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Voluntary Participation in Accreditation by Diagnostic Ultrasound Programs in Canada

by

Glen David Heggie

A thesis submitted to the Faculty of Graduate Studies and Research in partial fulfillment of the requirements for the degree of Doctor of Education

in

Administration of Postsecondary Education

Department of Educational Policy Studies

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5th April 2000
Dated

Dedication

This thesis is dedicated to the memory of James M. Roxburgh, a man who willingly gave of himself in the hopes that his efforts would leave the world a better place. From "Per ardua ad astra" to "Talent de bien faire" he did his best. Thanks for everything "Roxy."

ABSRACT

This study focussed on the reasons that four of Canada's eight programs in diagnostic ultrasound technology voluntarily enrolled in the accreditation process of the Canadian Medical Association. Data was gathered by carrying out 11, one-on-one interviews with individuals from the four accredited programs; and three telephone interviews with program administrators from the non-accredited programs -- one program was unwilling to participate in the study.

Respondents were asked to describe their views of the meaning of accreditation, how being accredited affected the way their programs operated, and what value, if any, they placed on the process. Respondents from the non-accredited programs were asked to explain why they had chosen to opt out of the accreditation process.

The analysis of the interview data revealed six major themes -- Views of the meaning of accreditation; Benefits attributed to the accreditation process; Disadvantages attributed to the accreditation process; Reasons for being an accredited program; Reasons for not being accredited; and, Substitutes for accreditation. Each major theme was broken down into sub-groupings.

The study revealed that respondents described accreditation in a similar way regardless of their role in the program, or whether they were from an accredited or non-accredited offering. Accredited program staff valued accreditation identifying ten separate benefits -- Providing protection to the students; Ensuring ongoing quality control; Encouraging programs to improve; Assisting programs to grow and evolve;

Providing leverage to bring about change; Exerting political pressure in support of program goals; Assuring portability of professional credentials for graduates; Enhancing program and graduate status; Ensuring that graduates are competent; and, The relationship of standards and competence to safety. Three major reasons were given for not being accredited -- Costs versus benefits; Government discouragement; and, Failing to change the program.

Future research on accreditation should focus on comparing the success of graduates from accredited programs with that of students from non-accredited programs. The roles played by the various levels of government and how these affect the various postsecondary training programs for the allied health care professions should also be examined.

Acknowledgement

This undertaking could not have been completed without the support, guidance and inspiration provided to me by a number of individuals who always seemed to be there when I needed them the most.

My supervisor, Mike Andrews, could not have been any more supportive. When I think back over this process I will always be thankful that I was fortunate enough to find a mentor who allowed me to wander far enough to learn, but always knew when I needed to be reminded to maintain a specific focus. His interventions provided just enough catalyst to keep me going while leaving it up to me to finish what I had set out to do.

During my years as a student at the University of Alberta I took a number of classes from Ken Ward, Joe da Costa and Frank Peters. In many ways there is a little of each of them in this work, and for that I am grateful. Even though all of the courses have been completed I find that I'm still learning from them and continue to appreciate their insights and advice.

In order to put together a committee I needed an external committee member, and an external reader. These positions were filled by Don Philippon and Glen Jones. My sincere thanks go out to these individuals for agreeing to sit on my committee and, of course, for their comments and suggestions.

It would be remiss of me to forget to acknowledge the individuals who willingly participated in this study and allowed me to interview them. On many

occasions the respondents showed a warmth and willingness to help that exceeded professional courtesy.

Finally, I can't say enough to thank my wife Martha and our children Grant and Marnie, for their unwavering faith and support. No matter what I had to do, where I had to be, or how long I was away, they were always supportive and understanding.

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INTRODUCTION

Purpose of the Study

The purpose of this descriptive study was to explore the reasons that four of eight Canadian programs in diagnostic ultrasound technology voluntarily chose to enroll in the accreditation process of the Canadian Medical Association (CMA). To gather the necessary data 14 interviews were conducted with representatives of three major stakeholder groups from each of the four accredited programs -- the clinical instructors, senior administrators, and the medical advisors --, and with the program administrators of three of the four non-accredited programs -- one individual was unwilling to participate in the study.

Accreditation

Accreditation is a review process for postsecondary education institutions and their programs by an external group of peers. In most cases the accrediting body is not an agency of the government, or of an educational system, and should be seen by all to provide a non-partisan, objective assessment of the quality, currency and comprehensiveness of the institutions and their programs. Although participation in a formal accreditation process is often seen to be purely voluntary, many health professions -- through their national professional associations -- restrict access to their certification examinations, and ultimate licensure as a professional, to graduates of programs that are accredited (American Association of Colleges of Nursing, 1996; Council for Higher Education Accreditation, 1996; National Accrediting Agency for

Clinical Laboratory Sciences , 1998; Canadian Association of Medical Radiation Technologists, 1999).

Accreditation and the Canadian Medical Association

Since 1938, the Canadian Medical Association (CMA) has played a key role in the assessment of educational programs in a variety of health science professions in Canada. Acting through the Conjoint Committees for Accreditation (CCA) -- part of the CMA's Professional Development Directorate -- this well respected national body has established and refined an accreditation process that is designed to assure the public, and program stakeholders, that national standards are being met or exceeded. The CCA presently delivers national accreditation services to ten different health professions in Canada. The ten disciplines listed by the CMA for 1999 were -- cardiovascular perfusion, cytotechnology, diagnostic ultrasound technology, medical laboratory technology, nuclear medicine technology, ophthalmic medical assisting technology, paramedicine, radiation therapy, radiological technology and respiratory therapy. Four of these professions fall under the "umbrella" of the medical radiation technologies --radiological technology, diagnostic ultrasound technology, nuclear medicine technology, and radiation therapy.

Accredited programs in the Medical Radiation Technologies

Formal training programs for the four medical radiation technologies are offered at a variety of sites throughout Canada. The CMA's official list of accredited programs (December 1999) identified 20 programs in radiological technology, four in diagnostic ultrasound technology, six in nuclear medicine technology and 12 in

radiation therapy. The CMA also listed a total of 226 participating sites -- hospitals, clinics and post-secondary institutions -- associated with these 42 accredited programs in the medical radiation technologies. Regardless of the specific health profession, the individual programs vary in the way that they provide didactic and practical experiences. Some of the programs are hospital-based, many are cooperative ventures between technical institutions and clinical facilities, while others are run by a technical institute, college or university in much the same fashion as many Canadian nursing programs.

Accreditation and Provincial Legislation

One feature that is a keystone of such programs is that the provincial legislation and regulations governing the health professions require them to be accredited. Typically regulations stipulate that practitioners must be graduates of an educational program accredited by the CMA, and, that they have also successfully challenged their professional association's national certification examinations.

Professional Designations

The specialties of nuclear medicine, medical radiological technology, and radiation therapy are represented by the Canadian Association of Medical Radiation Technologists (CAMRT). Practitioners obtain their professional designations -- Registered Technologist in Nuclear Medicine (RTNM), Registered Technologist in Medical Radiology (RTR) or Registered Technologist in Radiation Therapy (RTT) -- by successfully challenging national certification examinations set by the CAMRT. Access to these certification examinations is controlled by the CAMRT and is

restricted to individuals who have successfully completed a recognized training program accredited by the Conjoint Committees of the CMA. Other Canadian training programs in the allied health professions -- such as medical laboratory technology, and respiratory therapy -- mirror this arrangement. Since the professional body sets the certification examinations, and as the achievement of professional credentials is dependant upon passing these examinations, the training programs have no choice but to achieve and retain accreditation from the CMA -- this is also generally embedded in provincial regulations governing the practice and licensing of health care professions (Alberta Health Disciplines Act, 1981).

Diagnostic Ultrasound

The field of diagnostic ultrasound -- also commonly referred to as medical sonography -- presents a unique situation when compared with nuclear medicine, medical radiography and others. The national certifying body of medical sonography does not set or administer its own certification examinations. Medical sonographers in Canada are represented by the Canadian Society of Diagnostic Medical Sonographers (CSDMS); however, graduates of Canadian training programs in sonography write the American Registry of Diagnostic Medical Sonographers (ARDMS) certification examinations. The ARDMS publishes specific prerequisites for access to its certification examinations (ARDMS, 1999). Since there are a number of program models that are acceptable to the ARDMS, individuals do not necessarily have to be graduates of an accredited training program in order to write the American Society's papers. At present there are no national Canadian equivalents to the ARDMS

examinations and so the professional designations gained by passing the American examinations have been accepted throughout Canada as the standard professional credentials needed to practice.

