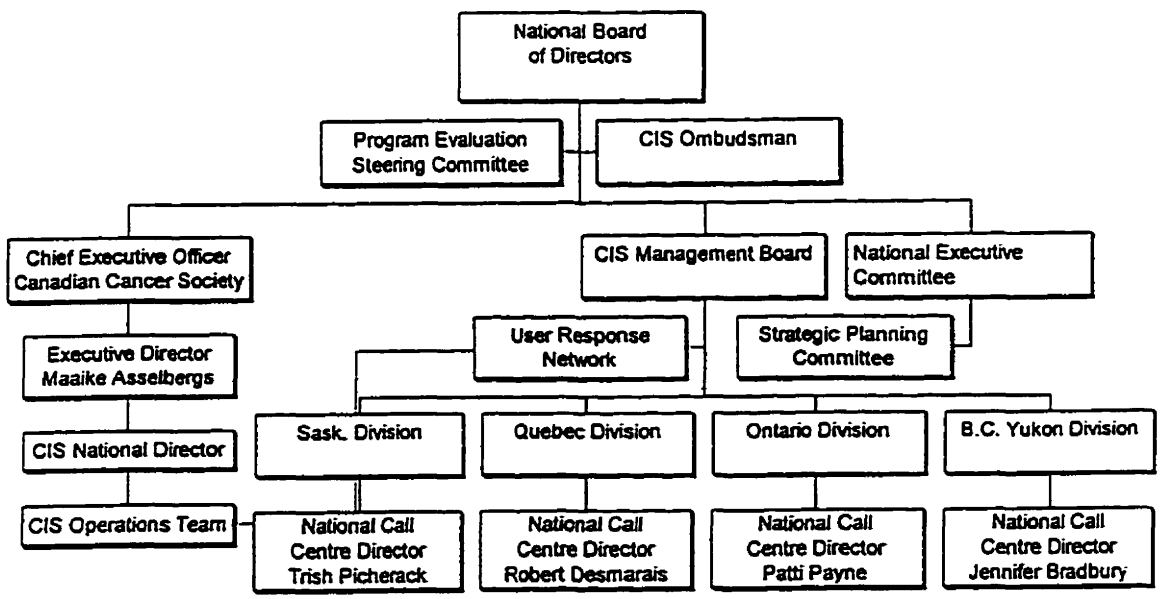


(Source: CCS and CIS documentation, 1997)

The CIS involves three major players: the CCS National office, and the Saskatchewan and Quebec Divisions, each having their own roles and responsibilities (CIS

Communique, December 1995). The National office "sets the standards for the overall service and is responsible for quality assurance including regular evaluations. National will also coordinate the promotion and sponsorship for the service" (CIS Communique, December 1995, p. 3). The Saskatchewan and Quebec Divisions "will take the lead in creating the service, including the computer system (i.e., the software), the Canadian Cancer Encyclopedia, and staff training programs" (CIS Communique, December 1995, p. 3). Although Regina and Montreal are the two National Call Centres, they still function under the National office, and report to their respective Divisions (Figure 4).

Figure 4: Structure of the CIS Call Centres within the CCS



(Source: CCS and CIS documentation, 1997)

Goals and objectives of the service

Like most organizations, services, or programmes, the CIS also has specific goals and objectives which dictate how the service should be run, and which also act as templates against which to measure successes and areas requiring further development. According to the CIS Implementation/Operational Plan (May 29, 1996), planners saw the CIS as being able to accomplish several things, including attracting new contacts for the CCS, increasing public awareness of the CCS, refining the CCS position with government health organizations, encouraging Divisional relations with cancer-related organizations in their province, helping the CCS become "an authoritative voice with the media on cancer related issues", honouring an individual's relationship with his/her physician, and giving out information "in an unbiased, non-judgemental way, with no attempt to edit or 'control' the content".

The vision that was developed for the CIS is the following:

> ***The CIS will become a flagship for the Canadian Cancer Society, respected by the public and by other health agencies nationally and internationally as a reliable and credible source of cancer-related information, and will continue to maintain the society's role as a leader in the community. The Canadian Cancer Encyclopedia (CCE) will develop into the most complete compilation of cancer information in Canada (CIS Implementation/ Operational Plan, May 29, 1996).***

The CIS mission is:

> ***"The primary mission of the CIS is to provide accurate and up-to-date information in a timely manner that meets or exceeds the needs of the caller" (CIS Implementation/Operational Plan, May 29, 1996).***

The specific goals and objectives that were developed in the planning phase for the service are much more focused and may provide a benchmark for what the service has achieved, what it represents today, and what still needs to be accomplished and developed. According to the CIS Implementation/Operational Plan (May 29, 1996), they are:

Goal 1) "To provide a wide range of cancer-related information to the country, to cancer patients and families, their caregivers and the general public. Information is available in English and in French, in a manner that ensures caller dignity and confidentiality and anonymity". Within this goal, the objectives were for the service to be implemented October 1st, 1996; to develop a Canadian Cancer Encyclopedia which enables access to a variety of cancer information, and then to maintain this database; to find necessary resources to provide cancer information; and, to provide this service free of charge to the public.

Goal 2) "To respond to the specific information needs of cancer patients and their families, caregivers and the general public by providing individually personalized service and by updating and expanding the CIS database accordingly". The objectives here are to establish a "system and organization" responsible for collecting the information and keeping it up to date.

Goal 3) "To increase public awareness and usage of the CCS and its programmes". The objectives here are to make the CIS a leader in the provision of cancer information; to get the CIS backed by health professionals, and for them to make better use of CCS programmes and services; within five years, for the CCS to reach a greater number of those afflicted with cancer in Canada.

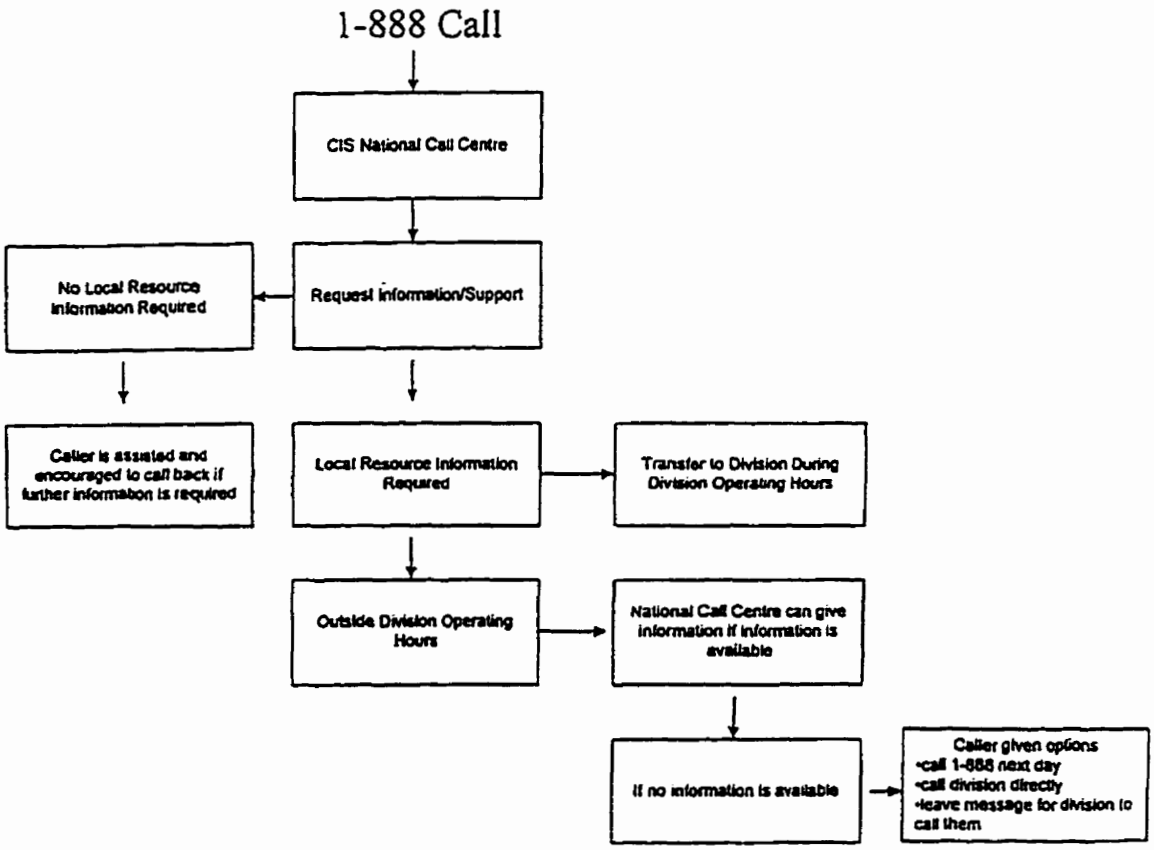
Goal 4) "To increase collaboration among all levels of CCS internally and with cancer treatment and research agencies within each province". The objectives here are to respect the uniqueness of each CCS Division and to organize a method of local information gathering for each Division; and to establish and document roles and responsibilities of the players who are involved in the provision of information, as well as frameworks for cooperation.

In short, the service consists of the development and delivery of a comprehensive cancer information database that is responsive to client needs and to particularities of Divisions. Success of this programme, in turn, was expected to enhance collaboration within the CCS and promote the organization further in communities.

Model of delivery for the CIS

The model of delivery for the CIS is the following: a 1-888 number is used to reach the service, allowing universal access by the entire Canadian population at no cost. When a caller reaches the line, he/she is welcomed by a prompt, or what is referred to as an Interactive Voice Response System, asking whether English or French service is preferred. If English service is selected, the call will reach the Regina National Call Centre, and if the French service is chosen, the call will reach the Montreal National Call Centre. It should be emphasized that Regina and Montreal take calls from everywhere in Canada. The Hamilton and Vancouver Call Centres, referred to as Regional Call Centres, provide service to their respective provinces (Ontario and B.C.). They are both part of the CIS service and use the same toll-free number. Callers from these two provinces will reach their respective Call Centre when they call the service, but when these offices are closed, the callers will automatically reach one of the two National Call Centres.

Figure 5: "Phone transfer flow chart"



(Source: CCS and CIS documentation, 1997)

The National Call Centres will take BC calls after 4:30 pm (pacific time) from Monday to Thursday and all day Friday, and calls from Ontario after 4:00 pm (standard time) from Monday to Friday. The total hours of operation for the service from Monday to Friday are 9:00 am to 6:00 pm no matter where a person is calling from in Canada, which

means that the two National Call Centres must remain open for 13.5 hours per day. The Call Centres utilize the Canadian Cancer Encyclopedia (CCE), a database that the information specialists retrieve their information from. When a caller calls one of these Call Centres but requires specific local information, they are then transferred to their respective Division office which is much more familiar with this localized type of information (Figure 5).

It should be mentioned at this point that the major sponsor of the CIS is Sears Canada, which provides the CIS, or more specifically the National Call Centre in Regina with office space, their voice communications equipment, and systems which permit the Call Centre to track their calls and extract reports. Sears also provides the CIS with the use of their Sears promotional mechanisms, including catalogues and flyers.

Staffing, roles, and responsibilities

The **staff members at the Regina Call Centre** include the Director of the Call Centre, an administrative support, one part-time clerical, a systems support person working on a contract basis two days a week, three senior cancer information specialists who also develop the CCE and are registered nurses in Saskatchewan, seven cancer information specialists, most of whom are nurses and two are social workers.

The **role of the information specialist** is to provide accurate and up-to-date information to Canadians on a wide range of issues pertaining to cancer, and to communicate this often very complicated information in a way that will be understandable to the caller. According to the job description for the information specialists, their **responsibilities** include the following: to provide up-to-date information and counselling;

to be a resource to health-care professionals, students, and other organizations; to give referrals; to educate and train other staff and individuals; to pursue ongoing education; to contribute to the CCE database; to perform research; to connect with other key individuals to the service; to take part in evaluations of the service; to propose areas of further development; and other duties as required.

Information specialist training

Every information specialist at the Regina Call Centre goes through extensive training with the help of a training manual which touches on five different areas. Each information specialist works through this manual, which includes self-tests on the content, articles, and reference to other learning techniques. Module one of the personnel training manual is an orientation and introduction to the Canadian Cancer Society, patient services and public education, as well as the Cancer Information Service. In module two, information specialists work on listening skills, interviewing techniques, caller feelings/how to handle callers, correct use of the telephone, role of the information specialist, responsibilities of the information specialist, how to organize a call, and doing a needs assessment. In module three, attention is paid to why people fear cancer, the different aspects of dealing with cancer, attitudes toward cancer, psychoneuroimmunology, communication between cancer patients and others, responses to diagnosis, physical concerns, death, dying, palliative care, living wills, grief, and loss. In module four, an overview of cancer is provided including the biology of cancer, causes, epidemiology, screening, detection, risk factors, prevention, treatment, side effects, pain management, cancer research, clinical trials, support groups, and resources for the public. In addition to this initial training, **information specialists in Regina also have continuous training** to meet standards and objectives and to stay up-to-date, through courses, lectures, and

workshops. In terms of Divisional training, staff are trained in communication skills, Call Centre operations, and user orientation to ACCCIS software. Staff at the National Call Centre in Regina were responsible for the initial training at the Divisions, but it now remains up to the Divisions to pass the original information and training to any new staff.

Database and information systems

The Director and senior information specialists at the Regina National Call Centre developed the **Canadian Cancer Encyclopedia database which is used by information specialists at the Call Centres** as "the primary information resource" to access information and respond to caller needs. The database categories include all the different cancer sites, treatments, drugs, coping mechanisms, and side effects, among several other categories. According to the Implementation/Operational Plan (May 29, 1996), the information within this database is based on priorities that the CCS's National Medical Advisory Council, the Director of Medical Affairs, and key volunteers and staff identified and suggested, with input from BC and Ontario, both of which already had much information. The Montreal Call Centre did the translation into French for the CCE database. Expert reviewers from a wide variety of areas such as nursing, medicine, and psychology are used "to ensure accuracy and credibility of the CCE database and to be a resource in the ongoing updating and expansion of the database" (CIS Implementation/Operational Plan, May 29, 1996). What is worth emphasizing is that the plan states that CCS volunteers take part in the process "to ensure that the perspective of the person with cancer, their families, and the general public are represented" (CIS Implementation/Operational Plan, May 29, 1996).

The **information specialists conduct research and obtain new information** to add to the database or to make revisions and updates through the Physician Data Query (a

database developed by the NCI and used by the US CIS to retrieve cancer information), the internet and Compuserve, textbooks, journals, and reports. Some of the original information used was also obtained through printed documentation, such as pamphlets that the CCS and NCIC distribute. The plan asserts that "Information is continuously added and updated based on reviews of current literature, comments from teams of reviewers and inquiries by the public" (CIS Implementation/Operational Plan, May 29, 1996). It also explains that "hot" news items and press releases will be entered into the database before they are made available to the public, when circumstances permit, to prepare the CIS to deal with these types of calls.