Ultrasound Programs in Canada

Presently there are eight formal training programs in Canada for individuals who wish to become diagnostic medical sonographers. While there is no requirement for any of these programs to seek accreditation through the Conjoint Committees, four of these eight programs have elected to voluntarily pursue the accreditation process offered by the CCA of the CMA -- these are sited in Calgary, Edmonton, St. John's and Halifax. In January of 2000, the program in Hamilton will be formally applying for accreditation for the first time and, if successful will become the fifth accredited program in diagnostic sonosgraphy in Canada. The four programs currently accredited are one-year "post graduate" offerings -- commonly referred to as "second discipline programs." The usual prerequisite for these programs is the successful completion of an accredited program in one of the professions represented by the CAMRT, or other allied health program of at least two years duration. Other than diagnostic ultrasound, the CMA accredits all of the Canadian education programs in the medical radiation professions -- without this status their graduates do not have access to the national examinations offered through the CAMRT.

Statement of the Problem

This study explored why four Canadian programs in diagnostic ultrasound technology have voluntarily enrolled in the CMA accreditation process.

Research Questions

The study was underpinned and guided by the following research questions:

1. How do each of the stakeholder groups describe accreditation?
2. What value is placed by the stakeholder groups on the program being accredited?
3. What impact does accreditation have on the way that a program operates?
4. Why have four programs elected not to pursue accredition?

Research Method

This study was undertaken to explore why four Canadian programs in diagnostic ultrasound technology have voluntarily enrolled in the CMA accreditation process. In order to gather detailed information regarding the research questions that guided this descriptive, exploratory study its author conducted one-on-one interviews with 14 individuals. Twelve of the interviews were audiotaped. Ten respondents were interviewed in person; these were made up of four clinical instructors, three medical advisors and four program administrators from the four accredited programs -- located in Calgary, Edmonton, St. John's and Halifax. The author carried out telephone interviews with the administrators of three of the four non-accredited programs -- these were located in Vancouver, Winnipeg, Hamilton and Toronto. During the time of the interviews, program descriptions and other pertinent information were gathered for later analysis.

Organization of the Thesis

This thesis is organized into eight chapters. Chapter 1 addresses the purpose of the study, provides a brief description of accreditation and how it relates to training programs in diagnostic ultrasound in Canada, presents the research questions that guided the thesis, and provides a glossary of key terms. Chapter 2 presents the review of the literature. Chapter 3 describes how the study was carried out, its design and rationale, the selection of participants and how interview and other data were managed and analyzed. Chapter 4 provides descriptions of the programs that were studied, and the context that they operate under. Chapter 5 presents the findings that emerged from analyzing the data, and introduces emergent themes from that analysis. Chapter 6 discusses other issues identified during the interviews. Chapter 7 is the discussion, with Chapter 8 addressing the summary, conclusions and recommendations for further study. Since many of the terms used in this thesis are discipline specific, I have included a glossary. The glossary of terms can be found following the references as Appendix A.

CHAPTER 2

LITERATURE REVIEW

The review of the literature related to the accreditation of training programs in the allied heath disciplines revealed that there has been very little written on this area. Unlike the United States, each of the allied health disciplines in Canada has invariably been represented by one national professional society, and obtained its professional credentials through that body. Similarly accreditation services have been provided to many of these disciplines by a single national body -- the CMA. In the vast majority of cases accreditation is not an option for Canadian programs in the various health disciplines. As a result of these factors there has been little stimulus to produce a body of literature in the area, and even less reason for material to speak to issues of voluntary participation in the accreditation process.

The sources that were found, and that have been cited, were frequently published by the CMA or, were American publications. Although it can not be claimed that these offered a balanced and unbiased view of the subject, they did provide insights into issues that might emerge during the interviews and were useful in designing the interview guides.

Accreditation

Accreditation is an integral concept when considering accountability, standards, quality and competence. The term, as it is commonly understood, subsumes all of these issues and provides an objective base to evaluate the degree to which programs and institutions are meeting expectations. The National League for

Nursing Accrediting Commission (NLNAC) provides a generic description of accreditation:

> The achievement of accreditation indicates to the public and educational community that a nursing program has clear and appropriate educational objectives and is providing the conditions under which its objectives can be fulfilled. Emphasis is placed upon the total nursing program and its compliance with predetermined standards and criteria. (NLNAC, 1997, p. iii)

The Canadian Medical Association defines accreditation as: "...a process designed to ensure national standards for educational programs in designated professions, thereby contributing to the competency of graduates and the quality of patient care in Canada." (CMA Basis of Accreditation, 1994) This is quite similar to the view of Robinson and Shakespeare (1995) who stated: "Accreditation is the process by which an agency or an organization evaluates and recognizes a program of study or an institution as meeting certain predetermined qualifications or standards." (p. 42)

History of Program Accreditation in Colleges

The external accreditation of programs in the health sciences was not an issue when the Canadian college system evolved in the sixties. Training for the allied health disciplines was originally offered by, and at, the hospitals using an on-the-job approach. Program quality varied as did program design. The range of offerings ran the gamut from individual "apprenticeship" training models to semi-independent, specialized educational institutions such as the Toronto Institute of Medical Technology (Hill et al, 1989) -- now known as the Michener Institute.

During the sixties the number of allied health professions and programs increased as technology brought about major changes in the delivery of health care. As new professions developed, the medical profession became increasingly concerned with training standards. For example, Sproule (1968) wrote a detailed paper on minimum standards for schools of inhalation therapy -- now commonly referred to as respiratory care -- which argued that programs should be required to provide extensive program descriptions for submission to a group of physicians for review and assessment. By 1972 formal accreditation for all Canadian programs in respiratory therapy had commenced (Andrews, 1984).

With the transfer of many of the allied health programs to the college sector, standards, and their relationship to the quality of both instruction and the curricula that the various programs used, became major issues. In a 1971 paper issued by the Ontario Ministry of Health, the Ministry stated:

> To ensure that the public has a high quality of health care, systems of accreditation or appraisal should be continued in, and/or expanded to, those institutions where practitioners in the health disciplines are educated. (Principle no. 44)

The report went on and added that: "Accreditation or appraisal should be the responsibility of a body independent of educational institutions, regulating bodies or voluntary association." (Principle no. 45)

Hall (et al, 1989) identified that the accreditation activities of some of the new occupations created conflict between professional accrediting associations and the educational community. They cited the example of the Canadian Association of Occupational Therapists -- CAOT -- and its refusal to accredit the Occupational

Therapy program offered by Mohawk College in Hamilton. In this instance the CAOT had established accreditation standards that included a requirement for training to be based at a university and refused to accept graduates from a college-based program. Even after an independent review reported that the graduates from Mohawk were equivalent to those of existing university programs CAOT would not change its stance. Ultimately, bending to pressure from CAOT, the government agreed to move the Occupational Therapy program to the university.

Organization of the Literature Review

In order to provide an organized overview of the current literature on accreditation as it pertains to educational programs in the allied health professions I considered the concept under the five steps identified by McTernan and Hawkins. (1972, p. 66) These five steps are as below:

1. Standards are set by the accrediting agency in collaboration with the educational institutions.

2. The institution or program seeking accreditation prepares a self-evaluation focusing on of how its performance measures up against these standards.

3. A team from the agency visits the institute or program for an on-site survey.

4. The team compares the self-evaluation against the established standards and validates these by comparing the results with those obtained during the on-site visit by the team.

5. The whole process is repeated in part or whole on a periodic basis to ensure that program quality remains the same or improves.

Since a major source of information in this chapter was derived from a study commissioned by the CMA in 1989, I have included brief description of the study prior to incorporating the findings of the literature review under the five headings

suggested by McTernan and Hawkins (1972).

The Redding Report

In September of 1989 the CMA hired an outside consulting firm -- Redding and Associates -- to carry out a comprehensive review of the accreditation process used by the conjoint committees. This report was published in 1992 and was entitled: *"Allied Medical Education Accreditation Process Survey."* To assess the views of the more than 500 individual programs, and 34 partner groups who were the monitored by the CMA accreditation process, Redding and Associates mailed out 840, 79 item questionnaires to the stakeholders, ultimately achieving a 71 % return rate (Redding and Associates, 1992). Some of the specific areas identified for inclusion in the questionnaires were: "...accreditation philosophy and outcomes, funding, objectives, options for on-site visits, alternative approaches and future modifications" (p. 9). The final report revealed that virtually all of these areas had significant fiscal components. For example, *alternative approaches* were covered by questions 53 through 66 inclusive. For each question the respondents were asked to give a "yes" or "no" answer, followed by an opinion as to whether or not costs would go up or down and whether quality would be affected. The issue of cost versus program quality may be key to program satisfaction with accreditation, and underpins much of the decision-making processes seen in the relationships between the various partners in the accreditation process.