The CIS also has a **call statistics database** which allows the statistical exporting of each call made to the line, and of the information gathered on the callers by the information specialists. This gives the Call Centres as well as the Divisions the ability to determine call patterns, to generate statistical reports on the calls, and to target improvements accordingly. The information specialists also have at their disposal an **electronic brochures database**, which houses some of the information that can be mailed or faxed to callers. For example, if a caller required information on how to perform a breast self-exam, how to identify the signs and symptoms of skin cancer, or coping skills for bereavement, the information specialist could simply check in the brochures database to see what is housed at the CIS in terms of written material, as well as a description of these, and then send this information to the caller.

All **Divisions are responsible for collecting information for their local resource database**, to enable them to respond to caller needs when the Call Centres transfer individuals to the Division. In the case of Ontario and B.C., the CIS Call Centre is responsible for collecting and updating the local resource database. The National Call

Centre in Regina provided Divisions with an outline of the standard information which the databases should ideally cover and a format template. These databases hold information pertaining specifically to a given province or territory, and include such items as:

- CCS programmes and services
- support groups, rehabilitation, and professional services
- suppliers of wigs and prostheses
- government assistance programmes
- treatment facilities, hospitals, and health centres

It is also the **responsibility of each Division to update its own local resource database** at least once a year, but it is recommended that this be done whenever new information is developed. Updates are then sent to the National Call Centre on hard copy, where they are then inserted into the database. The local resource database information is used at the Regina and Montreal Call Centres whenever the Division offices are closed, or not available to take calls.

While the above findings represent factual information from the documentation concerning how the service was set-up and implemented, the decision-making processes and planning that took place, the objectives of the service, the model of delivery, as well as how the service is intended to run, the following findings arose from the interviews and diaries. Findings from the Regina National Call Centre site visit will first be presented, followed by findings gathered at the Manitoba Division site visit.

4.3 Findings from the Regina National Call Centre site visit

A total of four days were spent at the Regina National Call Centre to collect appropriate documentation, conduct the interviews, and observe operations. Upon returning from this site visit, interviews were transcribed, and answers for each question from all interviews were then summarized and grouped together, in order to facilitate the search for common themes. For example, the answers from each interview for question number one were all put into the same subfile so that they could be analyzed as a whole, rather than having to go through each transcription to examine responses by themselves.

After organizing the answers in such a way, it was observed that numerous responses were being repeated by the information specialists, who often used the exact wording. When the same answers were being expressed by a significant number of information specialists, it became clear that this represented a theme within the findings. These themes were labelled based on the term which the information specialists assigned to these answers. After all answers from each interview had been grouped together, it was apparent that there was some overlap between some responses, in which case a note was simply made to also observe the answers from the questions that produced similar themes. It should be noted that responses that were mentioned only by a few information specialists are still discussed, although efforts will be made in the last chapter to emphasize which were the main findings and how these conclusions were arrived at.

Diaries were completed by the information specialists two months after the interviews took place. They focused primarily on roles and responsibilities of the information specialists and typical scenarios that are dealt with, and were used to elaborate on some of the main themes in the interviews. Because the diaries were very short in

length, there was no need to summarize answers and group them together, as was done with the interviews. It was found that diary entries revolved mainly around some of the themes that were identified in the interviews, therefore diary responses from the information specialists were added to the thematic categories already developed. Hence, the diaries helped give further support to the findings from the interviews. Examples of typical calls that the information specialists deal with were all taken from the diaries.

The following findings from the Regina National Call Centre are not grouped according to the interview question categories (given the amount of overlap between the answers), but rather according to the general themes that arose from the use of the interview and diary methods. They could be classified though under the two main categories of questions, namely, the information provision processes within the CIS and the interactive processes between disseminators at a National Call Centre and at a Division, with each one of these containing several subcategories of major themes.

The themes under the category "information provision processes", include: roles, staffing, and training of the information specialists; information provided at different levels of the service; and keeping up-to-date with new information. The themes under the category "interactive processes", include: relationships and communication; channels of communication; transferring procedures; database issues; clarification of roles; greater promotion of the CIS and its potential; and organizational issues and the need for more leadership. It should be kept in mind that these findings are representative of data which was collected in November 1997. Several changes have occurred at the CIS since then, and efforts will be made to identify these when possible.

The information provision processes within the CIS

a) Roles, staffing, and training of the information specialists

A common theme that was repeated several times not only in the interviews but also in the diaries revolved around the **roles and responsibilities of the information specialists**. Almost all information providers stated that their role includes providing medical information so that it is understandable to everyone, and one individual specifically referred to this as making it "user friendly". Again, almost all of them claimed that because they are health professionals, they can make more sense of this type of information containing technical terms by using their background knowledge in addition to what is on the database. Information specialists stated that they also play a counselling role, and more specifically, pick out the underlying issues, or real reasons why people are calling, as well as listen when callers simply want to talk. One information specialist felt that it was especially important and beneficial to have individuals from different backgrounds, since this contributed to the overall service. She said: "I think one thing that I appreciate is the attempt to balance the types of staff and everything that we have at the CIS. They're beginning to realize that CCS can't work necessarily from the medical model". She further stated: "We've all got skills that we bring in. I think that each contribution is part of the whole".

All information specialists indicated that their primary role was to access information and resources, and to disseminate this information. This includes performing a needs assessment, determining what information to send, interpreting the needs of people, and how much information to provide. Many stated that if they do not have the information and the Division does not either, then they would be responsible for

researching the question and getting back to the caller, a role that people at the Divisions are also responsible for. One concern voiced by a couple of information specialists is that at times, although it is rare, they have no answer to give, or there is not much more that they can do for people, bringing on a feeling of helplessness.

One individual stressed a need for more **training at Call Centres in managing the calls and in customer service**. Another person stated:

> From our review of the training that was done and from the feedback at the time, it's clear that many people at Divisions do not have a lot of training on how to do customer service. Yes, it costs money, it takes time, but if you're going to do this and you're going to do it well, that's what it takes, and it's not a waste of money.

One individual admitted that the concept of training at the Divisions is a little uncertain. She explained that originally, this was done at the Division by senior information specialists who did two days of training with staff in terms of how to use ACCCIS, what is the CIS, and respective roles. She further explained that there has been some staff turnover in some Divisions so that the person who was initially trained is now gone and replaced, without this new person being trained. Divisions are now responsible for training their own staff about the CIS, ACCCIS and any related issues.

Along the same lines of roles, staffing and training, there was concern expressed by a few information providers on whether or not volunteers could deliver the same level of service. One information specialist did not know the extent of training of the B.C. volunteers, but said that they do have a training manual that is supposed to be utilized for new staff. Another information specialist discussed the fact that B.C., uses its own database because they had it before the CIS was established. She explained that callers

start to notice a difference in the type of information given, and when to place their call in order to reach the National Call Centres. She said: "I just hope that as an organization, the information that everyone is getting is adequate. It shouldn't matter where you're calling from in Canada. You should be getting accurate, up-to-date information". Another individual echoed this: "Callers are catching on as to when they can reach certain Call Centres. It would be nice if they didn't have to call twice, but could call any time and still get the same information anywhere".

b) Information provided at different levels

Almost all information specialists mentioned that **information given at the Regina National Call Centre is specific and detailed disease/cancer-related information** such as cancer treatments, how it is acquired, and how to prevent it, which is much more in-depth and tailored to caller needs. Callers want information on a wide range of areas related to cancer, and some examples of the calls that are received at the Regina National Call Centre are the following:

- many calls from students doing projects
- information on clinical trials being done in Canada and the US
- a caller wanting reassurance that he would be cured when the doctor gave him one year to live
- a caller wanting to know how to tell her children about a parent who has cancer
- an extended call with a woman who has breast cancer and who adhered to several myths
- a man wanting to know the name of the "liver doctor" who could treat his girlfriend, although this type of information is not collected and could not be given
- a man from Nova Scotia asking how many people used the "medical seats" on Air Canada flights and why the fares were not reduced more than they were
- a woman in her twenties just diagnosed with terminal cancer wanting to know about alternative treatment centres to prolong her life
- a wife with cancer calling about her husband just having been diagnosed with cancer and how worried she was because they have two small children

- a policy analyst looking for statistics
- a sister asking for coping skills because her sister has cancer
- callers venting their frustrations on how unfair it was for them to get cancer
- a social worker wanting information on alternative therapy
- many crisis calls from individuals just diagnosed and in shock
- smoking cessation calls generated from Non-smoking Week campaign over the radio
- a woman asking about information on her nephew's brain tumour with spread to the spinal cord
- request to send information via e-mail to Peru, and to Denver
- a woman from New Brunswick needing accommodations in Montreal
- a woman asking about a procedure she read about in Reader's Digest
- a person asking about information from a TV program that he saw
- a dental student looking for information on cigars and health risks.

Several information specialists also emphasized that because they are a National service, they cannot possibly know all the local information and that many of these services require coordination at the local level, which is why Divisions are better able to play this role. One information specialist summed it up this way: "It's the people from the community helping the people in the community that works best. We can talk about the cancers, but when it comes to a day to day, one-on-one support, the Divisions are an information service as well. We depend on them".

The majority of information specialists thought that **local information is more general and not as in-depth, and that it focuses more on community services**, such as support groups, homecare, palliative care, hospices, support services, where patients can find a prosthesis, nutritionists, and transportation assistance. They added that Divisions are responsible for local pamphlets, videos, audio, information packages, kits, and bulk orders.

c) Keeping up to date with new information

A popular theme, one stated by the majority of information specialists, concerned the **challenges of keeping up with ongoing training and education** to handle a variety of inquiries because they work in a fast paced and changing environment. They all agreed the opportunities that are provided to take courses and attend conferences are very useful learning experiences, which they bring back to share with the others. In addition, several commented on how worthwhile it was to get lectures from people who come in to speak about a specific topic. The information specialist II's, in addition to having conducted the initial training at the Divisions, develop the database and perform much of the research at the CIS, although all information specialists contribute to this latter task to some extent. The information specialist II's also look at "Oncology News" daily on the internet, a news bulletin which is sent to all four Call Centres. Several individuals mentioned external agents who also assist in keeping them up to date, such as patients who are getting more sophisticated, the committee of expert reviewers, the media, and other organizations which they have contacts with. One mentioned a need to make more connections with people at cancer centres in order to gain some of the most current information.

A common concern voiced by almost all information specialists is the **difficulty in trying to balance taking calls with doing research**. Many maintain that they need more time away from the phone in order to do their research and to update the CCE. Some information specialists said that they sometimes deal with this by not taking calls to catch up with doing research. Ideally, some said it would be nice to have people set aside specifically to do research. On the other hand, one information specialist stated that doing the research is one effective way of keeping up with the changing information. One

individual listed some of the skills that were required of information providers in order to deal with this aspect of the job:

> It helps to be knowledgeable in your field, to know where to look for information, to have good antennae, to be able to hear something in the background and keep it there, or be able to quickly connect bits of information so that you can quickly catch on to new information, to be skilled in research, such as using the internet, journals, books, or any resources available, to have a good network of people, to have good investigative skills to keep up with the information, to have a sense of interest and not be frightened by the fact that this is new information, and to accept that you have to keep learning.

The above section described the information provision processes within the CIS that are currently taking place, including the roles and training of the information specialists, the type of information which they provide at the National level as opposed to the local level, and how the information specialists stay up-to-date with the changing information within the field of oncology. The interactive processes between disseminators at the various levels of the service will now be considered.

The interactive processes between disseminators at the National Call Centre and a Division

a) Relationships and communication

Half the information specialists stated that for the most part, current communication processes are effective and Divisions have been cooperative and helpful, but that there remains room for improvement. One recurring theme voiced by the information specialists at the National Call Centre was for the **Divisions to keep Call Centres updated on matters pertaining to the Division, which ultimately affects the Call Centres.** They

also mentioned that if a Call Centre is getting many calls about a particular issue, they let Regina know this because eventually the calls will reach them, and this way callers can be handled in a one-step process. Several of them said that Divisions do not always communicate with Call Centres and that they find out about things, such as events in provinces, through other people, which then leaves Regina with having to look up the information after the information specialists get the calls. It was added that it would be helpful for the Call Centres or Divisions to send Regina a copy of whatever the issue was, to explain it, and then create a response so that the information specialists know what answer to give to the callers. Among these updates would be upcoming events for the province, fundraisers, runs, campaigns, etc. Other things mentioned by individuals that should be communicated are staff turnover, who the contact is at the Division, and when that contact is available. It was said that some Divisions already do this, but that it would be helpful if all of them did. One information specialist added that she believes Regina keeps Divisions up to date, but that perhaps this should be done on a more regular basis.

Most information specialists said at some point in the interview that not all Divisions will let them know if a "hot" news item comes out in the local media. As one person stated:

> We get very little if anything from Divisions. National does send us issues alerts--information about what the issue is and what the CCS response is. They send us any press releases and are very good about letting us know of a new study, or when something controversial is published. So on the whole, I would say National does virtually all of that. Very seldom do the Divisions do anything in terms of keeping us informed.

Some examples of "hot" news items are anything related to breast and prostate cancer, which always generates many calls, but also cancer-related information that may

have been reported in a newspaper article, on a radio talk show, or television news reports, especially if the CIS number was given out.

Another person discussed what is known as "News To Us", which is a way by which Ontario keeps other Call Centres updated through cc:mail and warns them if a "hot" media item is generating a lot of calls. Many felt that it is difficult when they are not warned beforehand that the CIS number is being given out because they sometimes need more information before they can give a response. One person said that getting a warning was very useful because the information specialists could then prepare and have news releases from the National office ready, have all the research available for the callers, get information packages ready, and schedule people accordingly. She further explained that the only place the staff have trouble with sometimes is when something is a "hot" item in B.C. or Ontario because these provinces have such a high population and such a high exposure that if the phone number is given out, it has a ripple effect and Regina is not ready for the number of calls, which she says has workload, staffing, and information implications. This same person also explained that when something very provocative is said, such as study findings on a particular treatment that is still being tested, and the information specialists in Regina did not get a chance to research this study and they begin to get calls, this creates an unnecessarily difficult situation. She added:

> I think we need to be more proactive and more anticipatory...But I think with time, people become more skilled at judging what is likely to impact and what isn't. When people are aware of the large picture outside of their own Call Centre, when they get their networks a little more active, it will improve their ability to pick up on these things quickly. And B.C. and Ontario are very good about picking stuff up. If they catch it, they let us know.

In fairness to the other Call Centres and Divisions though, one individual explained that it is sometimes difficult to pick out what is an issue and what is not.

Half the information specialists referred to **the need for more open, spontaneous, and honest communication when dealing with problems and difficulties**, and to develop a trusting relationship. Some individuals in Regina felt that Divisions do not always communicate with the National Call Centre if they have any problems, such as with the transfer of calls, with the ACCCIS database, or with CIS operations in general. Information specialists stated that if the Divisions have any concerns, that they discuss them openly. One person said that Regina will sometimes hear about a certain Division having troubles with the database, or some other issue, through a third party, rather than the Division itself. She added: "Direct, honest, and open communication is the best policy. If something's not working right, we want them to let us know". Some information specialists claimed that whenever Regina is having difficulties, the information specialists discuss these with the CIS contact at the Divisions to clear the issue, therefore they expect the same treatment in return. Yet, one information specialist felt that if there was a problem or Divisions were not happy about something, they would call Regina.

b) Channels of communication

All information specialists listed **several channels of communication that are utilized when communicating with other Call Centres and Divisions**, including the phone, e-mail, cc: mail, and faxes. In addition, opportunities for communication are also provided to those within the service when information specialists in Regina transfer callers, when other Call Centres such as B.C. and Ontario keep the Regina Call Centre updated on what is happening in their province, or when the National office distributes press releases

for current information. Some individuals also mentioned that the information specialists II's are responsible for keeping in touch with the contacts at the Divisions where they did the initial training. Information specialists in Regina also look at "Oncology News" daily on the internet, and then put any new information on cc: mail for everyone at the Call Centres to read, in case the topic might hit the media. Some mentioned that Divisions get reports--monthly, quarterly, and annually from Regina, which lets Divisions know such things as how many calls were received from their province, the age range of the callers from their province, and what people from their province were calling about. Another person stated that the CCS used to have the CIS Communique newsletter, which was primarily for use within the CCS, but that nothing had been formally printed since last year. Other answers concerned more formal methods of communication, such as the operations team meetings every two weeks, and staff representation from the four Call Centres to develop the policies and procedures by conference calls.

c) Transferring procedures

The **information specialists are all very clear on the circumstances for the transfer of calls**. They stated that the major determining factor for transferring a caller is if a Division is open, followed by concerns about financial assistance, transportation, support groups, bulk orders, and donations--issues which are better addressed at the local level. Some information specialists said that although they are supposed to transfer for community services, they sometimes handle these inquiries themselves if they have the information on the local database rather than transferring, since it is easier to handle the caller in a one-step process.

A few information specialists agreed that most Divisions do appropriate referrals most of the time. On the other hand, some individuals pointed to **inappropriate referrals being made**. They indicated that there needed to be some clarification regarding the Divisions telling callers to call Regina for information needs that Divisions are supposed to handle. One person said that "sometimes Divisions give out our number for things we don't deal with, so I'm not sure they really know what our role is". Another person stated that she would like "for Divisions to understand which role we play, then we get appropriate calls". A similar comment was made by an individual explaining that not being aware of each other's expectations and roles affects the relationship between Call Centres and Divisions. For example, she said Regina will sometimes get calls that are appropriately dealt with at the Division level. Many said that it is frustrating when people call the Division, where the caller's needs are not always carefully heard, where there is no clarification, no questioning, no triaging, or no proper needs assessment, in order to make the appropriate referrals. This then means that the caller is sometimes needlessly being transferred to Regina when the call could have been handled at the Division. As one person said: "It's not good service and it will reflect badly on us". Another said that this is hardly cost-effective. One information specialist specifically said that any Call Centre or Division doing the wrong referrals should be made aware of this. She said: "I think we all appreciate being informed if our referrals are incorrect, or inappropriate, because it's not about us, it's about meeting the caller's needs".

Another concern voiced by a few information specialists had to do with some **Divisions calling on behalf of the caller**. One specialist said that Divisions should not attempt to be the intermediary and try to pose the questions for the caller, get the answers, then go back to the caller. She observed: "We discourage that as much as possible because

we're not sure that it's the best way to serve the needs of the caller, and it is inefficient". Another added that this process would result in misinformation.

Most information specialists also talked about **inconsistency in terms of transferring procedures**. One information specialist said:

> It must be recognized that each Division is unique within the CCS. I think the biggest improvement is if Divisions could all work cooperatively on this project so that the service is the same across Canada. So that we don't have to remember that this Division has an answering machine, this Division has a contact person, this Division's only open a certain time. Continuity I think, through all Divisions is important.

Some of them added that it is frustrating having to remember who they are supposed to transfer a caller to for ten different provinces, since for some, there is always a contact person available, for others it is anyone who happens to be in patient services, still for others it is the receptionist.

The majority of individuals claimed that besides the existing variance between Divisions with who takes the transferred calls, there is also **inconsistency with the issue of whether a person or an answering machine will answer**, as was reflected in the above quote. Answering machines were definitely a common concern from almost all information specialists, who emphasized that some Divisions are easier to contact than others. It was stated by many of them that one province uses the answering machine solely, which can be very frustrating for them. Therefore if Regina has to transfer a caller to them, they will give him/her the option of leaving a message, or getting Regina to call on his/her behalf. Some suggested that it would be nice if they could let Regina know when they are out of the office or away from the phone, then if transfers have to be made, they could warn

the caller that he/she will get an answering machine. On the whole, most seem to think that it is better to have a voice to connect a person to. It should be added that a few of the information specialists claimed that the communication is effective in that Divisions will always return calls, but it is also ineffective in that callers can often get an answering machine. They further explained that sometimes this cannot be avoided, since at some Divisions there is only one person in patient services, and the CIS may not be that individual's only responsibility.

d) Database issues

In terms of the Canadian Cancer Encyclopedia, **many information specialists commented that it is excellent and very helpful**. In addition, many added that they have a good supply of resources, and that they feel well-equipped and sufficiently trained to find the information. One person said that she has to keep reminding herself that she is an information specialist, not an expert, or that she has to be an expert at finding the information, but not at knowing everything there is to know about cancer because there is always new information coming out.

All Divisions have their own provincial database which they revise and send to Regina on a monthly basis, with formal updates done on an annual basis. Most Divisions adhere to recommendations for what should be in the database, although several information specialists stated that provinces all enter information in differently, and while a Division might let Regina know how it entered information, Regina cannot always remember what the standard is for each province. Every information specialist stated that there was **a need for more consistency in database entry**.

Referring to the importance of these databases, one individual stated that Divisions:

> have been able to see the benefits of it because they have a need for it at their own Division. Overall, Divisions have worked really hard at trying to get their database as complete as possible, but they have limitations in personnel, time, energy, priorities, equipment. It's such a great benefit to them. They're quite happy to keep it up to date because it helps them do all of their other work. The database is a tool for them to use.

However, a few information specialists said that the way things are entered in the database sometimes makes it difficult to search. One of them suggested assigning a national coordinator overseeing the consistent entry of database information. A few added that these regional databases should be more specific, more descriptive, and be kept updated on a regular basis. For example, individuals at Divisions are very familiar with the support groups in their province since they may deal with them on a regular basis, but an information specialist in Regina may not know just by looking at the name in the database who this support group caters to, what they do, when they meet, and where they are located.

Also related to database issues was a statement by one person who thought that **technically, the service could use more resources**, such as systems support people, which would be helpful when strategically planning so that planners and organizers could remain aware of all the technical implications. She said:

> The Canadian Cancer Society does not have a lot of infrastructure, and one of the things I think we could really use in relation to the CIS is more resources to help us with the technical aspects. As we progress and technology becomes more and more advanced, and there's more and more expectations, and I think we would benefit from perhaps a full-time position in the National Call Centre who could be involved in keeping us technically current in this sort of thing.

And finally, a couple of information specialists mentioned that **Anglophone callers from the province of Quebec do not have that many resources** compiled for them in the database and that this should be improved. They said that it is frustrating for these callers because if they want the service in English and are connected to Regina, the information specialists do not have much information that they can provide them with. If staff in Regina transfer them to Quebec, one person said that the information specialists at the Montreal Call Centre also cannot do much to assist the caller.

e) Clarification of roles

Perhaps the issue that was returned to the most often throughout the interviews and covered in almost all categories by the information specialists had to do with the clarification of roles. **Almost all information specialists at the National Call Centre in Regina had the impression that Divisions felt somewhat threatened with this new service being implemented**, as it would take responsibilities away from the provinces. One person said: "Some Divisions, we feel, are almost threatened by the service, that we're going to be taking jobs away. So some are quite hesitant to cooperate and to participate in this service, so that's an area of improvement that could really be looked at".

Another stated:

> Some Call Centres have been operating longer and they have their own way of doing things. And when a new way of doing things and a new group of people have been brought to the national profile, that's somewhat threatening, and I don't think we mean to be. I think it's a time of change and adjustment and we're still learning how to cope with one another. I think for the most part, we're doing a fairly good job.

One individual explained that she did not think it was a matter of feeling threatened, but rather:

> I think it's a matter of Divisions realizing that they need to have those connections with their populations and that as soon as people are dealing with someone outside of their Division, it's a lost opportunity. We're in the business of raising money for cancer, and helping people who have cancer. All that means is you have to have contacts with people, your donors, and people who have cancer, and so it's a lost opportunity when you don't, which is why the original model for the CIS saw the referral back to the Divisions for these sorts of questions as very important. But it wasn't only important from the Division's point of view; we thought it was also important from the client's point of view, because I know that a person in the Division office in Nova Scotia is going to be able to give better information out of a database than a person from the National Call Centre in Regina.

A couple of people referred to themselves and the National Call Centre as being "the new kids on the block" and therefore "more difficult to accept by others". It was repeated a number of times by the information specialists that their purpose was not to eliminate jobs and that the role of the Divisions was crucial for the service. One information provider stated: "We need them (the Divisions). They are essential to our being and we can't function without them. I'm not sure that they understand that, and I think that would make things a little easier if they did understand that".

It should be mentioned that at the time of the interviews, Alberta had not yet provided their local resource database to the National Call Centres. Therefore, much of the discussion around the sense of feeling threatened was centred around this Division, although some information specialists pointed out that this was not the only Division with whom they had this impression. There appeared to be some resentment surrounding this issue, as **many individuals thought cooperation from all Divisions was crucial for a**

National service. They also felt that not having Alberta's database greatly affected service to the callers from that province, since local information could not be provided to them when it was required, with a caller having to make a number of calls to get a question answered. The National Call Centre now has Alberta's database.

Many individuals thought this issue of role clarification was related to the confusion and **miscommunication surrounding roles at all levels**. One person stated that Divisions used to know what their role was when they had to handle everything themselves, but since the CIS came into place, there may be confusion about who should handle what. A few people suggested that this could perhaps be improved with the promotion of roles within the Call Centres and Divisions. One information specialist explained that all Divisions are provided with information about what Regina does, but that with the staff turnover, this information may not be passed on. Others said that it is how well information is filtered and disseminated by those who did receive the training. A few others thought that even some people within the CCS are not familiar with what the CIS does and its role, and they were not sure how well information about the service had been delivered, prompting some Call Centre staff to suggest that the service should be promoted within the entire CCS organization. Another suggestion that was made by a few information specialists to work on this issue of role clarification involved meeting each other in person to discuss roles and responsibilities. One of them said: "Things like that get you connected on a National level, then you have a face, a voice, and a sense of being with the same organization". Another information specialist said that many people view the Call Centres as being separate from the Divisions, and that there was a need to see how each end works and how they work together: "How we fit together is what I don't think is understood".

Related to roles and responsibilities are the **expectations that each level has of the other**. A few information specialists indicated that some Divisions may not even know Regina's expectations, that there was quite some variance in terms of expectations within a Division, and one mentioned that Executive Directors may even have different expectations than the Division contacts, or the volunteers in patients services. She added: "On the whole, I would say that those expectations are not clear and they're irregular. I know what I think they were supposed to be, but I'm not sure if I could say what they in fact are. I think they vary within each Division and they vary from Division to Division".

One expectation that Regina had of the Divisions that was repeated by several information specialists and often referred to as *customer service*, is that Divisions ought to help people to the best of their ability, that they "go the extra mile" to make suggestions to the caller, that the caller's needs be handled promptly and as efficiently as possible, that the caller be handled with respect and dignity, and that there be cooperation to make the service the best it can be. One person commented: "The Divisions themselves are the CCS in the provinces so they need to have a good relationship with the public because they're run on public donations. I hope that they would be going out of their way to provide any information or any services that they could for any individual there". This same person also added that this help is crucial because the callers are very sophisticated and are empowered by knowledge to make better choices. She said:

> I feel that knowledge is really empowering and when a person is given the diagnosis of cancer and she's lost all sense of control, then at least by learning what the cancer is, what treatment options there are, and what's going on in the world in relation to the disease, she can try and get some control back, make some sense, and have a guideline of where she's going. And if she's terminal, then she can come to terms with that, and where she can go from there. I don't think I ever realized how providing the person with information can make a change in her life and in her outlook on the disease. And there's always that sense of hope and I always try and instill that in the caller because even if

> there is no form of treatment, I really believe that if you have a good mindset, and you have a will to survive, that you won't cure yourself miraculously, but at least the quality of your life may improve.

Although this is a personal opinion expressed by one information specialist, it is reflected in the philosophy of the CIS service.

A few people commented that callers should also be left with the impression that the CCS did try to assist them. One stated that she expected Division staff to be as helpful as possible with the callers, even if there was not much that could be done, to at least make it look like an effort was made.

For the most part, information specialists agreed that the Divisions expect the National Call Centre in Regina to make the appropriate referrals and transfers, that Divisions be kept involved in the service, that they be kept up-to-date and informed technology-wise and information-wise, that there exist open communications, that Regina calls and checks to see how they are doing, and that Regina lightens their workload, since Divisions had the responsibility of addressing all these needs previously. One individual commented on this last expectation:

> It was a huge boon for us to have a service like the CIS to refer people to. We're a very small Division, staff-wise, we have one nurse on staff who was not an oncology nurse. While we had a lot of written information, for anyone who wanted to talk and ask questions about the written information, we really weren't very well equipped to answer them. So having the CIS available is just a tremendous benefit to our volunteers and our staff.

In terms of whether or not the Regina Call Centre and the Divisions are clear on each other's expectations, there was some variance. Most information specialists agreed that the expectations were made clear at the start, but that they may no longer be so in some

provinces where there has been a great deal of staff turnover. The initial training that was performed there and the background information provided may not have been passed on to the new person. Another maintained that while expectations were clear because of the training, it is not always individuals from patient services who answer the transferred calls, and that perhaps the receptionists or volunteers who sometimes answer do not really understand the various roles at each level.

f) Greater promotion of the CIS and its potential

Another major theme that was returned to very frequently by the information specialists was related to **greater promotion of the CIS**--within the CCS National office, Divisions and Units, the NCIC, other health organizations, and the general public. One information specialist discussed in great detail how important she felt it was for medical professionals to endorse and promote the service and distribute the CIS number at their offices. She explained that many nurses and doctors may have been hesitant about the service at first but now that it has been around for over a year, the CIS has been able to demonstrate its capabilities. She suggested that the service could potentially improve communication between patients and doctors since the former would get a better understanding of the disease, which would make it easier when they go to their doctor.