Although the findings of this report were notable, and many were relevant to this study, two major provisos needed to be recognized when attempting to apply

the results of Redding's (1992) survey analysis to this thesis. First, the survey was done before the CMA undertook a major redesign of its accreditation process, and so opinions and comments made by the recipients of the questionnaire were based on a process that was substantially different than the one that is presently in place. Second, Redding sent questionnaires to six stakeholder groups -- senior administrators, department heads/managers, medical directors/advisors for training programs, clinical instructors/coordinators for training programs, presidents of societies/associations and conjoint committee members (p. 10). In Redding's survey the executive summary claims a 71 % overall return rate. However, on page 10 it is noteworthy that the return rate for administrators was 38.2 % (66 of 173), that of medical directors was 44.1 % (86 of 195), and the rate for clinical instructors was 92.9 % (131 of 141).

Standards

The establishment of standards that reflect current, representative and reasonable expectations of a program are a crucial element in the process of accreditation. Not only must the expectations that they represent be meaningful to both the accreditation agency and the institution seeking accreditation but they must also be seen to be achievable and relevant. The success of any process within today's climate of constraint and accountability requires that the process be seen as being both reasonable and meaningful. The importance of using standards to set a minimally acceptable level of performance is that it allows programs to not only meet these minimal levels of acceptable performance, but to exceed the benchmark and demonstrate improvement and areas of strength. As McTernan and Hawkins (1972)

pointed out nearly three decades ago: "... accrediting also implies stimulation toward improvement of quality beyond the minimum standards specified by the accrediting body" (p. 66). This concept is still evident in the literature and can be found in many documents including a recent publication of the American Association for the Advancement of Science: *Benchmarks and standards as tools for science education reform* (AAAS, 1997). This publication stresses the need for standards that can be used to validate the curricula of programs, and that can be used to form a common basis from which a national approach to educational reform can begin. The link between accreditation and standards was supported by Redding's survey in which 94 % of respondents felt that accreditation was effective in helping to ensure that national standards were being maintained by education programs in the allied health discipline (p. 39).

Professional groups and organizations such as the CSDMS, CAMRT and others expend a great deal of effort to establish, validate, and regularly revise their standards. The National League for Nursing Accrediting Commission produces three separate sets of standards and criteria for accreditation, one for diploma programs, one for associate degree offerings, and one for baccalaureate and higher degree programs in nursing (NLNAC, 1997). While the standards are similar in many ways, the level of compliance and specific performance indicators required become more detailed and broad-based as the educational level of the program increases. In short the accreditation standards are customized to review and assess programs at a level consistent with program -- and public -- expectations. Just as in the K-12 system

where there is a relationship between the length of time that an individual is in a program and the performance and knowledge expected of that individual; there is a relationship between the perceived quality and level of an accredited program and the rigor to which it is subjected when being evaluated by the accreditation agency.

A key feature of most accreditations is that program quality is assessed and validated by a mixture of internal, preparatory activities, and external terminal activities. Prior to the actual visit the program does its own pre-survey self-evaluation and then the accrediting body carries out a detailed review of the pre-survey self-evaluation followed by an on-site visit.

Program Self-evaluation

Program administrators seeking accreditation are seeking external validation that they have met, or exceeded a set of published standards and expectations identified by the accrediting agency. Since these standards are published, adminisitrators know exactly what is expected of them and are expected by the accrediting agency to critically review their own performance before an accreditation visit occurs. Generally called "self-evaluations" or "self-assessments" these are essentially "mock-accreditations" that programs carry out on themselves. By assessing how well they are meeting the published criteria for accreditation, a program can focus its resources and energies on addressing areas of weakness before the accreditation survey team arrives. More importantly the self-assessment often allows programs to solve problems and deal with issues before the surveyors even arrive. Notwithstanding the substantial time and effort that needs to be put into the

self-evaluation, 91 % of Redding's respondents stated that they felt that these should be retained as part of the accreditation process (p. 39). The degree to which these self-evaluations were accepted by these individuals was evident when 98 % were reported to be in agreement with the statement: "the accreditation process is a supplement to, rather than a substitute for, program self-evaluation" (Redding, p. 21).

One of the major advantages of having a list of clear, achievable standards is that each program has a basic set of guidelines from which it can design an educational package that makes effective, efficient and appropriate use of the resources available to it. Since accreditation is seen to be a voluntary process -- and for the most part this is true for allied health programs in Canada -- it is important that a high degree of trust and mutual respect develops, and is maintained, between the programs and the agency(ies) responsible for accreditation (American Association of Colleges of Nursing, 1997, Canadian Medical Association, 1991). The implications of this latter point are that any self-evaluation requested by the agency must be based upon published standards and assessed objectively against those standards, further, the program must be honest in portraying its strengths and weaknesses since accreditors tend to look for evidence of programs actively working on proactive plans for dealing with any problems that the programs have identified through their own self-evaluations. To this end accreditors can be seen as being validators of process more than bearers of solutions -- no team member is likely to have as good a grasp of the local environment in which a program must function as the individuals who work in it on a daily basis.

The self-evaluations -- also called self-assessments or self-studies -- require a substantial, ongoing and concerted effort on the part of the program since they require input from all of the program's stakeholder groups along with extensive supporting documentation (Hill et al, 1989). Above all the self-evaluation is as an opportunity for the program to assess its efforts and policies in terms of measurable outcomes such as -- student satisfaction, employment statistics for graduates, and performance results on national examinations. As both strengths and weaknesses are revealed by this process the program needs to identify them and, in the case of areas of concern, describe what is being done to address them. It is also expected that any deficiencies or suggested actions reported in the last accreditation visit will have been acted upon and that the steps taken to address these issues and concerns have been clearly outlined in the documentation supplied with the self-evaluation (CMA, 1996, Draft 5).

While each program, agency and profession may have its own preferred format and style, most self-studies are made up of four basic components -- an introduction, a program overview, required documentation related to standards, and an appendix in support of the program's success with complying with the standards (NLNAC, 1997).

The introduction provides a synopsis of the current state of the program -- where it is located, its basic governance model, staff qualifications, student numbers, and where exactly the major facilities are sited. Since many accreditation survey team

members come from other parts of the country it is not unusual to include local directions and site maps as part of the introduction.

The program overview is an important component of the evaluation since it allows programs to give the surveyors a sense of how the program evolved, what its history is, who its faculty and students are, and who the key players and stakeholders are. Although this portion should be brief it is crucial that it sets the stage so that surveyors understand the context within which the program being visited operates. Even though standards and expectations may be national, each program has to achieve them with resources, and under constraints, that are often unique and local. Frequent references to outcome-based assessment support this contention. As accreditation bodies shift their focus to programs demonstrating that their graduates have reached a set of terminal goals or outcomes, achieving accreditation becomes a less prescriptive and process-based activity (CMA, 1995, Draft 5, NLNAC, 1997). Assessing program outcomes allows institutions to mount effective programs that lead to success on national examinations rather than trying to offer national programs that have to be successfully in a local context. As Robinson and Shakespeare (1995) point out:

> Institutions are accredited to do various kinds of things that they have demonstrated they can do. Institutions of higher education are accredited -- by the government or by a professional body or both -- as institutions capable of delivering high quality higher education. (p. 42)

The statement above emphasizes the validation of a program's ability to offer a quality program rather than the role of accreditation to tell a program precisely how to go about doing so. Most importantly this allows a common end to be achieved by a

wide variety of approaches, thus allowing diversity and innovation to play a part in designing, nurturing and maintaining programs.

The third component of the self-assessment is the program's response to the established set of standards and criteria that it must meet in order to achieve and maintain accreditation. Each profession has its own published set of standards, skills or competencies and may group them into major divisions or simply present them sequentially. The various agencies appear to use these standards in different ways when assessing the degree to which a program complies with the requirements for accreditation. Some groups (CMA, 1996, Draft 5) identify certain standards as being critical while others are expected but to a certain degree negotiable. In such cases all of the standards deemed to be "critical standards" must be satisfied, while the greater the number of "expected" standards met by the program, the better the accreditation outcome is likely to be. Generally programs whose professions have identified larger numbers of standards and competencies are more likely to follow this model than those which have only described their discipline using a small number of broad standards.

The final component of the self-study is the appendix. This is where programs may choose to add background material, relevant minutes or correspondence, and other forms of program records or evaluation that support the various claims made in the submission. Typically, a well-organized submission will refer to the appropriate portions of the appendix in the main body of the self-study -- this reduces the time and effort needed for the surveyor to review the pre-survey materials.

The On-site Visit

Redding (1992) identified that the on-site visit is the portion of the accreditation process that incurs the greatest costs -- transportation of the team members to the program, local and regional travel to view all program components, and food and lodging for the group. Considering that many agencies use volunteer team members, that the process is both time consuming and demanding, and as many of the professionals who participate in surveys have to travel considerable distances to get to the sites -- a particularly common concern in a country as vast as Canada -- the available pool of volunteers is rarely very large.

Given that many educational programs and institutions are faced with funding reductions and demands for ever greater accountability, the accrediting agency must be seen to provide a valuable service at a reasonable cost (Andrews, 1992). According to the CMA (1997) costs can be reduced by doing a thorough, honest, and comprehensive job of the self-study. This can result in less time being spent by surveyors on trivial matters. The surveyors use these evaluations to acquaint themselves with the program being visited, to review the highlights and concerns of the last accreditation, and to attempt to identify those portions or aspects of the program being toured which appear to fall short of the standards, or which may not be running as well as might be expected (Commission of Collegiate Nursing Education, February, 1998).

The CMA: *Basis of Accreditation* (1997) points out that regardless of what a program may decide about what the surveyors should see, it is ultimately the survey

team members who will determine who they need to speak with, and what they need to review.

While much of this will be predictable there is always a potential for plans to change suddenly as the team attempts to hone in on particular concerns and problems which may appear once they reach the sites and begin speaking with stakeholders -- staff, faculty, students, graduates, and administrators. Recognizing that a visit is just a small temporal fragment of a program's existence it is entirely possible that it may or may not be a representative fragment. The ability to provide complete, clearly written documentation before, during, and, if needed, after the visit can go a long way toward protecting the program and team members from missing crucial insights and from "over-generalizing" their reported findings. This can be further supported by having as many stakeholders available as possible since a small sample is not likely to be representative of the population, and, more importantly, having access to only a small number of these individuals may be seen by the team as being an attempt to portray the program in a positive light by pre-selecting who will be allowed to provide information.

Validation of Results and Findings

While accreditation surveys are carried out under the aegis of the CMA, most team members are volunteers and are rarely professional surveyors. Teams will generally only have one or two new members along with a larger number of seasoned individuals with experience. Most agencies also insist that all surveyors complete some form of surveyor training before going on a visit, and usually approach

individuals whom they are interested in having on teams rather than advertising for persons who might wish to join. (Accreditation Council for Continuing Medical Education, 2000, CMA, April, 1999).

Coming to the on-site visit the surveyors are armed with three common strengths -- they have all been through the same "indoctrination" by the accrediting agency and should have similar views of their individual roles; they have a set of relevant standards and copies of the program's self-assessment; and they are all peer members in one form or another of the profession that they are evaluating.

Teams are usually a mixture of educators, practitioners, employers, and representatives of the accrediting agency. This mixture is meant to insure that teams are conversant with the field or profession, and have a broad range of expertise with the various practical experiences and stakeholder groups needed to offer a quality program. Often these individuals can also offer new insights, ideas, and suggestions for program improvement since they bring with them their own experiences with other programs and institutions, and are not experientially limited to one particular approach or region. Most importantly the on-site visit allows the accreditors to verify what they have been told by the program's self-evaluation and accreditation application documents. As Yvonne Taylor reported in the Fall 1997 issue of the *Conjoint Accreditation Newsletter* :

> The opportunity to be a member of the survey team was a marvelous experience for me. As an educational coordinator and employer, I definitely value on-site accreditation. It assures that the requirements of the *Basis of Accreditation* are met by the educational agency while facilitating the evolution of medical professions in Canada. I found that required documents from the education agency gave valuable information, but it does not reflect

> the educating process. I feel that site visits are the valuable tool that completes credibility of educational programs in Canada. (p. 3)

Following the on-site visits the team must use the information that they gathered to corroborate the statements and views expressed in the self-study, and to validate the degree to which the program is meeting the standards expected of it. Since each team member may have spoken with different individuals during the on-site visit, visited different facilities, and viewed what was seen through his or her own unique set of "lenses" the team must spend a great deal of time and energy arriving at a consensual, and hopefully objective assessment of the program .

Repeating the Process

Accreditation is an iterative process. It is not a certificate for life, a one-time achievement, or a license to offer a course or program. By achieving accredited status a program is given a formal acknowledgement that a peer-review has taken place and that based upon the outcome of that review the accrediting body has expressed the degree the program complied with established, known standards -- in essence a measure of "program quality" -- by granting accredited status for a set period of time.

All programs have to resubmit applications for accreditation periodically. This is related to the fact that program staff, resources, and support may change as may the very nature of what is routinely expected of entry-level practitioners in a given discipline. Professional expectations, and thus standards are subject to review and updating; and the assurance of public safety, and program credibility is best accomplished by periodic program reassessment.

Perhaps the most difficult aspect of accreditation for both the surveyors and the programs themselves is the team's accreditation status decision. Running the gamut from accreditation denied, accreditation revoked, conditional accreditation, and full accreditation of varying durations -- typically up to six years although a few agencies may grant as much as ten years (CMA, 1996, CCNE, 1997) -- the implications both financially and in terms of program reputation are taken very seriously by programs and the institutions that fund them. The cost of undergoing accreditation needs to be weighed against the cost of opting out of it -- assuming that that is indeed an option. Considering that allied health programs in Canada and the USA have -- for the most part -- sought accreditation since the 50s, and that almost every program and specialty had bought into the process by 1971 (McTernan & Hawkins, 1972) there must be a perception by programs and their related professional associations that this is a valuable and valid process. The review of the literature revealed little evidence of any detailed study of the views of program stakeholders as they relate to the value of accreditation.

Costs and Issues

Programs that seek accreditation are faced with both direct and indirect costs. Accrediting bodies charge programs for their services, and while the charges may only just cover the actual costs incurred by the surveyors -- airfare, hotel, local travel and meals; as well as the direct administrative costs associated with the process -- these charges often costs programs between one and seven thousand dollars or more annually (Dukes, personal correspondence, December 5, 1998, and CMA, February,

2000). Programs are expected to offer an educational experience that provides students with sufficient opportunities to develop competence in a wide range of current, generic and accepted practices in their chosen field. In order for a program to provide such an environment it must have access to sufficient equipment, textbooks, journals, facilities and staff, and, where these are not available, the program must somehow find them, often having to invest funds to do so. The Association of Canadian Community Colleges (ACCC, November, 1992) recognized that acquiring and sustaining these resources may add costs to the program itself, or, to one or more of the departments associated with the program.

Assuming that the human and physical resources needed are in place, there are still a number of less obvious expenditures required. Primarily these relate to the pre-survey preparation, in short, the producing a version of the accreditation application acceptable to all of the program stakeholders. Since most accreditation survey teams are unfamiliar with the local context of the program that they are being sent to assess, it is crucial that well-organized, comprehensive and up-to-date information is provided to the team members months before the actual visit is scheduled to take place. Preparing, typing, editing, copying, collating, binding and mailing off multiple copies of these pre-survey packages consumes a great deal of time and effort and, indirectly costs the program by diverting key personnel from their regular activities. Time is also required for the authors of these applications to meet with individuals and stakeholder groups both before and during the survey. These gatherings are essential in order to gather information for the submission, ensure that the application

reflects the consensus of the stakeholders, and that all of the individuals affected by the upcoming visit receive necessary information prior to the team's arrival.

Perhaps the most difficult challenge in demonstrating the value of the accreditation process is that accreditation does not result in an immediate, concrete, quantifiable or visible product. Unlike the educational system we cannot demonstrate a higher average mark per student, an improvement in retention or student satisfaction, or a reduction in the cost-per-graduate objectively attributable to accreditation. On the other hand, accreditation has real dollar costs, and requires the expenditure of substantial time, effort and commitment on the part of the entire program. In short, the costs are clearly there and may be seen to be higher or lower depending on how one views the process; however, the benefits can be harder to demonstrate, and are often difficult to quantify.