One person discussed a **promotion of excellence** in terms of consistency across all four Call Centres and Divisions, in delivery of information, of operation, of customer service, as well as in perceptions of what the service represents and what it is able to accomplish. She said:

> We need the CCS not just to understand but to encourage and to promote a level of excellence. At this point I 'm not sure that everybody buys into that,

> and I think that that discrepancy or that diversity in thought about what is the service, what can we offer to people, and how much trouble should the service go through to define information for people is hampering us because I know that there are variations in the level of information given to people across the Call Centres. If it's a marginal difference, if it's 10% variance, is that acceptable? I think right now we don't know what the variance is, and that's a problem, and I think there needs to be an expectation, an acceptance, and a promotion of excellence in this service.

An additional area where a couple of information specialists felt there was a need for greater promotion was in relation to **callers not realizing that this is a National service and that their call is not necessarily going to be received within their city or province.** Both mentioned that there was some confusion among callers about where their call was going, which suggests that people do not really know what the CIS is. One person said that people are amazed or surprised to discover they are calling Regina, and added that it can be intimidating if the caller is not aware of where their call is going to. She explained that even if it is a 1-888 #, some people assume that if they found the number in their phone book, it must be in their city, so some then get frustrated because they wanted to talk to someone from their Division. She further asserted that this was a problem with how the CIS and CCS phone numbers were listed in telephone directories for each city, and that people tend to call whichever number appears first.

g) Organizational issues and the need for more leadership

One individual discussed in quite some detail **the need for more leadership within the CIS**, the need for a Director of the CIS as a National service, and the need for a management team or group that the Call Centre Directors could consult for management issues. She explained that as it stands, these responsibilities have been informally allocated to the Director of the Regina Call Centre, and that if a Call Centre Director has a problem,

it is unclear how to resolve it. In addition, she said that the Regina Call Centre is responsible for generating all the reports for the service as a whole, as well as technical development and support--what she refers to as "centralized functions or tasks". She added: "We have managed very well up until this point, but I think for the service to grow and become more efficient and more effective, we need that leadership, and we need a more direct management structure, where there is accountability built in".

This same individual also observed that on an organizational level, there also exists a need for a clearer definition of relationships. She said:

> That's particularly important because there are things that go on at National and at the Divisions that need to dovetail with, and if people within the service are not aware of that information and we're not communicating properly, we can get going in different directions, and we can get duplication. There's a lot of work to be done at that level, and again, I come back to the management and leadership issues which I think are critical here.

She also discussed **leadership in terms of making everyone realize the full potential of the service**:

> There needs to be some leadership in defining what the CIS is, by making it the best it can be, and getting people to be proud of it. Let's get every penny we can out of it in terms of getting people to use it in ingenious and innovative ways that will excite them. In the short-term they are being very concerned, and rightly so, with functioning to date, but they're not seeing the long range picture.

On the issue of leadership impacting the image of the CCS through the CIS, this same person explained:

> The CIS is not the answer to everything, but there's a lot that it could do as the very public face of the CCS. I think one of the things the CCS is known for is,

> in some cases, being very backward and stuck in its ways. This kind of a service could change its image completely. It's very high-tech, it's very new, it's very up-to-date, it's exciting, it's changing, it has multiple faces, it's an information service. If you give value to the public, I believe the public will pay for value. People (the CCS) just haven't gotten their heads around it yet, and that's understandable. But I think that's a limitation and we need people to think. We need leaders who will help people that way.

Another person briefly touched on this idea of leadership and referred to it as building a vision. She said:

> Developing a vision, one vision without any 'yes, but's'. This is the vision we have for the CIS, this is what the CIS can be, we need everybody on board. I think that we need somebody who's really visionary and that can bring the different factions together, and say this is what this is, and this is what this can be.

The previous section discussed findings related to the interactive processes between disseminators at all levels of the service, including relationships and communication, channels of communication used, transferring procedures, database issues, clarification of roles, greater promotion of the CIS, and the need for more leadership. The following section will present findings obtained from the site visit at the Manitoba Division.

4.4 Findings from the Manitoba Division office site visit

The CCS Division offices take part in the service through the provision of local information that callers may require. When a caller talks to an information specialist at the National Call Centre and has local types of inquiries that Divisions are more familiar with and capable of handling, the staff at the Call Centre transfer him/her to the Division in his/her province. Staff at the Divisions who handle CIS-related calls also have a database from which they retrieve information, called the local resource database. It should be kept

in mind that Divisions do not have an individual whose only responsibility is the CIS, but they instead have several roles assigned to them. This is precisely the case at the Manitoba Division, the second site which was visited for this case study.

One day was spent at the Manitoba Division office in Winnipeg, and given the nature of the situation and circumstances, the site visit did not go according to plans. The researcher was informed shortly before departure for the site visit that staff could not dedicate individual time to formal interviews, as they were extremely busy preparing for a General Annual Meeting. Instead, informal discussions took place with each person who was supposed to be interviewed, except for the Executive Director of the Division who was away at the time of the site visit. These discussions were not tape recorded, as there were too many distractions because of the office operations and set-up (phone kept ringing, people asking questions, filling orders, etc). Notes were taken during the conversations, and more detailed notes were completed immediately afterwards.

Given these conditions, findings could not be treated in the same manner as they were with the Regina data. Instead, findings obtained through the discussions, observations at the site, the diaries, as well as a group response to an original set of questions sent to the Division for the planned interviews, are presented according to subjects on which information was retrieved, rather than according to major themes. Themes could not be developed as discussion topics with the information providers were not consistent, and the minimal time spent with each person produced incomplete responses because not all planned question areas could be covered. In addition, the group response to the interview questions represents responses from the staff as a whole, and not individual perceptions, as in Regina, which is specifically what enabled the retrieval of themes. As with the National

Call Centre, diary information at the Division was used mainly to determine roles and responsibilities, and for examples of the type of inquiries that the Division handles.

Research findings have been limited by this lack of information from the Division and as a result, presentation of findings may be skewed in favour of the National Call Centre, simply because the perspective of the Division could not be provided as effectively as was originally planned. As was the case with the Regina Call Centre, certain changes have occurred at the Division since the site visit, and efforts will be made when possible to identify these.

"Call Centre" operations

Individuals at the Manitoba Division said that when they implemented their service after the CIS was put into place, their intention was never to replace the CIS or to become a separate Call Centre like B.C. or Ontario, but rather to improve client services, to make the calls more efficient, and to extend what they could do for their callers. **The Manitoba Division does see itself as being independent and not a part of the CIS**, as they specifically stated "Manitoba Division is not part of the CIS". They also call themselves a call centre (in the sense of being separate from the CIS), although their service interfaces with the National Call Centre in the sense that they are still a CCS service. It should be made clear that the service as a whole does not consider the Manitoba Division as a regional Call Centre, such as the B.C. and Ontario Call Centres. An individual at another Division made a comment in regards to this issue and said that Divisions cannot see themselves as being separate from the CIS:

> I think it's absolutely critical that both Divisions and Call Centres remember that the CIS is a CCS service. It doesn't exist separate from the CCS. It's the

> National Board who approved it, it's the National organization who's funding it, and all that that implies both ways, from both the Call Centres' point of view as well as from the Divisions' point of view. I suppose it's like a well established family, then all of sudden, you have these children being adopted. You know it's going to take a while just to work it out, just for everyone to be comfortable about who the other person is and what their role is, and where they fit, and that sort of thing.

It is interesting to note that one person emphasized that the Manitoba Division does not label itself as a "Call Centre", and that they could not replace the CIS because the Division is not equipped to handle specific information with their backgrounds. Staff said that they do refer callers to the CIS and that the CIS transfers people to them. The reason why they sought to develop their own service was because originally, a receptionist was taking all the incoming calls at the Division, and callers requiring information were transferred to an information officer. With such a set-up, callers often had to leave messages on voice mail and wait an extended period of time for their calls to be returned and for information to be mailed out. One individual said: "A proposal was presented to the Executive Director to provide more efficient service. The proposal was to establish a room (Call Centre) from which all calls would be answered". The service currently has a full-time receptionist, a part-time receptionist, and an information officer, who are all referred to as Call Centre Assistants "to reflect the new customer focus of their positions". Therefore, these individuals handle both CIS-related and non-CIS matters, and act as resources not only for caller needs, but also for Executive offices.

Roles, responsibilities, and training

The **staff who handle all the calls at the Manitoba Division have other CCS duties and responsibilities that they must perform** around the office when their help is required by others. Most of their work is done in the same office space, which at the time

of the site visit was very small and not very private, but it has since then been expanded. One Assistant said that they are busy enough just taking calls related to the CIS and all that that involves, but the problem she said, is that they do not have the budget to do this, so responsibilities must be shared. Another person said that they would not have enough CIS calls to keep them busy at all times, and that it is not efficient for this to be the only responsibility of those who handle CIS matters. She further explained that with cutbacks, it is difficult to fill all positions which is why people must perform several tasks.

The head Assistant has been to Regina to see how operations are conducted and to discuss what everyone's roles are, but **no formal training has been conducted with the staff**. One of them explained that she did not think formal training would help. Another person stated that the Assistants do have a need for training in customer service, but added that she does not see where else they could benefit from training. No mention was made in regards to Call Centre operations and the database, two other areas where staff are supposed to receive training.

In terms of **what they see as their role**, expressed in the written group response that was provided at the site visit, they stated:

> our role is to meet the needs of Manitoba clients in the most expedient and effective manner, in these areas: providing printed material for education and patient services purposes, as well as videos from our lending library, extracting information to supply to the volunteer coordinators to arrange for a visitor from a variety of support groups, providing information about local sources for services, directing callers to the CIS line.

They mentioned that they do not give any specific disease-related information, and that they do not provide any counselling or give recommendations on treatment, physicians,

and the like, as this role was specifically designed as a function for the Call Centres. The Manitoba Division refers callers to the CIS number when callers have specific questions regarding treatment, research on drugs, questions about cancer types for which they have no printed information, or the most current news regarding a cancer topic. Information specialists at the Call Centres receive very detailed training in these areas, and staff at the Manitoba Division were aware of this fact. It was mentioned by the Assistants that they **provide information which has more of a local focus**, such as support groups, transportation assistance, treatment facilities, and where a patient could find supplies such as wigs and prostheses.

These kinds of inquiries were clearly observed through examples that the divisional assistants provided in their diaries, such as the following:

- a person who wanted a smoke-free video for pre-schoolers in French
- a university student wanting information on childhood leukemia
- a CBC reporter wanting a contact name for a particular group
- a caller wanting assistance that they were not getting from their doctor
- a daughter trying to find a support group for her father
- getting a kit ready for nurses
- a father looking for wig service contacts for his 11 year old daughter
- one man wanted information on CCS transportation by air for a friend to go to LA and receive alternative treatment and was referred to Mission Air
- about twenty minutes was spent on the phone with one woman who was very upset about her husband having been diagnosed with prostate cancer, and who is very ill herself.

Communication and interaction with the National Call Centre in Regina

The Manitoba Division staff commented that they do not communicate with the National Call Centre on a regular basis, but only when needed, and that Regina does not often contact them, unless they forward a caller to the Division for local information. Divisional assistants mentioned that they do not report news flashes or "hot" news items to the National Call Centre in Regina, but that Regina will at times let the Manitoba Division know if an issue that could potentially generate many calls is coming out in the media. What is interesting to note is that an individual from another Division stated: "I think that the policies and the procedures and the processes that were put into place at the National Call Centre in Regina, to facilitate and ensure that that sort of communication can occur are good. Now policies and procedures are only as good as the people who use them, or don't use them". The Manitoba Division does not consider itself a part of the CIS, therefore they do not adhere to the policies and procedures that were put into place for all levels of the service to follow. They specifically said: "As Manitoba is not part of CIS, we do not have these policies and procedures". It would appear then that policies and procedures put into place for the service are either not followed, are not effectively distributed to all those involved within the CIS, or are not considered applicable by some Divisions.

Expectations

The Manitoba Division expects the CIS Call Centres to provide callers with information regarding treatment, research, etc, since the call centre assistants do not have the oncology background, experience, or resources to deal with these types of inquiries. The staff did not mention any specific expectations that they had of the National Call Centre, nor did they discuss the expectations which they thought Regina has of them.

It is worth mentioning that expectations were discussed with an individual from another Division. She explained that she expects the National Call Centre to continue providing each Division with the call statistics reports so that provinces can get a better idea of who exactly their callers are. She added that this information could be very useful in other programme areas, but believed that Divisions have not quite figured out what they can do with this caller data. She said:

> How can we use the CIS and what it tells us about Saskatchewan callers, to better deliver our programmes to promote the CCS. In other words, to do the rest of the CCS business more effectively. The ball is in our court. We've got the CIS, it's operating, it's giving us information, now how are we going to use it to enhance our overall effectiveness, in raising money, in public education, in patient services. It's that piece that I think Divisions have yet to really get their heads around, including ours.

This was mentioned by one individual at the National Call Centre, who also believed that call statistics reports could be very useful for Divisions. Therefore, some Divisions expect the National Call Centre to assist them with Divisional programmes and services, in terms of providing Divisions with information on which callers from their province are contacting the CIS and what they are calling about. Staff at the Manitoba Division did not have such requests of the National Call Centre.

Local resource database and other technology issues

The staff mentioned that information for the database is obtained from individuals in client services and education, who research information based on suggestions made to them, and then forward it to the Assistants who do the data entering into their system. They added that volunteers, groups, and services within their province will at times let the

Division know of new information, and that database updates are made as information is provided to them.

The only improvement which the Manitoba Division recommended is technology-related. They indicated that they would like to have a client profile database or caller display screen, which Regina already has within the ACCCIS database. At the time of the site visit, only the head Assistant had the ACCCIS database on her computer which holds the local information. If the other Assistants had to use the database, they either asked the head Assistant to look up the information if she was not too busy, they looked themselves if she was not on the computer, or they took a message and got back to the caller. During the site visit, one individual said that having access to the database would not really help or make a difference because they have all the information stacked beside them, and from experience, they know which information to give or what information they have at their Division. Since then, a server version of ACCCIS has been implemented and all staff can now access the database.

Findings from the Manitoba Division site visit were discussed in the previous section in terms of "Call Centre" operations, roles, responsibilities and training of the Call Centre Assistants, communication and interaction with the National Call Centre in Regina, expectations that each level has of the other, as well as local resource database and other technology issues.

As part of a validation process, the results from each site were sent back to them for comments. There were very few changes suggested by Regina, most of which related to factual representations. On the other hand, Manitoba expressed a concern about being portrayed as uncooperative. The intent of the researcher was to simply describe the

interviewing and information gathering process. Errors of fact were corrected, however interpretations of findings were preserved by the researcher on the basis of the data collected through the discussions, observations, diaries, and group response to questions.

4.5 Summary

This chapter considers the case study, the methodology employed, and the sites that were specifically examined for this research. The historical context for the CIS was discussed, as were forces involved in its implementation. The service was set-up because several studies and work groups had identified the need that cancer patients have for comprehensible cancer-related information. After a number of events, Regina and Montreal were chosen as the National Call Centres, and B.C. and Ontario, which had similar services in place prior to the implementation of the CIS, have retained their services while still taking part in the National line. While these four Call Centres provide more detailed cancer-related information, the Divisions are involved in the service through their provision of local information.

Information obtained from a search through relevant documentation, and more specifically the CIS Implementation/Operational Plan was discussed, including the goals and objectives of the service, staffing, roles and responsibilities, training, as well as database and information systems.

On the basis of my opportunity to have a much closer look at the CIS, my view is that considering the challenges of establishing a National service and of the unique complexities of each Division, the service is essentially running reasonably well. The present structure is different than was originally intended, and in turn, is handling higher

demands than originally planned, which are reasons for this conclusion. Having said this, existing impediments are in my view manageable and can be addressed without too much strain on the organization. Challenges were found in the areas of staff training procedures, staying up-to-date-with the fast-paced field of oncology, relationship and communication barriers, call transferring procedures, database matters, the clarification of roles, expectations, promotion of the CIS, and leadership concerns. The final chapter will interpret these findings in relation to the research questions and theoretical approaches, recommendations will be offered, and limitations of the study will be discussed.

Chapter Five

DISCUSSION

5.1 Interpretation of findings and how they relate to research question

This case study focused on how information technologies are used for health information delivery, and more specifically, the organizational and environmental contexts that promote the effective set-up and implementation of a national telephone information line. These issues were examined at the CIS, and more specifically at a National Call Centre and one Division involved in the service. The CIS utilizes information technologies to disseminate cancer-related information to the general public, cancer patients, their family and friends, students, and health professionals. To accomplish this, a very specific context was established to run the service and be able to meet the needs of the callers in the most efficient and effective manner. This model of delivery and the organizational structure of the CIS was explored in greater detail in the previous chapter, as well as how the CIS was intended to function.

Chapter two discussed an exploratory study conducted by Health and Welfare Canada (1993) on health information and support telephone services, and identified seven future challenges for these lines. These challenges were offered as considerations that programme planners for such services should pay close attention to. They are presented here not only to recap these points, but to also demonstrate that the CIS already addresses these challenges to some extent, although further development is required, as will be discussed below. These challenges are (Health and Welfare Canada, 1993):

1) The CIS practices **collaboration**. This takes place with other organizations and agents in the same field in order to keep up with the latest developments and to build contacts, although the findings did show that this should be done to a greater extent.

2) The CIS **updates information**. This is done on a regular basis at the National Call Centre to enable the provision of accurate and up-to-date information. Perhaps this practice should be more strongly encouraged at the Divisions, since quality of information is important at all levels of the service.

3) Consideration of **technology.** The CIS has considered this in terms of the various databases established, as well as use of a diverse range of communication channels. However, in order to remain a key player in health information dissemination, the CIS will have to continue to adapt to the information age. **Costs** were discussed in the previous chapter in regards to the original model having to be replaced with the present one in order to remain within set budgets.

4) Use of **promotion**. This is already taking place through Sears promotional vehicles, distribution of the CIS number by health professionals, and making a presence at seminars, workshops and conferences. Findings demonstrate however, that more promotion is required for individuals within the CIS, the CCS, the general public, and health professionals to better understand the purpose, function, and role of the service. One suggestion made was the revival of the CIS Communique newsletter.

5) **Cooperation** with existing services which also provide health information. These could be health professionals, alternative resources, or other non-profit organizations who provide similar services. These relationships are already present within the CIS, as discussed by the

information providers, but as the service matures, more of these connections will be developed and will further strengthen the service.

6) **Provision of information and support.** These are both inherent within the CIS, as information providers respond to caller inquiries and play a counselling role.

7) **Research and evaluation.** This is more relevant to researchers, as very limited research has been conducted in Canada on health information telephone lines. This study on the information provision side of the CIS will provide a better understanding of this aspect of the service.

Community support was added to this list in chapter two, which the CIS considers with its links to other health organizations and its volunteer base. As mentioned, the CIS does consider these challenges to a certain extent, however, findings demonstrate that more development is required in some of these areas. The CIS has been effective in terms of exceeding its projected expectations (e.g. 55,000 calls predicted and 56,977 received), but they have been less effective and efficient on the organizational management of such a model. These structural impediments will now be discussed, existing problems will be used as illustrations, and improvements will be recommended to potentially strengthen the current structure.

The following quote from one of the individuals interviewed, who was also involved in the development phases of the project, captures the complexity of an organization such as the CCS attempting to organize a national service like the CIS:

> A large, unwieldy, complex, quite bureaucratic organization--that's what the CCS is. We're a sixty year organization working right across the country, and

> all that that implies. You don't make things happen fast, and you don't get decisions quickly, and you don't get the consensus just like that either. You have to get ten Divisions, and a National office, and all these layers try to reach some agreement on major points. So when you add that to the twelve months, or less than twelve months that we had to build the whole thing, I think that it's to be expected that you're going to be developing for a while.

In addition to the complex bureaucracy of the CIS, which is characterized by relationships between four Call Centres, ten Divisions, and a National office, it is useful to keep in mind that the service is in its infancy, and its structural and process issues reflect the 'growing pains' of a relatively new subunit.

Information provision processes

With the adoption of such an organizational structure and model of delivery for a health information dissemination service, findings demonstrate that certain challenges may come in the way of the information provision processes. Three issues were discussed in the previous chapter under this heading, namely, staff training, the type of information provided at each level, and staying up-to-date with new information. All three of these issues will now be discussed in terms of the problems which they presented for such an organizational structure.

In terms of **staff training**, problems were encountered in regard to the extent of training that different Call Centres should receive versus the Divisions, whether volunteers are equally capable of delivering this service as paid health professionals, and the location of responsibility for the training programmes. With the planning of the service, it was decided that staff at the National Call Centre in Regina would be responsible for the initial training to take place at the Divisions, but that when new positions are filled this training

responsibility would then be up to the Divisions. While this method of training was adopted because it was thought to be more cost-effective than having individuals from each Division go to the National Call Centre in Regina, findings from both site visits indicate that training may not necessarily be taking place with new staff and there seems to be much uncertainty surrounding this issue. The senior information specialists have done the initial training, but said that in some Divisions, staff members who were trained are no longer around and the new staff do not necessarily receive training consistently, which was specifically the case with the Manitoba Division. The intention for this structure and model of delivery was for staff at the National Call Centre in Regina to provide the more complicated and detailed information, while the Divisions are responsible for any local type of information. The information provided by Division staff is not as complex and does not require extensive training to deliver. This could perhaps explain why some Divisions do not feel they have a need for training, as was seen with the Manitoba Division. This is not to say that Divisions should not be trained in CIS matters such as communication skills, customer service, the ACCCIS database, and Call Centre operations, as they should. But perhaps this is an area where clarification is required on the part of the National Call Centres and the Divisions. The CIS puts much emphasis on responding to caller needs, yet in order to effectively accomplish this, it would seem that training programmes should become a priority and be much more standardized, especially if one considers the sensitive and complex nature of the issues that information providers must respond to, at every level of the service, whether this be National or Divisional.

There was also concern voiced by information specialists over volunteers at the B.C. Call Centre, the extent of their training, and whether they could provide the same level of service. Many information specialists commented on the practicality of being able to draw from their background knowledge, and how difficult it was for them even with this

experience and education to sometimes handle calls. They assumed it must be even more difficult for volunteers. The plan states that everyone in Canada will get accurate, up-to-date information, but some information specialists doubted this as some people in some provinces knew exactly what time they had to place their call in order to reach the National Call Centre. It is clear that some staff at the National Call Centre perceive that callers are sensing a difference in the quality of the information that they are receiving at different levels of the service, despite the Implementation Plan's goal of providing consistent, accurate, and up-to-date information, regardless of the organizational level.

With the given structure which characterizes the CIS line, different levels of the service provide **different types of information.** Staff at the National Call Centre in Regina are hired based on their experiences within a professional background in some kind of health-care setting, while still receiving extensive training once they are hired. This makes them well equipped to handle diverse caller inquiries pertaining to cancer specifics, but less knowledgeable when it comes to programmes and services provided in each province. Therefore, Divisions are responsible for meeting the needs of clients in terms of specific local information. The planners also wanted referrals going back to the provinces to enable Divisions to maintain contact with their own populations. The involvement of the Divisions is a definite strength of the model. This has the potential of stronger links with local communities and it ensures that the public is getting the best local information possible. The National Call Centre and the Divisions each have specific functions determined by the kind of information which they provide, and it is perhaps this aspect of the model that is most effective. It is the implementation of this feature which needs to be strengthened.

With any health information dissemination service, the importance of **staying up-to-date** with the material in one's field cannot be emphasized enough. This objective appears to be especially important within the field of oncology where information is being added or is changing at such a rapid rate, requiring constant research. All information specialists valued the importance of ongoing training and education to handle the fast-paced environment in which they work, and they appreciated the opportunities provided to accomplish this.

The Implementation Plan and the goals and objectives state that the CIS will help the CCS make connections with other cancer and health organizations, which is yet another way of keeping up with new information, but some information specialists said that there was a need for more connections with these organizations, such as treatment centres. These sorts of connections may be useful and time-saving mechanisms for staying current with any happenings in the field, and could be potential information sources for the database, therefore the CIS should seek greater involvement with these external agents.

The plan also states that part of the information specialist's role is to conduct research, which is being done to keep up with the information, but the staff say that it is hard to balance doing research with taking calls. While conducting research is a valuable aspect of staying up-to-date that cannot afford to be eliminated, it is also very time-consuming and requires attention away from handling caller inquiries. This issue could perhaps be resolved by encouraging a greater balance between taking calls and doing research, and to develop some kind of network where information and research findings can be easily shared. This would perhaps reduce the amount of research that each individual must perform on their own.

The interactive processes between disseminators at all levels

Although there were many interesting findings in terms of the information provision processes, the area which appears to require the greatest attention is in relation to the interactive processes between disseminators at the National Call Centre and the Divisions. There seems to be many discrepancies between what was originally intended with the implementation of such a structure, and what is actually taking place. It is interesting that this model of delivery specifically requires much interaction among players from different levels and this is precisely the strength of this structure as a health information dissemination service, yet several problems presented themselves that hinder organizational relationships. The previous chapter considered the following issues in this area: relationships and communication, channels of communication, transferring procedures, database issues, clarification of roles, greater promotion of the CIS and its potential, and organizational issues and the need for more leadership. Challenges that present themselves in regard to these areas and possible improvements will now be considered.

With the adoption of a model of delivery that is spread across such a vast country and which involves players from many different levels, **communication and relationship issues** become extremely important. The Implementation Plan does not sufficiently define formal communication procedures for communication, such as when Divisions and Call Centres should communicate, what they should communicate about, how they should communicate, who should be involved in these communication processes, and how problems are to be resolved. Information specialists in Regina would like to see the Divisions keeping the Call Centres updated on what is going on in their province with respect to cancer, such as fundraisers, campaigns, and upcoming events, as well as with internal Division issues such as staff turnover, Division contact, and Division operating

hours. This is of great importance to the National Call Centre because Regina does get calls on matters pertaining specifically to the provinces and the information specialists do not always know what the caller is referring to. But according to the Assistants at the Manitoba Division, there is very little communication taking place between the different levels, and Regina does not always call Divisions on a regular basis. Just as important as it may be for the National Call Centre to be kept updated with what is happening in other provinces, it is just as crucial for Divisions to know what is happening at the National level. Having such a structure for a health information dissemination service demands that regular communication take place to ensure that all levels of the service are aware of issues occurring in other areas. As mentioned several times, the CIS puts much value on meeting the needs of their callers and this could be further strengthened if all players within the service were kept up-to-date with issues happening elsewhere.

Regina also indicated that they would like Divisions to inform them when a "hot" news item emerges, as it is sometimes difficult to respond to the number of calls generated when information specialists are not prepared. Some information specialists did say that it is difficult to pick out what is an issue and what is not, but that anything related to breast or prostate cancer should always be reported. Assistants in Manitoba said that Regina will sometimes warn them of "hot" news items, but that their Division will usually not warn Regina. Therefore, it would appear that health information dissemination services with such a structure, especially when they are prone to attracting callers alerted by media coverage from across the country, must have a network or warning system such that everyone is well-prepared to handle the responses generated, and to provide consistent and accurate information to the public.

With a health information dissemination service such as the CIS which spans a large area and involves many individuals, having access to a wide range of **channels of communication** is crucial. Several are used to enable communication between the different players within the service, such as the telephone, e-mail, cc:mail, the internet, fax machines, and press releases. Some information specialists mentioned the CIS Communique and the possibility of reviving this newsletter, which was used in the implementation stages of the service to inform those within the CCS organization on matters related to the CIS. As mentioned, the different levels would like to be kept updated on what is happening elsewhere, and having a CIS Communique could effectively accomplish this.

A major characteristic of this organizational structure and model of delivery is the **transferring of calls** which takes place between the National Call Centre and the Divisions. According to information specialists, there exists confusion among some individuals at Divisions concerning these transfers. Information Specialists in Regina said that Divisions will at times refer callers to the National line when they could have been quite easily handled at the Division level. Many information specialists suggest this could be the result of Divisions not doing proper needs assessments, producing needless transfers. This was a frequently cited concern among the information specialists, indicating that it must be given greater emphasis during training. On the other hand, findings show that the National Call Centre in Regina will at times provide callers with local information if they have it, rather than transferring to the Division, because of convenience. The Implementation Plan states that the National Call Centre can do this if the Division is closed or not available to take calls, but perhaps this is taking place more often than necessary, especially if one considers that handling callers in a one-step process is simpler than transferring. This could possibly explain why some Divisions feel somewhat

"threatened", and as though responsibilities are being taken away from them. In addition, one of the major reasons why the planners wanted the Divisions responsible for local information, is specifically for Divisions to remain in contact with their own population base. As mentioned earlier, all players seem to be clear on which kind of information is given at which level, but this is not necessarily reflected in practice. The need for clarifying information dissemination roles is critical since this obviously affects cooperation efforts, relationships, and commitment to the service. It would appear that findings from this study indicate that a health information delivery service which involves transactions among several staff within the service, should be absolutely clear on the procedures and conditions for such interactions, as this could avoid potential problems in the long-run.

Another difficulty related to transfers pertains to Divisions sometimes calling on behalf of their callers, which frustrates the information specialists in Regina since they have a series of questions that the caller must respond to in order for the staff to provide the proper information. As mentioned earlier, there are precise reasons why each level is responsible for different types of information. The information specialists at the National Call Centre provide very specific cancer information and, to ensure that the wrong information is not being given to the callers, the staff often have to get to the underlying issues of the inquiries. Evidently, this is not something that can be done through an intermediary. It would therefore appear that Divisions may not necessarily be clear on why the National Call Centre must do this, and measures should be taken to clarify this issue among the different levels of the service, perhaps in training.