In Redding's survey a considerable number of questions were posed regarding the cost of accreditation. Although 19 % of the respondents felt that funding issues posed a problem for the program, 69 % reported that they believed that: "...the benefits that they received were greater than the cost." (p. 4)

Regulation of Professions

Both provincial legislation, and various forms and degrees of self-regulation, regulate the licensing of health professionals in Canada (Hill et al, 1989). Diagnostic ultrasound, like magnetic resonance imaging (MRI), uses a form of electromagnetic radiation (EMR) to produce clinical images. However, unlike medical radiology, nuclear medicine and radiation therapy the form of EMR used by ultrasound and MRI

is non-ionizing and does not raise the patient, public and operator safety concerns that are associated with ionizing radiation. The importance of this distinction becomes clear when provincial legislation is reviewed. The possession, operation, and application of devices and sources capable of generating and/or emitting ionizing radiation, are regulated by acts such as Newfoundland's *Radiation Health and Safety Act* (1977), Nova Scotia's *Medical Radiation Technologist's Act* (1989) and the *Alberta Health Disciplines Act* (1981). However, in all of these acts, the regulation of ultrasound technology and its use in clinical practice is conspicuously absent. Presently the Government of Alberta is planning to pass a new act into law to govern the province's health professionals -- *Bill 22, The Health Professions Act* (1999). As well as continuing to restrict the use of ionizing radiation, this new legislation specifies that the ordering or application of non-ionizing radiation for the purposes of imaging, or for any other application to the fetus, is a "restricted activity". It is noteworthy that although the application of ultrasound is recognized as a restricted activity, no reference is made to the regulation of, or training and licensing of, ultrasound professionals. The *Health Professions Act* passed third reading on May 18, 1999.

Self-regulation of Diagnostic Sonographers

According to the January 1998 issue of *Interface* -- CSDMS's official journal --

> ...there are 1,522 diagnostic ultrasound technologists presently registered in Canada under the Canadian Society of Diagnostic Medical Sonographers. The CSDMS was founded in 1981 and granted its "Letters Patent" by the Deputy Registrar General of Canada on September 30, 1981. The Society was directed to establish "...standards for accreditation of educational programs in

> conjunction with the CMA and preparation of a national certifying examination in diagnostic ultrasound" (CSDMS Bylaws, 1994, I, p. 1).

The Bylaws gave the Society a number of specific powers and duties, including the following :

> To establish qualifications for membership in the Society.
> To establish policies regarding the professional status, legislative activity and the general welfare of its members.
> To initiate and oversee educational programs.
> To seek liaison with organizations which have similar purposes. (CSDMS Bylaws, 1994, III, p. 4)

The CSDMS has acted upon these directives and described itself in a recent issue of *Interface* as follows:

> ... a society dedicated to the enhancement of patient care by promoting the science of Diagnostic Medical Ultrasound. The Society has established standards of education and training and promotes continuing education for its members. The Society has adopted as its certifying examinations, the American Registry of Diagnostic Medical Sonographers (ARDMS) examinations. (1998, 16, 1, p. 24)

Clearly the CSDMS has been given substantial control over its own evolution. In a recently published letter to the editor *Interface* (June 1998, p. 6) an ultrasound instructor from Calgary identified a number of challenges facing the field. Davies pointed to the lack of standardized education across Canada for ultrasound technologists, and the absence of the profession being included in the *Alberta Health Professions Act*. In her letter she contended that these were real threats to the profession, and its ability to maintain a separate identity and assure that its ongoing practice will be restricted to appropriately educated practitioners. She also acknowledged the importance of the *CSDMS National Competency Profiles* recently approved by the CCA (April 28, 1998) and adopted by the Society but also asked:

"...does every working site implement these standards?" The distinction between self-regulation and legislation becomes quite evident in such situations (Hill et al, 1989). While self-regulation works well when those being regulated comply willingly, legislation has the added benefit of the force of law. Although the CSDMS was given the right within its Bylaws to mandate accreditation as the standard required to access the certification examinations, the Society effective waived that same right by adopting the ARDMS examinations as the certification process for Canadian practitioners. Since the accreditation process itself can be seen as a form of self-regulation, then those ultrasound programs that have chosen to participate have effectively opted for a voluntary form of self-regulation beyond the requirements of their own professional body -- the CSDMS.

A Conceptual Model of Accreditation

In 1992 the Association of Canadian Community Colleges (ACCC) proposed a useful model for viewing accreditation by recognizing the interrelationships among government, the postsecondary institutions, and the professional societies. The ACCC suggested that accreditation exists within a "Triad Relationship" (p.2) and that each of the three groups mentioned above had specific roles and expectations related to the accreditation process. This model was further developed to identify the various roles and responsibilities for each of the three member categories of the triad. The proposed roles and responsibilities were remarkably consistent with those identified by the CMA Committee on Conjoint Accreditation's discussion paper: *Roles of Conjoint*

Accreditation Bodies, National Certification Bodies and Provincial Regulatory Bodies in the Conjoint Accreditation Process (1997). The soundness of this model and the responsibilities and roles it identifies are well supported by the literature review.

Both the CMA and the ACCC acknowledged that although the various professional associations control access to professional credentials in the disciplines that they represent, they are only able to do so because the government granted them that right in the legislation under which each association was incorporated. In order to access the examinations leading to the credentials offered by the professional associations, training programs must satisfy a variety of conditions set by them. In Canada virtually every professional association in the allied health disciplines requires programs to be accredited in order for their graduates to access the certification -- credentialling -- examinations that they offer. These relationships were incorporated into the conceptual framework that I used for this study.

Morse and Field (1995) defined a conceptual framework as, "A theoretical model developed to show relationships between constructs. It is often used in qualitative research for the identification of variables" (p.241). This study was guided by the conceptual model as Figure 2.1 on page 31. This model illustrates the links present between the accreditation body, the professions and programs; and the influence that government has over them all. The inter-relationships illustrated by the conceptual model resonated well with the findings of the literature review, and were useful in identifying themes and issues which were often implied rather than explicit.

In all but two instances the linkages identified by the conceptual model are shown as double-headed arrows. The use of two-headed arrows indicates that the author feels

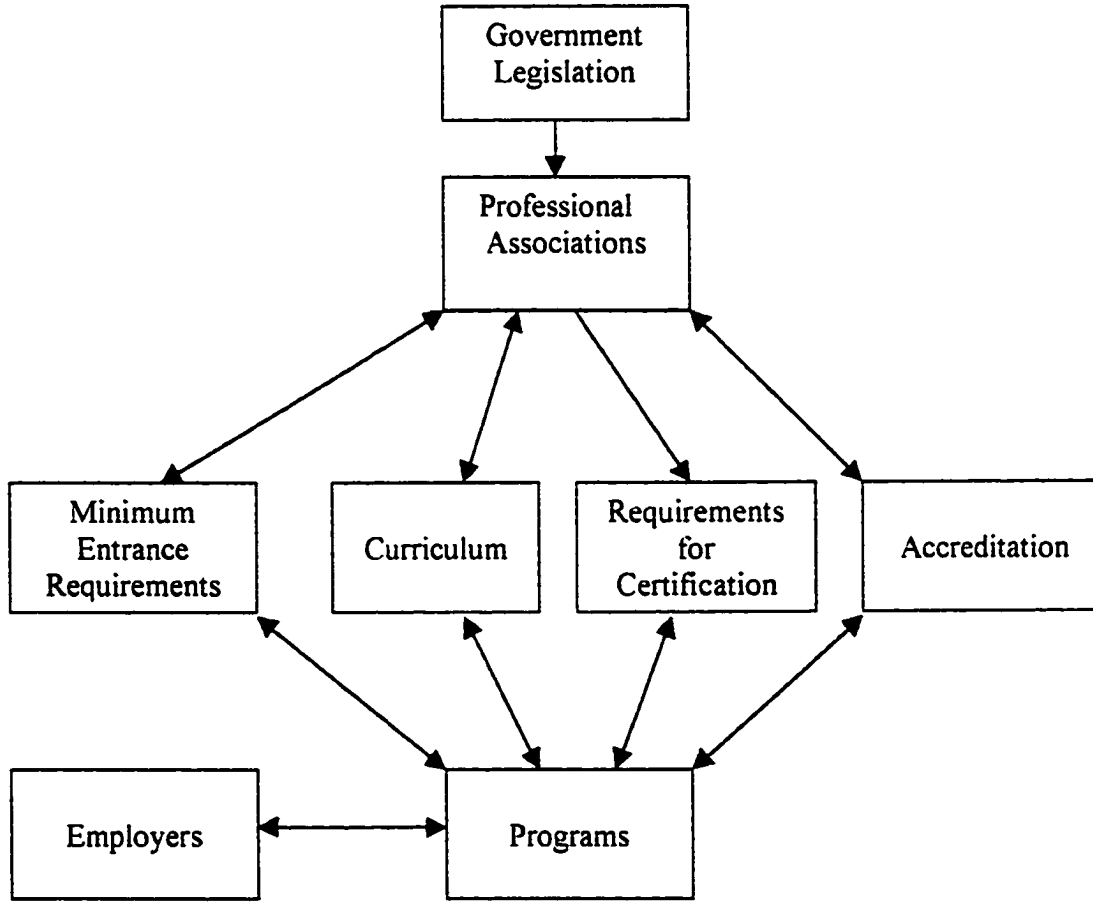

Figure 2.1. Conceptual model of the accreditation process

that the relationship is a collegial one where decisions are arrived at by negotiation and consensus rather than being imposed on one body by another.

The single headed arrows flowing from the box labeled "Government Legislation" to "Professional Associations"; and from "Professional Associations" to "Requirements for Certification" are meant to emphasize the control wielded by government over the professional associations, and, by the professional associations over access to professional credentials.

Summary

There was very little current, Canadian literature relating to the accreditation of programs in the allied health disciplines. While there was a significant study produced for the CMA by Redding and Associates in 1992, it assessed an accreditation process no longer in place, and did not provide a rich description of the views held by those who responded to the questionnaire.

The focus of this study was on the voluntary participation of programs in diagnostic ultrasound, and although the literature review was unable to find any work that directly addressed this area, it did provide support for the conceptual framework used by the author. The literature was remarkably consistent in how it described accreditation, and in the way that it portrayed the process and major issues related to the process. In particular the themes that emerged from the literature review were helpful in designing the interview guides and in analyzing the interview data. These included -- standards, quality control, self-evaluation, peer review, validation of findings, on-site visits, cost versus benefits and accreditation outcomes.

CHAPTER 3

RESEARCH METHOD

Design and Rationale

In order to adequately address the major research question -- "Why have four of Canada's eight diagnostic ultrasound programs voluntarily enrolled in the accreditation process of the CMA?" -- the data obtained must reflect the views and personal opinions of each of the major stakeholder groups. The use of interviews in this descriptive, exploratory study offered opportunities to gain insights into the ways in which the various key players viewed the importance of accreditation to their individual training programs.

Programs

There are eight formal training programs presently operating in Canada. The American Registry of Diagnostic Medical Sonographers (ARDMS) in their *1998 Information and Examination Application Guide* recently reported the accreditation status of these programs -- this information is from an American publication since the graduates of all eight Canadian programs in diagnostic medical sonography write the American certification examinations. According to the guide, four Canadian programs are accredited by the CMA, namely -- the Foothills Provincial General Hospital program in Calgary; the Edmonton School of Sonography in Edmonton; the Diagnostic Ultrasonography Program at the College of the North Atlantic in St. John's; and the School of Diagnostic Medical Ultrasound in Halifax. The remaining four programs in Canada are not accredited, and are located as follows -- the British

Columbia Institute of Technology in Burnaby; Mohawk College in Hamilton; the Winnipeg Health Sciences Centre, and the Michener Institute for Applied Health Sciences in Toronto. The ARDMS does not require candidates challenging their examinations to be graduates of accredited programs if they have previously completed a two year accredited program in an allied health discipline, or, if the training program that they completed is four years in length. At this time there are no equivalent Canadian examinations available. These two facts are responsible for the unusual situation where Canadian programs are not forced to attain accreditation in order for their graduates to obtain nationally portable professional credentials. As cited earlier on page 27 of the literature review, the lack of relevant provincial legislation also permits this situation to exist.

Stakeholders

In order to gather data from the four accredited programs, representatives from three different stakeholder groups were asked to participate in one-on-one interviews. These groups were made up of the clinical instructors from each of the four accredited training programs; a senior member of the administration associated with each program; and the medical advisor of each program. Table 3.1 on page 35 summarizes the individuals interviewed for this study and their affiliations.

In order to identify the individuals who were asked to constitute each of the stakeholder groups I referred to the membership of the individual program advisory committees or their equivalent. Traditionally advisory committees are composed of representatives from a range of stakeholder groups and their memberships are

Respondents Interviewed

Table 3.1

Summary of the Respondents showing the Stakeholder Group they were from, and the Accreditation Status of the program they were associated with

Stakeholder Group	Number Interviewed In Person	Number Interviewed By Telephone
Clinical Instructor	4 individuals at 4 of the 4 accredited sites	none
Medical Advisor	3 individuals at 4 of the 4 accredited sites	none
Senior Administrator	4 individuals at 4 of the 4 accredited sites	3 individuals at 3 of the 4 non-accredited sites

composed of individuals chosen by their peers to represent the field or program being served by the advisory committee. Since advisory groups are integral to program accreditation, and intimately associated with the organization of the programs they represent, selecting interview respondents from these committees was assumed to provide the names of potential study participants who were both committed to the programs and familiar with their organization and objectives.

In order to gain insights into the reasons why the other four programs chose not to seek CMA accreditation the author conducted telephone interviews with the administrators of those programs. As was the case with the one-on-one, face-to-face

interviews carried out with the stakeholders of the accredited programs, the author taped, and later personally transcribed the interviews.

A total of 14 interviews were conducted. The program administrator of one of the non-accredited programs was unwilling to participate in the study, and the medical advisor of one of the accredited programs was unavailable for an interview. Upon arriving at one of the accredited programs I was informed that the only individual who the institution would allow to be audio-taped was its president. Written field notes were relied on for the interviews conducted at that one site.

Interviews

To facilitate the research process interview guides were designed on a semi-structured format for each interview. However, as the members of the three stakeholder groups were each living, to one degree or other, different realities; it seemed appropriate to intentionally design the content of the interviews to best reflect the areas of interest and expertise expected for each group. As Bradburn and Sudman pointed out in 1980: "...it is one of the virtues of good interviewers that they are flexible and can appropriately adjust their behavior and speech to the situations they find themselves in"(p. 172). The interviews were all carried out by the author in order ensure that each session was as similar as possible to the others. There were four interview guides, each one having a slightly different focus, but all being based to a substantial degree upon the same research questions. The reason for these "tailored" interview guides was to focus on the particular area of expertise and/or influence of the stakeholder groups being interviewed.

Clearly the interview questions themselves should function as triggers to initiate discussion while also helping to maintain focus during the sessions, however, the degree to which these two purposes were evident depended on how well the questions resonated for the individuals being interviewed. Questions that resonate poorly have the potential for causing the subjects to see the questions as being ambiguous, or confusing, and may make the researcher appear unfamiliar with the topic. While poorly phrased questions can never be totally avoided, careful planning and design can minimize their occurrence and impact. In order to make these unfortunate occurrences less likely each of the interview guides were pilot-tested using similar subjects drawn from similar programs outside of those which were included in the actual research.

Pilot Study

Once draft versions of the interview guides were completed I approached two colleagues who taught programs in the medical radiation technologies and asked them to participate in a pilot study of the guides. These individuals were not medical sonographers, and although their responses were audio-taped, their comments were not included in the data used to produce this thesis. The major focus of the pilot study was to clarify the wording of the questions. As Belson (1981) warned: "A question may be wrongly interpreted if it has in it difficult words or words which mean different things to different people" (p. 384). Even though the test subjects were not sonographers they were familiar with the CMA accreditation process and had both undergone accreditation visits in the past. Since the CMA's accreditation process is

not discipline specific, and since the terminology used by the CCA is consistent across the fields that its teams visit, I felt that this approach to pilot testing the interview guides was generalizable to the individuals whom I intended to interview for my data collection. After transcribing and reviewing the two audio-taped interviews, I added a number of probes to the interview guides, and made a few minor revisions to the wording of a number of questions that had not been as clear to the respondents as I had intended them to be. The pilot testing also revealed that one of the two tape recorders that I had intended to use was incapable of producing an audio-tape that was clear enough for transcription purposes. As a result of this I purchased a new audio-tape recorder designed for taping conversations in a variety of surroundings.