Still another concern among the information specialists is the lack of consistency with transferring procedures between the ten Divisions, which makes it difficult to

remember who to transfer a caller to, since it varies so much from province to province. One of the goals for the CIS specifically states that the uniqueness of each Division is to be respected, therefore compromises will have to be reached with regard to maintaining some kind of consistency. This problem should not be difficult to resolve, as the information specialists only require regular updates on who the Division contact is, especially if there is staff turnover, and when the Division is taking CIS calls or using an answering machine. This latter point is especially important, since the information specialists will try not to transfer callers to the Divisions if they know that an answering machine will be reached.

Use of answering machines is not addressed in the plan, although some information specialists said that they are used almost exclusively by some Divisions. Information specialists in Regina said that it is difficult when they have a caller who wants local information to channel the call to a Division that uses an answering machine, since the caller either has to call back, leave a message, or have an information specialist leave a message for him/her. Information specialists stated that if Divisions do this, they should let Regina know when they are out of the office and will be using an answering machine. They emphasized that Divisions always return calls, but that it is nice to get a person on the other end. Perhaps one of the main advantages of having such a telephone health information dissemination service is that the caller can have direct, personal contact with another person, instead of the impersonal touch one is often faced with when having to deal with a machine. This is a tremendous strength of the service, especially on an issue such as cancer where many individuals are in need of support, and require or want immediate information assistance. Answering machines, in a sense, defeat the purpose of what the service and structure are about. Recognizing the problem of budgetary constraints, their use should be limited as much as possible.

The plan mentions local information **database** standards and format templates which were provided to Divisions by Regina. Many information specialists said that there is still no consistency between provinces, and that it is difficult for Call Centres to remember the standard for each Division. It cannot be expected that every Division have identical pieces of information in its database, as features or resources may vary tremendously from province to province. The ideal is to find a balance between Division uniqueness and keeping a standard from province to province on basic and crucial pieces of information. The plan also states that these databases should be updated once a year, but that it is recommended that Divisions do this whenever they have new information. In terms of Manitoba's local resource database, they said that updates are made as information is provided to them. Because updating of the databases is an area that has significant bearing on the service, perhaps this issue should be given greater attention and Divisions strongly encouraged to send revisions on a more regular basis.

Some information specialists mentioned that the way some data is entered in the database makes it difficult to search for certain items. This indicates that either more training is required for the information specialists in terms of searching skills within the ACCCIS database, or that the manner in which information is entered is not as effective as it perhaps could be, to enable the fast and efficient search of information.

Two information specialists went to great lengths in the interviews and the diaries in describing their frustration with the issue of Anglophone callers in Quebec not having access to enough resources as these were very limited in the database. Again, if the CIS claims to be an English and French service available to all Canadians across Canada, the need for databases to be complete in either language is critical. It is important to note that when one of these information specialists was asked about Francophones across Canada in

provinces outside Quebec, she did not appear to have the same opinion. Given the fact that there are more Francophones outside of Quebec than there are Anglophones within Quebec, it would seem that this issue is an important one that should be considered with regard to both languages. In addition, there are several areas within Canada which have concentrations of groups, such as the Inuit in the N.W.T or Chinese in B.C. For a health information service to cater to all its multicultural groups with significant numbers becomes a real challenge. This is an issue that needs re-examination.

The Plan mentions that call statistics reports generated from the database enable Call Centres and Divisions to determine call patterns and to plan improvements accordingly. A couple of individuals interviewed mentioned that Divisions have yet to grasp the potential of this information and what it could do for their province. Divisions should therefore be assisted by the CCS in figuring out what these reports can do for them, especially if they have the potential of enhancing CCS programmes and services within their province.

As mentioned in chapter four, **clarification of roles** was the issue discussed the most frequently by the information specialists. Individuals at the National Call Centre thought that Divisions may feel threatened by the fact that Regina may be taking responsibilities away from the Divisions, although the information specialists emphasized that they were not trying to take jobs away. As one person said in the interviews, Divisions feel they are losing a connection with their population, and this is precisely why the model wanted callers referred back to their Division. The original model for the CIS and the present one are very different. The original concept proposed two Call Centres (Regina and Montreal) and for the Divisions to be electronically linked. The existing model has four Call Centres, and the budget did not allow for electronic linkages so Divisions are

involved with the telephone system. Therefore the initial model saw the National Call Centre in Regina as having a 'hands-off' relationship with the Divisions, but instead, the National Call Centre in Regina is now very much involved with the provinces. This could again explain why the Divisions may feel as though responsibilities are being taken away from them. The first concept saw Divisions as being more independent from the service, in the sense that the National Call Centre in Regina would not direct as many of the CIS-related activities that take place on the Division side. If Divisions truly do feel threatened, it is understandable, given that the National Call Centre in Regina may be handling many of the local calls that could be transferred. In addition, although the roles and responsibilities of the National Call Centres and the Divisions are stated in the plan, they may not be sufficiently explicit. With any service, especially one with a complex structure such as the CIS, much attention must be devoted to defining roles and responsibilities with precision, to ensure that all players are clear not only on their own role, but also that of others within the service.

Much emphasis is given to the CIS as a National service and all that that implies, but less attention is paid to the local aspects of the service and how crucial Divisions are for the efficient functioning of the service. Therefore one could hardly blame Divisions if they feel the way the information specialists say they do, for Divisions seem to have been put on the backstage in this service, and their capabilities and functions downplayed. It is clear that this area needs to be clarified further between Divisions and the National Call Centre.

Another area related to role clarification has to do with the labels and titles assigned to the various levels of the service. The Call Centres do not encourage Divisions to call themselves "Call Centres", although they have no control over these kinds of decisions.

The Manitoba Division did choose to call itself a "Call Centre", and said that it does not take part in the CIS. Therefore, it appears that the various units are taking issue with labels when the fact of the matter is that this information delivery model requires collaboration from all levels of the service. The Call Centres and the Divisions must engage in discussions to clarify this issue, as many people appear to be focusing their attention into matters that are not of primary importance, such as the names, titles, or labels that each level should have. The priority for such a model is for the various levels to work together cooperatively in order to provide the best possible service to the callers.

Role clarification is also an issue when new staff come on board and there is inconsistency in passing on of information and training. Some individuals suggested doing site visits to clarify roles and to get connected on a National level, and although potentially costly, this idea should perhaps be given some consideration.

There is also much confusion between what information specialists at the National Call Centre expect from Divisions and vice-versa. There is clearly a gap between each side's expectations and actual performance. Information specialists think that Divisions have the following expectations of the National Call Centre: that the National Call Centre make the right referrals and transfer calls for local information to the provinces; that the National Call Centre keep Divisions involved in the service; that the National Call Centre keep Divisions up to date technology-wise and information-wise; that the different levels have open communication; that the National Call Centre call and check with Divisions to see how things are going; and that the National Call Centre lighten Division workload. Although information specialists from Regina stated that they believe this is what people at the Divisions expect, findings show that this is not necessarily what individuals from the National Call Centre in fact do, or what the Divisions expect. For example, Regina may

not always be transferring local calls to the Divisions if they already have the information on their database, therefore Divisions may not necessarily feel like they are being kept involved in the service. In regards to being kept up-to-date technology-wise, the Manitoba Division did not have, at the time of the site visit, certain technologies such as the caller display screen which the Call Centres do. It is not clear whether all other Divisions have this beneficial tool available to them. Also, according to staff at the Manitoba Division, the information specialists do not necessarily call on a regular basis to see how they are doing. Finally, although staff in Regina may think that lightening Divisional workloads is a good thing, those at Divisions may not necessarily perceive the situation in the same way, especially if they think that responsibilities are being taken away from them, explaining why they may feel somewhat threatened. Given the nature of the organizational structure and model of delivery, it is of utmost importance that staff expectations be clearly defined to avoid problematic issues such as those just described.

Many emphasized the need for **greater promotion of the CIS** among the National office, the Call Centres, the Divisions and Units, the general public, and health professionals, since many of these groups are not sufficiently familiar with the service. Reviving the CIS Communique newsletter was one suggestion made, and for every person within the organization to receive one, as well as health professionals. In regards to this latter group, one information specialist provided some very interesting and useful comments. She mentioned the importance of medical professionals endorsing the service and passing the phone number to their patients as an effective way of promoting the CIS. This could perhaps be accomplished by having physicians and nurses distribute a CIS pamphlet to patients explaining what the service is and how it can be reached.

Some information specialists also discussed promotion in terms of explaining to the public how the service works and how calls are being routed. They felt that some callers are frustrated by the fact that they sometimes wanted to reach their Division but end up with the National service without being aware of it. They added that this is probably the result of how the phone number appears in telephone directories across the country. This concern could simply be resolved by making it very clear in the directories which number connects to which offices or centres.

One person mentioned the **promotion of a level of excellence and the need for more leadership**, such as having a Director of the CIS for the service as a whole to deal with management issues. The full potential of the service has not yet been realized and a more integrated leadership structure could address some of the current weaknesses in information flow and decision-making. She explained the need for leadership to make everyone realize the full potential of the service, and leadership to figure out what the CIS can do for the CCS. Certainly this is an important point, especially in regard to the management of the service. It was discussed previously that Divisions have yet to grasp what the CIS can do for CCS programmes and services in their province, and this is the sort of role that a management team could play.

This same individual added that when the National Call Centre has a problem, whether it be in relation to other Call Centres, Divisions, or policies and procedures, it is unclear who it should consult with to resolve these issues. A management team and leader would have a better understanding of the service as a whole and how all pieces fit together, therefore they could deal with these particular issues more effectively. Although leadership is an important issue, especially with a dissemination service with such a complex structure

and many players involved, it must be represented from different aspects of the service to ensure that everyone's point of view is taken into consideration.

The above section provided interpretations of the findings and how they relate to the research questions. As discussed in chapter four, a triangulation method of data collection was utilized to permit comparisons and contrasts, and to allow each method to corroborate to overall results. Answers from each question were grouped, facilitating the identification of common and recurring themes. Data obtained from the diaries overlapped with interview findings and were therefore added to the themes already developed. Some themes were given much more emphasis by the information specialists than others, in the sense that some issues were discussed by almost all individuals, and others only by a few people. Nevertheless, all findings were represented and efforts will now be made to identify the main themes and how these conclusions were arrived at.

The finding that was given the most weight under the category of information provision processes was in regards to training. Although only a few information specialists mentioned training when specifically discussing this issue, references were made throughout the interviews by many of the information specialists for the need of a better and more consistent understanding of roles and responsibilities and transferring procedures. Training therefore has implications for these organizational practices that are crucial to the running of the service.

Findings under the category of interactive processes between disseminators at the National Call Centre and the Division were expanded on to a greater degree by the information specialists than the previous category. More specifically, the themes that were repeated the most often by almost all information specialists and which most of them

discussed more in-depth than the other findings are relationships and communication, transferring procedures, clarification of roles, and greater promotion of the CIS. In terms of relationship and communication issues, several information specialists commented on the need they felt for Divisions to keep the National Call Centre updated on provincial issues, and for open communication to deal with difficulties. This finding is presented as one of the main themes on the basis that the model of delivery adopted by the service demands that communication take place among the various levels involved, yet many information specialists thought it was lacking.

Transferring procedures was touched on by every information specialist in one way or another, which is why it is being included here. Many of them expressed some frustration in regards to inconsistencies in transferring procedures, and of getting an answering machine when transferring to a Division. Transferring callers is one of the central and most important practices within the service, yet this is one area where the information specialists felt there was much room for improvement.

Clarification of roles was the finding or theme that was returned to the most frequently throughout the interviews by all information specialists, was touched on in almost all the categories, and which many felt explained some of the other issues discussed, such as responsibilities, training and transferring procedures. These reasons make this finding especially significant because it would appear that several organizational levels of the service, including cooperation among the various levels, are influenced by this issue.

Greater promotion of the CIS and its potential is another theme that was touched on by almost all information specialists, several times throughout the interviews, who

explained the importance of having the general public, the CCS, those within the CIS, and health professionals better understand the service and its purpose.

One last theme that was only discussed by two individuals, but which is felt should be mentioned here, is the need for more leadership. Although this issue was not made explicit by the majority of information specialists, it would appear that several of the structural impediments present within the service could be the result of not having a leader or more concrete management structure within the CIS. For example, in terms of consistency with training, transferring procedures, databases, roles and responsibilities, and communication practices, there is no one body in place to set policies and regulations for all Divisions and Call Centres to follow. A structure that allows a balance between Divisions taking initiatives while at the same time maintaining some form of consistency is required, if the CIS is to be a National service that provides accurate and up-to-date information no matter where a person is calling from.

5.2 Connections between findings and theoretical approaches/planning model

The following discussion briefly reviews the two theoretical approaches presented in chapter three, namely, institutional theory, and organizational theory, as well as Green's PRECEDE-PROCEED model and applies them to the findings above. To recall from the methods section in chapter four, the analytical framework derived from institutional theory revolves around the question of what contextual factors help us gain a better understanding of the development of the service. Organizational theory permits us to closely examine which structural and process factors play a role in relation to communication patterns and roles within the organization. The fifth, sixth, and seventh phases of the PROCEED stage

of Green and Kreuter's model enables us to look at what administrative, policy, and implementation issues were considered for the development of the CIS.

Institutional theory and the organizational structure of the CIS

As discussed in chapter three, institutional theory stresses the interactions between organizations and their institutional environments and the structural outcomes of such interactions. In this case, the substructure would be the CIS line whose development has been influenced by organizational and environmental factors. Limited resources and spending within the health-care system have required organizations to adapt and come up with innovative and cost-effective ways of providing the public with health services. The CCS and CIS have responded to this need through several mechanisms, including: the use of a single toll-free number for the entire country, and sponsorship from the private sector which has provided space and the communications system required for the service to function. The CCS has also had to make adjustments to the service, such as a reduction in the hours of operation to reduce costs, and postponement of electronic linkages from the National Call Centre to the Divisions likewise due to costs. The National Call Centre now has access to Division local databases via a disk that Divisions send on a yearly basis. It was also decided that staff at the Divisions would be trained at their own offices rather than the National Call Centre in Regina, which was originally planned, in order to save money.

Another environmental and institutional factor that played a role in the shaping of the CIS, was the input from the Cancer 2000 report, the "Patient Needs" studies, and the Quality of Life Priority Working Group, which demonstrated a significant need for more effective information delivery. In responding to this need with a broader delivery mechanism, the potential exists for more effective promotion of the organization as a

whole. Providing individuals with the needed information and skills to enable them to enhance their overall health is a central tenet not only of health promotion programmes, but also of the CIS. These concepts are embedded within the service, for one of the main goals is the provision of accurate and up-to-date information to meet the needs of callers.