Interview design

Notwithstanding the intent to use semi-structured interviews, it was recognized from the outset that some flexibility was needed in order to allow for the inevitable adjustments and changes in direction that come from unexpected answers and from unanticipated information offered by those being interviewed. To appear inflexible or to attempt to "direct" those being interviewed along some predetermined path can very quickly alienate the subject and may hide the very information being sought. Glesne and Peshkin (1992, p. 92) pointed out that qualitative inquiry is characterized by using the perceptions that you gather to form a picture that represents the "native's point of view". The interview questions can only provide the insights into the world of the "native" when they are used as an invitation to

discussion, and when they provide a rough guide to where the researcher would like to travel but no instruction as to how or when to get there. The acknowledged inevitability of taking these "side-trips" during interviews was seen more as an opportunity than a liability since these unplanned occurrences may offer insights into the interests, interpretations, and values of the subjects. Without allowing for, and even looking forward to such events, the interviews could end up providing only predictable data, shallow bland descriptions, and superficial insights.

Interview Data Management

Data obtained through interviews can be recorded in a variety of ways. Since I was interested in obtaining detailed responses from each of three stakeholder groups from eight different programs in six provinces I used audio recording and field notes. While the field notes were usually used to support the audio-taped data, they had to take the place of the audio-tapes at one site as I was not permitted to record my interviews there.

In order to establish a level of trust between myself and the individuals I interviewed, I sent a printed copy of the research questions to each interviewee two weeks before the actual interview. This approach also allowed time for the interviewees to consider their views on accreditation prior to the actual interview sessions and may have helped to produce richer, more detailed responses. All of the recorded interviews were transcribed by the author following the completion of the sessions. The final analysis of the interviews focussed on discovering consistencies or differences of opinion both within and between stakeholder groups, and within and

between program models. The degree to which such consistencies or differences existed determined to a great extent the study's trustworthyness.

Other Sources of Data

I reviewed a variety of program documents in order to compare the programs' published views with those revealed by the individuals interviewed. Specifically I perused current copies of the information supplied to program applicants, published program profiles and current information found on websites maintained by the hospitals, universities and institutes affiliated with the training programs.

Assumptions

The major assumption of the study was that the four accredited programs and their major stakeholder saw the accreditation process as a worthwhile undertaking that added value, prestige and quality to the program and their graduates.

With regards to those programs which were not accredited the author assumed that they did not see accreditation as being justifiable on a cost/benefit basis. However, one program decided to apply for accredited status in January 2000 due to a change in its context that may have caused its program personnel to alter their view of the process.

Finally it was assumed that the stakeholders were knowledgeable about the accreditation process and that they would be willing to participate in the interviews in an open and honest fashion.

Delimitations

The study only investigated the opinions of the programs in diagnostic ultrasound in Canada. This delimited the study to the eight programs currently offered in Canada. Since diagnostic ultrasound is not regulated in the provinces where these programs are sited, and as the certification process used by diagnostic medical sonographers is unique among the other medical radiation technologies, the findings will not necessarily be applicable or generalizable to the remaining medical radiation professions, or to other programs in the allied health disciplines.

Limitations

The study involved one-on-one interviews with 11 of 12 individuals from the four accredited programs, telephone interviews with the program administrators of three of the four non-accredited programs and a review of documents and publications. While it is believed that the respondents were key decision makers for these programs it is also acknowledged that this was a small group which may or may not provide an accurate description of the views of the programs in general.

A further limitation was that the researcher had to rely heavily on the content of the one-time interviews since distance and limited access to the stakeholders made follow-up sessions difficult.

Data Analysis

In order to sort and analyze the interview data I undertook a methodical five step process. First I became familiar with the content by listening the tapes as soon as possible following each of the interview sessions. Having done this I typed out each

of the interviews exactly as they were recorded -- with the exception of using a random two letter code to identify each individual who had been interviewed, and removing any contextual clues as to the interviewee and the program that he or she was affiliated with.

The second step of the process involved printing out a copy of each of the transcriptions in large print, and double spaced. These were then read three times, the first time I looked for errors in the transcriptions or problems with formatting. Once these had been resolved I reread the material and highlighted any areas that were relevant to the study's research questions, or that offered interesting insights or initiated further questions.

The third portion of my approach to the interview data involved rereading the material with an emphasis of the areas and comments highlighted earlier. At this point I stopped and sorted each comment or observation into a general category -- "Views of the Meaning of Accreditation; Benefits Attributed to the Accreditation Process; Disadvantages Attributed to the Accreditation Process; Reasons Given for Being an Accredited Program; Reasons Given for Not Being Accredited; Substitutes for Accreditation; and, Other Issues Identified During the Interviews." Once I had decided on the general category for a highlighted comment it was cut out of the transcript and placed in a cardboard box that was labeled with the category's "name." Each of the segments of paper had the interviewee's two letter code written on it so that I could track who said what. At the end of this stage I had identified a total of

seven broad categories and had placed all of the selected comments and insights into one of the seven boxes.

As the number of items in each of the categories was quite large I went through each comment word-by-word looking for insights into how the comments in each category could be logically divided into smaller sections. As I read through the material emergent themes began to appear and I sorted the data into file folders that I labeled according to the general category and the issues or themes within each. Ultimately this sorting process yielded a total of 33 individual file folders containing all of the highlighted material that I had cut out from the copies of the typed interview transcripts. This completed the fourth phase of my data sorting.

Now that the data was sorted I took each individual folder, read through the comments in it, and then reread the original copies of the interviews. My intent was to see if there was any further material revealed during the interviews that could offer further insights for the issue covered by the folder's contents. Whenever I discovered that I had missed useful material I copied the section and cut the portion that I had identified out, adding it to the folder.

Trustworthiness of Interview Data

The degree to which the data obtained through the interview process can be claimed to be trustworthy depends on two major concerns being satisfied. First, was what was asked by the author the same as what was heard by the interviewees? Second, was what the author reported a fair representation of what was said by these same individuals?

By pilot testing the interview guides, and providing the interview participants with a written summary of the research questions that would form the basis of the interviews, I hoped to minimize concerns related to misinterpretation of the interview questions. Belson (1981) cautioned interviewers to "Avoid the use of words that are not the usual working tools of the respondent" (p. 389). I believe that my responsibilities coordinating the clinical portion of Edmonton's nuclear medicine program since 1977; being involved with accreditation as both a recipient and survey team member since that time; and being retained by the CSDMS to carry out two major national surveys (1995-98) ensured that I was comfortable with the language and culture of the participants. Richardson et al (1965) stated that:

> It is relatively rare, however, for an interviewer to have valid external evidence with which to compare the response material. ...In such situations, the interviewer must rely on evidence within the interview. If the various overlapping, related, or repetitious pieces of information hang together and there are no inconsistencies, the interviewer has some basis for believing that the information is valid. Indeed, many interview schedules include questions designed not to elicit information but to provide a validity check on other responses (p. 131).

I relied on open-ended questions designed to keep the conversation on topic without being directive. Such an approach was meant to encourage the respondents to answer freely and at length, providing a broad and deep response. Obtaining detailed and complete answers also provided greater opportunities to check for consistency within the interviews.

In order to assure that what was reported was consistent with what respondents felt they said, I asked for clarification during the interview sessions,

periodically summarized what I understand to have been said, and echoed portions of responses where answers seem incomplete or unclear. I offered to provide the respondents with a written transcript of the interview in order to allow them to provide additional feedback or correction, however, none of the participants accepted the offer. As a further check I mailed a copy of the chapter on data analysis with their personal two letter code to four of the study's respondents. This chapter included my comments and interpretation of what they said. I asked that each of these individuals review the material and send me a note by faxsimile verifying that my understanding was consistent with their own, or notifying me that I had misinterpreted their intent. Although none responded in writing, three of the four verbally informed me that they were satisfied that my remarks were consistent with what they had meant during the interviews.

Ethical considerations

Given the small number of key individuals involved in diagnostic ultrasound education in Canada, and the delimitations of the study, it was a challenge to ensure confidentiality and anonymity. While it was possible to use generic terms when describing findings from various stakeholder groups, it was hard to remove contextual information from some of the responses given during the interviews. These contextual clues might identify the program and certain participants to individuals who are intimately familiar with the senior ultrasound community in Canada. To minimize the risk of this occurring I referred to the study participants by a random, two letter code or pseudonym, the study sites were never identified, and any site-specific contextual

material or references were avoided during the writing of this thesis, or purged during editing.