Another factor within the environment that has influenced the structure of the CIS is the public seeking to have greater control over their health. This is occurring as a result of less spending on health-care, medical professionals no longer holding the image of ultimate experts on health matters, and complimentary forms of medicine becoming more acceptable. The CIS has a structure conducive to public participation for it enables people to gain information which they feel they need to exert greater control over their health. In addition, the original concept of the CIS came about as a need that was identified by cancer patients and, volunteers also participated in the initial planning of the service and continue to have a say in its direction.

The increasing by widespread use of information technologies is another environmental factor which the CIS responded to. As discussed in chapter one, information technologies are increasingly being employed by health organizations to expand delivery of services to the public, to reduce costs, to save time, to be more efficient, for convenience purposes, and to ensure that the information provided to the public is the most accurate and up-to-date. The CIS has adapted to these needs by using the telephone as an outreach and dissemination vehicle, providing universal access and convenience to the Canadian population, complemented by a database system that is intended to be accurate and current. According to the findings, it would appear that the service is feeling an increasing amount of pressure to keep up-to-date on the technology front.

The above factors are all elements within the environment that significantly influenced how the service was developed and implemented, corresponding to institutional theory's notion that environments are very successful at getting organizations to accept the expectations that are imposed on them by their external environments, in order to be perceived as a credible and legitimate organization. Scott (1992b) referred to these expectations as "social and cultural pressures" from within a sector, as well as pressures that the society at large exerts on organizations. Institutional theory labels these social and cultural pressures as 'rational myths'--rational because they set out the obligations organizations have towards their publics, but they are myths because the success of the organization is often determined simply by meeting these expectations that are widely used by others (Scott, 1992b). Therefore, organizations who follow the norms within their institutionalized environments may increase their legitimacy and may be rewarded for adopting the appropriate structures with greater support (Scott, 1992b). In the case of the CIS, the service may be compensated with a greater volume of calls, increased sponsorship from private organizations, and greater acceptance by health professionals who can distribute the CIS number. Having said this, there will also be pressure on the organization to create the appropriate structures and processes to meet these demands in an iterative process.

Organizational theory and communication structures

Chapter three mentioned that organizational theory is important to consider in this study as it makes the connections between the interpersonal and structural issues within an organization. The historical/background study from organizational documents provided a structural and institutional context portrait while many of the findings from the site visits presented data at the interpersonal and information technology levels. Several findings

presented themselves on this more individual level, but they nevertheless play a role within the organizational structure of the CIS. Two management systems were introduced, namely, mechanistic and organic systems, each having very specific organizational structures that determine internal communication processes.

Mechanistic systems are more appropriate for stable environments and are characterized by an adherence to vertical frameworks, circumscribed roles, self-interest, and one-way forms of communication. Organic systems are more efficient under uncertain circumstances and are defined by a commitment to common objectives, interdependency, joint responsibility, sharing of information, and altering roles as the environment changes.

The CCS is a sixty year organization that has developed a highly bureaucratized structure, which may characterize it more as a mechanistic system. The CIS subunit, which participates in an environment that is constantly changing, appears to resemble more of an organic system that exists within this highly bureaucratized mother organization. This unstable environment has been responded to by encouraging participation from all levels of the organization, which rely on each other through extensive communication networks to achieve a common goal. It is these characteristics that make the CIS reflective of an organic system, for several different reasons. First, all participants were brought into the CIS because of their expertise and specialization which they could contribute to the objectives of the service, whether this is because of a nursing or social work background, or customer service and leadership capabilities. Second, tasks, roles, and responsibilities are not formally laid out, but rather evolve as the given situations do. An example of this is the fact that there was no designation of a Director for the service as a whole, but planners are becoming aware and suggesting that such an individual may be required. Third, all participants are responsible for the efficiency and effectiveness of the service. This relates

to discussions concerning how each separate part contributes to the whole. Fourth, all levels of the service are concerned with the common objective of providing accurate, up-to-date information to the callers. Fifth, there exists no formal hierarchy of roles, but rather one's expertise determines who is responsible for what. For example, every information specialist has an area of specialization which labels her as the source to contact when there are specific enquiries in this area. Sixth, two-way forms of communication take place at all times, as does the sharing of information and advice-giving, although this may not be performed as often as it perhaps should be to eliminate confusion and miscommunication. Seventh, participants are concerned with the potential of the CIS for the CCS as a whole. Finally, networking and sharing of information takes place with external agents such as the panel of expert reviewers, other health organizations, and the public.

The above view is based on two site visits, and therefore more call centres and Divisions would have to be investigated to make a definite statement. Nonetheless, it appears that an interesting situation presents itself with this service. While the CIS resembles an organic system, the larger CCS organization under which the service operates may be classified as a mechanistic system. It may help for the CCS as an organization to encourage the CIS as a subunit to have flexibility, in order to adapt to the specific demands of its changing environment and more effectively deliver the service.

Communications within the CIS can be characterized as an interplay between process and structure, within which are embedded the significant use of information and communication technologies, all in the context of an organic system and environment. Structure, as well as process are based on a network model of communication where much transmission takes place laterally, and significant interaction among units within the CIS subsystem as well as between the CIS and the CCS is present.

The problems identified point to some 'growing pains' within a relatively young entity such as those discussed earlier in this chapter. Challenges were identified in the areas of a more effective way of managing technology (in this case, the database) and more effective communication between subunits in the system (e.g., between the four Call Centres and between the Call Centres and the Divisions). These issues can be discussed in the context of communication structure and practices within an organic system which requires flexibility, adaptability, and innovation.

The PRECEDE-PROCEED model and the implementation of the CIS

The PRECEDE-PROCEED model is an all-inclusive health promotion framework which considers individual level as well social-structural and environmental factors that can affect individual health. It specifically examines administrative and structural factors--issues which this study pays close attention to. The model, as explained in chapter three, contains two stages, the first being concerned with evaluating contributing factors to the given health issue, and the second addressing the planning, implementation, and evaluation of a health promotion programme. **While all stages and phases are important pieces of the model, not all are directly relevant to this study.** The PROCEED phase, and more specifically the fifth, sixth, and seventh phases touching on administrative and policy diagnosis, implementation, as well as process evaluation, applies itself most directly to this study, as it specifically considers the decision-making processes and stages to go through for setting up a health promotion programme, such as the CIS line.

According to Green and Kreuter (1991), administrative diagnosis examines resources needed and potential obstacles that may arise. Applied to the CIS, administrative diagnosis would include many of the resources already discussed in chapter four, such as

staffing, roles and responsibilities, training of staff, database and information systems required, as well as other key players that could potentially play a role in the service, such as the panel of expert reviewers, volunteers, and related organizations. There are several challenges that present themselves in relation to these resources. Budgetary constraints were one limitation which the CIS has responded to by altering the model of delivery from what was initially proposed, to save costs. Many staff at Divisions must handle other responsibilities besides the CIS, which is being dealt with through the use of answering machines (although their usage may not be the best solution). Training varies at every level of the service, and is one area which requires some improvement. Database issues have also presented an obstacle to the service in terms of consistency in usage and data entering, which also requires further attention.

Policy diagnosis includes policies, regulations, organization, and political forces (Green & Kreuter, 1991). With the CIS, policy diagnosis would relate to policies on the model of delivery and structure that were chosen for the service, the goals and objectives that were established, procedures to be followed, relations within and outside of the organization, communications issues, and running of the service. Although most of these were addressed in the Implementation Plan, they may not be taking place in practice. For example, although one goal for the service was to make more connections with other health organizations, some information specialists felt that this should be taking place to a greater extent. Formal policies were not necessarily established for all of these issues, such as roles and responsibilities and communication processes, which could explain some of the difficulties that the CIS is presently experiencing.

Process evaluation assesses programme policies, goals and objectives of the programme, resources utilized, and organizational practices within the programme (Green

& Kreuter, 1991). All of these issues were touched on in this study of the CIS. In terms of policies, it was found that the service is not consistent across all organizational processes. For example, policies exist for certain issues such as which level should deal with which types of information, but these appear to be unclear among some information providers at all levels, or in the case of the Manitoba Division, they do not adhere to them. There are areas in which the development of formal policies would be useful, such as with the clarification of roles, where there appears to be some confusion between the different levels. Goals of the programme have been followed and objectives met to a certain extent, but according to some information specialists, more work is required in making connections with other health organizations, as well as with the collaboration of different levels of the service. Resources utilized were assessed in regards to the staff and the information and communication technologies, and more specifically the databases. Challenges presented themselves with the inconsistency of the training and of the databases across Divisions, in terms of their content and usage. Organizational practices encompasses all of the findings presented above, and therefore will not be discussed further.

The next section offers another way of looking at this research site by examining the CIS and CCS as part of a knowledge network, a concept we have come across as we were completing this project.

5.3 The CCS and CIS as a knowledge network

According to Davenport and Prusak (1998), many organizations can be characterized as knowledge organization requiring the management of knowledge networks. They differentiate between data, information, and knowledge. These concepts

exist within a linear relationship, where data will develop into information, and information into knowledge, and they are not interchangeable (Davenport & Prusak, 1998).

They say: "....data is most usefully described as structured records of transactions", which are usually kept "in some sort of technology system" (Davenport & Prusak, 1998, p. 2). In the case of the CIS, the various databases used, such as the ACCCIS, CCE, the local resource databases, and the call statistics database would be considered the data.

This then leads to information, which the authors view "as a message, usually in the form of a document or an audible or visible communication" (Davenport & Prusak, 1998, p. 3). Information within the CIS is the conveyance of messages by the information providers to the callers, or to other participants within the service, such as the other Call Centres, the Divisions, the Units, or the National office. This information is spread through various mechanisms including the telephone, e-mail, faxes, and cc:mail.

Information then becomes knowledge, which according to the authors, can be defined as the following:

> Knowledge is a fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information. It originates and is applied in the minds of knowers. In organizations, it often becomes embedded not only in documents or repositories but also in organizational routines, processes, practices, and norms (Davenport & Prusak, 1998, p. 5).

In relation to the CIS, knowledge would be the overall package that each individual, such as the information providers, Directors, and volunteers, among the many participants in the organization, brings to the service and develops and enhances in the course of his/her

work. At the macro level, it is also the mix of these individual and database repositories and the practices and norms associated with them.

Knowledge management technologies

Knowledge management technologies are part of this knowledge network. These are technologies that retain knowledge and enhance its access and the rate at which it can be reached (Davenport & Prusak, 1998). The authors caution that this concept carries with it a little uncertainty and they provide videoconferencing and the telephone as two examples. They sate: "Both of these technologies don't capture or distribute structured knowledge, but they are quite effective at enabling people to transfer tacit knowledge" (Davenport & Prusak, 1998,. 128). The telephone in this instance happens to be an expanded use of a traditional medium for the transmission and dissemination of cancer information. Both the telephone and computer databases are the knowledge management technologies employed at the CIS, specifically because they are accessible and allow easy and immediate dissemination of this knowledge. They further explain: "The goal of these technologies is to take knowledge that exists in human heads and paper documents, and make it widely available throughout an organization" (Davenport & Prusak, 1998, p. 129).

The most crucial component of knowledge management technologies, also referred to as knowledge repositories by the authors, is therefore the knowledge that comes from people: "Since it is the value added by people--context, experience, and interpretation--that transforms data and information into knowledge, it is the ability to capture and manage those human additions that make information technologies particularly suited to dealing with knowledge" (Davenport & Prusak, 1998, p. 129). The use of information technologies to store knowledge obviously entails a connection between the technology and the

knowledge workers, for it is how people use the technology that is important. As the authors emphasize: "Technology alone won't make you a knowledge-creating company" (Davenport & Prusak, 1998, p. 142). Obviously one must start with individuals gaining the appropriate knowledge. Once this is acquired, these knowledge brokers must be familiar with storing and retrieving information if it is to contribute to some overall objective. "Technology is common in the domain of knowledge distribution, but it rarely enhances the process of knowledge use" (Davenport & Prusak, 1998, p. 142). This is something that can only be attained through proper training, communication, and role clarification, as was demonstrated with the CIS. "Information technology is also relatively less helpful when it comes to knowledge creation, which remains largely an act of individuals or groups and their brains" (Davenport & Prusak, 1998, p. 142). This again relates to the CIS in the sense that it is the information specialists who must gain this knowledge, whether through continual training and education, ongoing research, or regular evaluation of the service. On the other hand, "...if the appetite, the skills, and the attention to knowledge are already present in an organization, technology can expand access and ease the problem of getting the right knowledge to the right person at the right time. The presence of knowledge management technologies may even have a positive effect on the knowledge culture of the organization" (Davenport & Prusak, 1998, p. 143).

Knowledge management projects

In their study of 31 knowledge management projects, which the authors define as "attempts to make practical use of knowledge, to accomplish some organizational objective through the structure of people, technology, and knowledge content" (Davenport & Prusak, 1998, p. 144), they characterized knowledge organizations as incorporating several of these attributes:

- Development of an expert network
- Development of internal document repositories
- Efforts to create new knowledge
- Development of "lessons learned" knowledge bases
- A high-level description of the knowledge management process
- The use of evaluation and compensation systems to change behaviour (Davenport & Prusak, 1998, p. 150).

What is interesting to note is that the CIS is defined by all of these elements. The service has a network of expert reviewers who provide knowledge; internal document repositories are present, such as e-mail, cc:mail, press releases, in addition to its database system; efforts to create new knowledge is always taking place with ongoing research to make additions or revisions to the database; evaluations and studies of the service, such as this one, could be considered "lessons learned" knowledge bases; a high-level description of the knowledge management process is taking place in terms of the frameworks that exist for training, as well as for various procedures; and finally, the CIS is committed to regular evaluations of the service to determine what is effective and what could be improved on. It should be mentioned that the use of compensation systems are not as visible within the service, perhaps because volunteers are an integral part of the organization. On the other hand, perhaps the organization could also extend its volunteer recognition system to this special corps of knowledge brokers.

We have offered this concept as a way of thinking of the CIS and the CCS and an approach to its management as a knowledge system. It offers an integrated way of looking at and assessing the viability and effectiveness of the system as a whole.

5.4 Recommendations for the organizational context of the CIS as a health information dissemination service

The following recommendations offered to the CIS and CCS pertaining to the organizational context of the CIS as a health information dissemination service are based on the findings described in the previous chapter, as well as the theoretical approaches taken in this study, namely, the PRECEDE-PROCEED model, institutional theory, and organizational theory.

- Continue with the extensive training programmes at the Call Centres, but also provide ongoing training to the present staff at all levels of the service in areas such as database functions, searching skills, customer service, interactions with other levels of the service, roles and expectations. In addition, to ensure that new staff at Divisions always receive training in the above areas.

- Diversify responsibilities of the information specialists to enable them to more effectively and efficiently conduct research. This could be accomplished by providing a greater balance between taking calls and conducting research, or to develop a network of information-sharing in which each information specialist would be responsible for a specific area and then update the others on any new developments.

- Improve communication processes and cooperation between all four Call Centres and the Divisions, and to create more formal guidelines and procedures for accomplishing this. Within this recommendation is included procedures to be followed when any level of the service has concerns or problems with any aspects of the CIS.

- Maintain more consistency across Call Centres and Divisions in terms of transferring procedures. These procedures should be made very explicit for individuals at all levels of the service, and guidelines should continually be updated and passed on to any new staff to avoid confusion.

- Encourage Divisions to limit the use of answering machines since having person to person contact is a major strength of this service. If they are being used because the CIS contact has other responsibilities, perhaps this individual could put these other tasks on the side when caller inquiries arise. If taking calls would take up too much of the information provider's time away from his/her other responsibilities, this would indicate that there is a high need for a person whose main role would be to take CIS calls.

- Ensure that all Divisions have the necessary database tools, such as the caller display screen on the ACCCIS database, as this affects delivery of service, response to clients, and storage of caller information. In addition, having these important tools to more effectively carry out one's role will make staff feel a part of the service and allow them to more actively participate in the information delivery network.

- Find innovative ways of using information from the caller statistics report and apply this to enhance CCS programmes and services at the Divisions. To also create opportunities so that the Divisions can share this kind of information with each other and provide suggestions to enhance CCS initiatives in each province.

- Provide CIS staff at the Call Centres and at the Divisions with the opportunity to observe operations of the service at different levels. This would help clarify roles and responsibilities and give the staff a sense of working for the same organization. This could be accomplished over a period of time if costs present a concern.

- Encourage different levels of the service to work collaboratively, which is an essential requirement with the adoption of such a model, rather than focusing on labels or titles assigned to the various units.

- Ensure that the CIS number and the way that it appears in telephone directories is consistent across Canada, and that it is clearly explained that one number is used for a National service, and a different number is used to reach the provincial Division. Related to this is a better explanation to the public about how the service works in terms of structure, as there appears to be much confusion surrounding this issue.

- Conduct greater promotion of the CIS within the CCS organization, as well as the general public and health professionals. This could be accomplished through the revival of the CIS Communique newsletter, seminars on the service, distribution of printed material on the service, greater use of promotional vehicles from the sponsor, and possibly radio, television, and newspaper ads whose costs could be offset through more sponsorship from private organizations.

- Develop a CIS leader or Director for the service as a whole who would oversee the direction of all four Call Centres and all ten Divisions, in terms of CIS matters, and ensure that such issues as communication, training, and service operations are all resolved. A more integrated management structure could address many of the weaknesses discussed above. This leader would have to be involved with all aspects of the service, and not solely the National Call Centres where most efforts seem to be driven.

Summary chart of issue areas, problems identified, and recommendations

Issue Areas	Problems Identified	Recommendations
• Staff training	Inconsistent	Ensure that staff from all levels receive the training that is relevant for them, and for training to take place on an on-going basis
• Staying up-to-date with new information	Difficult to balance doing research with taking calls	Diversify responsibilities
• Communication and relationships	Not clearly defined	Implement explicit procedures and standards that specifically address these issues
• Transferring of calls	Inconsistent and uncertain	Ensure that all levels are clear on when transfers should be made and to adhere to these guidelines
• Use of answering machines	Eliminates personal nature of the service	Limit their use and let call centres know when they have to be employed
• Database usage and updates	Inconsistent management of databases across Divisions	Encourage Division uniqueness while still maintaining some form of consistency, and to update on a more regular basis. Also, to ensure that all levels have the required technology to carry out the service
• Clarification of roles and expectations	Not clearly defined	Communicate these in a more explicit and precise manner to those at all levels of the service. Provide the opportunity to observe the service at different levels

• Greater promotion of the CIS	Many people within and outside the CCS are not sufficiently familiar with the service	Revive the CIS Communique and get health professionals to distribute the number more frequently
• Need for more leadership	No formal position currently exists to address various management issues	Implement more integrated leadership structure to deal with current weaknesses

5.5 Recommendations for future research

Findings from this study of the CIS demonstrate that much remains to be done in the area of the organizational context of health information dissemination services in general. In addition to providing recommendations on additional areas of study, suggestions are also given to avoid specific challenges that this study encountered.

In terms of methodology and the site visits, an abundance of information was found and an additional day could have easily been spent at the National Call Centre in Regina to do more observations of Call Centre operations. The process requires the researcher to balance the need to do a closer ethnographic account (requiring more time and interaction) and the need to not be an impediment to the work environment.

In a larger study, more Divisions should be included for site visits to get their perspectives, since each Division is unique and opinions and work contexts surely vary from one province to another. Although looking at one National Call Centre and one Division provided some interesting and useful data, findings suggest that similar challenges exist within and between all levels of the service and should be given further attention.

At the theoretical level, future research studies on health promotion might do well to examine organizational contexts of programmes. The focus on users/audiences/clients is understandable but the circle to incorporate the production end needs to be completed. This may require a melding of theoretical approaches to meet the demands of multiple levels of analysis.

The dearth of studies on the organizational contexts of health dissemination services further suggests the need to examine other types of organizations and technological approaches.

5.6 Limitations of study

Like other studies, this research had its limitations. At the methodological level, the interviews at the Manitoba Division could not be conducted with the staff, including the Executive Director of this Division. Data collection was therefore not uniform in both sites, with the preponderance of information obtained from the National Call Centre in Regina.

The diary method was relatively successful in the sense that it corroborated findings from the interviews and provided very specific information on roles and responsibilities. As well, examples of the types of calls received at the CIS were provided. On the other hand, it appears that CIS information providers at the National Call Centre in Regina and at the Manitoba Division viewed this activity as an extra task that they did not have time for, and one information specialist directly stated this in her diary. Staff members were asked to write two pages double-spaced yet most only filled one page. Therefore, if a diary method is used in future studies, perhaps the extent of the writing should be limited further or the content or issues covered should not duplicate interview areas.

This case, of course, covers only two Call Centres. Other sites ought to be examined as well to reach a better understanding of the organizational context of a health information dissemination service.

Examination of the organizational context of health information dissemination services also needs further refinement at the theoretical level. The concept of knowledge networks needs to be examined more carefully at the empirical level as it seems to offer an innovative way of looking at organizations in the information society.

5.7 Concluding statement

The organizational and environmental context for the implementation of health information dissemination services has not been allocated the kind of attention which it deserves in research. While examining the efficiency of these services from a user's perspective is crucial, the information provision side of these services is just as important in determining whether it is functioning the way that it was intended.

Institutional theory forces researchers to consider the idea that several factors within the environment such as increased usage of information technologies, health promotion efforts, public participation, and a changing health-care system all influence how an organization is shaped. Organizational theory examines how the structure and functions adopted by an organization can impact internal communication processes. The PRECEDE-PROCEED model, and specifically the latter phase, encourages planners to consider the larger administrative and organizational factors that play a role in health promotion programmes.

These issues were specifically examined in the context of the Cancer Information Service, which serves to demonstrate the important role that the organizational context plays in terms of planning and implementation strategies, decision-making processes, and use of resources, in health information delivery.

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Appendix A

Interview Questions

A. Questions on sense of efficacy in your role:

1) Could you comment on your role, or contribution within the CIS, and how it contributes to the effectiveness of the service?

2) Do you feel that you are sufficiently equipped with the knowledge, resources, etc needed to assist callers on the CIS line, or do you feel that your role could be enhanced with additional resources (for example, training, courses, other site visits, etc)?

B. Questions on the communication processes between the call centres and the divisions:

1) How do the call centres and divisions communicate?

2) Is the Communication timely

3) Whom do you communicate with and about what?

4) Is the communication effective? What would improve the communication and the service to the caller?

C. Questions on the differences in the types of information given at each level:

1) Could you tell me how information provided to the callers from the national call centre (Regina) differs from that given at divisions (such as Winnipeg)?

2) How is it determined at the national call centre that a caller should be transferred to a division?

D. Questions on the expectations that each call centre or division has of the other:

1) What are your comments on the relationship/expectations of the national call centre with regards to the divisions, and vice-versa?

2) Do you think that both call centres and divisions are aware of these expectations that each has of the other?

E. Questions on improvements that you would recommend:

1) Could you tell me about some of the improvements that you would recommend to make the CIS more effective?

2) Is the information dissemination process a smooth and problem-free one, or are you at times faced with difficulties and limitations?

3) What particular areas have you found as perhaps troublesome, or as requiring further development?

F. Any other issues, concerns, or questions?

Appendix B

Consent Forms for Interviews and Diary Method

Consent Form for Interviews

Research Project Title: Perceptions of Health Information Providers on the Efficacy of the Cancer Information Service Call Centre and its Interactions With a Local Centre
Investigators: Dr. Edna F. Einsiedel and Marie-Claude Gratton, Graduate Program in Communication Studies
Funding Agency: Sociobehavioural Cancer Research Network

This consent form, a copy of which has been given to you, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, please ask. Please take the time to read this form carefully and to understand any accompanying information.

Project description:

The goal of this research project is to examine how the information provision role is being carried out by the CIS and what organizational structure and context enhances this role in order to provide the most effective services to the users. This will be explored through the examination of the Saskatchewan call centre, as well as the Manitoba call centre, in order to observe the information dissemination process from a national call centre (Regina) to a local one (Winnipeg) and the interaction that occurs between them.

You have been chosen as a participant based on your position and knowledge within the organization and service under examination.

What your participation entails:

The interview for which you have been recruited consists of questions that will be asked of front-line health information providers, the division executive directors at both call centres, and the executive director of the Canadian Cancer Society. These questions will deal with your perceptions of the effectiveness of the service, sense of efficacy in your role, improvements that you would recommend, expectations that your call centre has from the other call centre, channels of information that you make reference to, and differences in the types of information that is given at each level.

Your participation in the interview could potentially lead to the improvement of the information provision role of the CIS. Your participation could also assist the research team in the development of a possible national study of the CIS. No remuneration will be provided. We do not foresee the possibility of any harm from your participation.

The interview should take approximately one hour to one hour and a half of your time. Since individuals who hold specific positions within the organization will be interviewed, identification may be unavoidable in the thesis, and the final report. Findings will be described as a whole. In cases where direct quotes from the interviews are found to be beneficial, your permission will be requested before they are used.

We would also like to request your permission to audiotape this interview which will be transcribed. Both the tape and the notes will be kept securely for three years in a locked file cabinet in the principal investigator's office, after which all of these records will be destroyed.

Your signature on this form indicates that you have understood to your satisfaction the information regarding participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the investigators, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation. If you have further questions concerning matters related to this research, please contact:

Dr. Edna Einsiedel
Graduate Program in Communication Studies
The University of Calgary
Calgary, Alberta T2N 1N4
Ph: (403) 220-3924; FAX :(403) 282-6716; e-mail: <einsiede@acs.ucalgary.ca>
Or,
Marie Gratton
Graduate Program in Communication Studies
The University of Calgary
Calgary, Alberta T2N 1N4
Ph: (403) 255-2950; FAX: (403) 282-6716; e-mail: <mcigratt@acs.ucalgary.ca>

If you have any questions concerning your participation in this project, you may also contact the Office of the Vice-President (Research) of the University of Calgary and ask for Karen McDermid, (403) 220-3381.

_____ _____

Participant Date

Permission to audiotape interview:

_____ _____

Participant Date

A copy of this consent form has been given to you to keep for your records and reference.

Consent Form for Diaries

Research Project Title: Perceptions of Health Information Providers on the Efficacy of the Cancer Information Service Call Centre and its Interactions With a Local Centre
Investigators: Dr. Edna F. Einsiedel and Marie-Claude Gratton, Graduate Program in Communication Studies
Funding Agency: Sociobehavioural Cancer Research Network

This consent form, a copy of which has been given to you, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, please ask. Please take the time to read this form carefully and to understand any accompanying information.

Project description:

The goal of this research project is to examine how the information provision role is being carried out by the CIS and what organizational structure and context enhances this role in order to provide the most effective services to the users. This will be explored through the examination of the Saskatchewan call centre, as well as the Manitoba Division, in order to observe the information dissemination process from a national call centre (Regina) to a local division (Winnipeg) and the interaction that occurs between them.

You have been chosen as a participant based on your position and knowledge within the organization and service under examination. Participants for the diary method are front-line health information providers like yourself from both call centres.

What your participation entails:

Your participation will consist of writing brief notes at the end of your work day, observations of your tasks, as well as any other pertinent observations which you feel would contribute to the overall research. In addition to this, you will be asked to write about specific cases that you have handled with callers

Your participation in the diary method could potentially lead to the improvement of certain issues on the information provision side of the CIS. Your participation could also assist the research team in the development of a possible national study of the CIS. No remuneration will be provided. We do not foresee the possibility of any harm from your participation.

The diary entries should be approximately one to two pages in length. No efforts will be made to associate participants to specific diary entries and no identifications will be

made. Findings will be described as a whole. In cases where direct quotes from the diaries are found to be beneficial, your permission will be requested before they are used. There is also the possibility that you may be contacted for follow-up information after the one week diary entry period is complete.

The diary entries will be transcribed and will be kept securely for three years in a locked file cabinet in the principal investigator's office, after which all of these records will be destroyed.

Your signature on this form indicates that you have understood to your satisfaction the information regarding participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the investigators, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation. If you have further questions concerning matters related to this research, please contact:

Dr. Edna Einsiedel
Graduate Program in Communication Studies
The University of Calgary
Calgary, Alberta T2N 1N4
Ph: (403) 220-3924; FAX :(403) 282-6716; e-mail: <einsiede@acs.ucalgary.ca>

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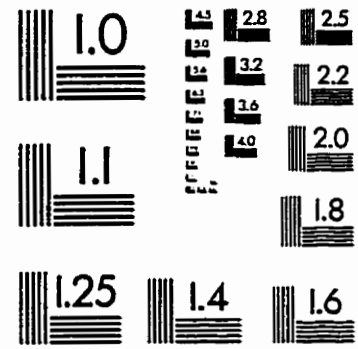
If you have any questions concerning your participation in this project, you may also contact the Office of the Vice-President (Research) of the University of Calgary and ask for Karen McDermid, (403) 220-3381.

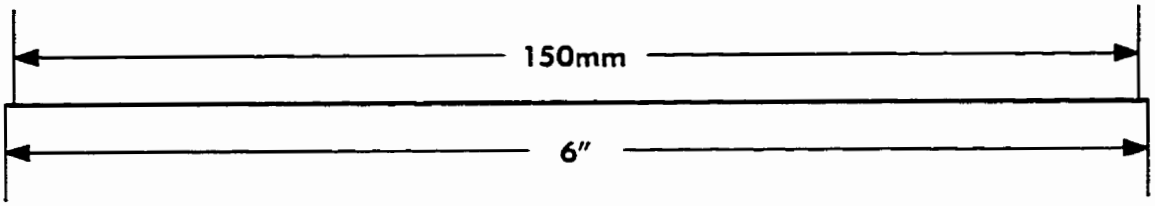
_____ _____

Participant Date

A copy of this consent form has been given to you to keep for your records and reference.

TEST TARGET (QA-3)





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