The study complies with the requirements specified by the University Standards for the Protection of Human Research Participants (1991), a guide approved in 1991 by both the Graduate Faculties Council and Board of Governors of the University of Alberta. Before the interviews, each participant received a letter clarifying the intended use of the data obtained from the sessions, the actions that would be taken to protect the anonymity of participants, and an assurance that copies of the researcher's conclusions, recommendations and suggestions for further research would be forwarded to the interviewees -- should they so wish. I did all of my own transcriptions of the interview audio-tapes and was thus be able to assure a greater level of security and confidentiality than would be true if the tapes were released to a an outside agent. Further, only the author handled, or listened to the audio-tapes.

Summary

The author carried out 14 interviews in order to gather data to explore the study's major research question -- "Why have four of Canada's eight diagnostic ultrasound programs voluntarily enrolled in the accreditation process of the CMA?" 12 of the 14 interviews were audio-taped, two of them were reported using written field notes. The interviews were semi-structured and utilized interview guides that were first pilot-tested on two clinical instructors from a medical radiation program other than sonography. The results of the pilot-tests were not included in the data

analysis. The interview data were analyzed using a methodical five step process described on pages 42 and 43. This study was delimited to diagnostic sonography programs in Canada, and was limited to the data obtained from a variety of documents, and single interviews of 14 of the 16 individuals selected by the author for inclusion in this study.

CHAPTER 4

DESCRIPTION OF THE PROGRAMS

Each of the eight programs studied, and the four visited were unique and distinct in many ways. In order to analyze the data obtained from the various participants in the study, the author referred to published current information and program descriptions in an effort to relate comments from the various stakeholders to the context in which each program operated. The following brief descriptions provide a basic overview of Canada's eight formal programs in diagnostic medical sonography. This information is readily available for any individual planning to train in ultrasound at these facilities.

British Columbia Institute of Technology (BCIT) Program in Diagnostic Medical Sonography

This post-diploma program is offered by the institute's School of Health Sciences, and is 12 months in length. Students spend the first four months at the institute focusing on didactic material and some introductory clinical experiences. The remaining eight months of the course are spent gaining clinical experience in the sonography departments of one or more of the program's eight cooperating hospitals. Students entering the BCIT program must have successfully completed a two year allied health program such as nuclear medicine or radiography, or hold a Bachelor of Science in -- "...an appropriate health related field and with an emphasis on human anatomy and physiology" (BCIT, 2000). This is presently a non-accredited program with two identified clinical instructors.

Calgary Foothills Hospital Program in Diagnostic Medical Sonography

This hospital-based, accredited program, is sited at the Foothills Hospital, Calgary's largest health care complex, and utilizes facilities there, and at two other local hospitals. Students must have successfully completed previous training -- "...in a nationally recognized training program in one of the allied health fields. The training program must have been a minimum of two years in duration." (CRHA, 1999) -- in order to be considered for a position in the sonography program. This is a fourteen month long accredited program that is under the direction of a single clinical instructor.

Edmonton School of Sonography

This is an accredited program funded and supported by the Capital Health Region -- "...Canada's largest integrated academic health region" (CHA Website, December 1999). The "School of Sonography" utilizes the clinical resources of five local hospitals and four private clinics to provide clinical experience to its students during the 14 months of the program. Students are required to have at minimum completed a "nationally recognized" two year allied health program in order to be considered for a place in the course. The program is supported by two clinical instructors or "co-coordinators."

Winnipeg Health Sciences Centre Program in Diagnostic Medical Sonography

Sited at the Winnipeg Health Sciences Centre, this program is not presently, nor has it previously been, accredited. Students gain their clinical experience at Winnipeg's Health Sciences Centre and the St. Boniface Hospital under the guidance

of this program's single clinical instructor. Access to this second discipline offering is the same as the two previously described programs -- applicants must have previously completed a two year allied health program before applying. The Winnipeg program is twelve months in length and has been available since 1973.

Michener Institute Program in Diagnostic Medical Sonography

Initially fully accredited -- Michener held this status for five years, but has not reapplied for accreditation since -- the program is affiliated with numerous private and public sonography facilities throughout Toronto and Ontario. Unlike other typical, cooperative ventures between institutes and hospitals, in the case of its accredited programs Michener Institute pays all of the accreditation costs, including those for all of the clinical sites. Three instructional staff are identified for this program which: "...commences with a two-month home study of the Anatomy, Physiology, and Cross Sectional Anatomy for Ultrasonographers course in July and August." (Michener, 2000)

Mohawk College Program in Diagnostic Medical Sonography

The college operates two programs -- a one year, second discipline program, and a three year first discipline program for students coming straight from high school or those without a previous health care background. Although these programs are not presently accredited, Mohawk recently decided to apply for accreditation for both and is scheduled for a site visit by the CCA in January of 2000. It is relevant to note that the ARDMS examinations are not available to graduates of a three year first discipline program unless that program is accredited. The Mohawk program lists two

instructors and is affiliated with 69 different sonography departments sited in both hospitals and private clinics.

QE II Health Sciences Centre Program in Diagnostic Medical Sonography

The sonography program at the QE II is an accredited program with two clinical instructors. In September 1999 it changed from a hospital-based, second discipline model to an integrated four year Bachelor of Health Science (BHSc) program through Dalhousie University -- one of six professional streams within the new BHSc, the others being diagnostic cytology, medical laboratory technology, nuclear medicine technology, radiological technology and respiratory therapy. The program has retained a diploma exit option with students being eligible to write the ARDMS examinations after completing three years towards their degree.

College of the North Atlantic (CONA) Program in Diagnostic Medical Sonography

Located in St. John's, Newfoundland and affiliated with four local hospitals, the program at the College of the North Atlantic is presented by a single clinical instructor. Unlike any other offering in Canada, this accredited program only accepts students from one specific background -- they must have completed a two year program in medical radiography and be registered with the CAMRT. The program is also unusual in that under the regulations of Newfoundland's Department of Education any post secondary educational program with access to a national accreditation process must apply for it, therefore unlike the other seven programs in Canada, CONA has no choice but to seek CMA accreditation.

Program Staff

As seen from the preceding program descriptions, four of the sonography programs operate with two clinical instructors. Typically these individuals divide the teaching load by specialty area so that specific subjects are assigned to each instructor. Three of the programs manage with a single instructor while one has three. It should be noted that in most cases these individuals have administrative responsibilities as well as their teaching load and that these include many activities related to committee work, the preparation of accreditation applications, and student selection and evaluation. The majority of the sonography teaching staff initially trained as medical radiographers. After working in a clinical setting as practicing sonographers they moved into their instructional roles while the programs were still in their infancy. While few of the instructors have any university education, a number of them have completed, or are in process of completing, Bachelor of Education degrees since commencing their duties as clinical instructors.

Summary

Eight programs in Canada offer formal training in diagnostic medical sonography. These all provide their graduates with access to the ARDMS examinations. While four of the programs are presently accredited and four are not, it is likely that Mohawk College will be an accredited offering early in 2000. A variety of training models are used ranging from hospital-based programs, to cooperative ventures with technical institutes, and including an undergraduate university degree option. Programs range in length from one to four years. The number of instructional

staff for each of the eight programs varies from one to three individuals. Although a few of the current teaching staff have completed, or are completing BEd degrees since they started teaching sonography, most do not have a university degree.

CHAPTER 5

DATA ANALYSIS

This study was guided by the four research questions below:

1. How do each of the stakeholder groups describe accreditation?

2. What value is placed by the stakeholder groups on the program being accredited?

3. What impact does accreditation have on the way that a program operates?

4. Why have four programs elected not to pursue accreditation?

During the review and analysis of the interview data six emergent themes were identified -- "Views of the meaning of accreditation; Benefits attributed to the accreditation process; Disadvantages attributed to the accreditation process; Reasons for being an accredited program; Reasons given for not being accredited, and; Substitutes for accreditation." Since this was a descriptive, exploratory study I chose to organize this chapter around these six themes rather than using the research questions as headings. For purposes of clarity the six themes were further subdivided into the key issues identified within each.

The purpose of this descriptive, exploratory study was to explore the reasons why four of Canada's eight programs in diagnostic medical sonography have voluntarily enrolled in the CMA's accreditation process. In order to obtain insights into this decision the author held eleven, one-on-one interviews with representatives from three stakeholder groups -- medical advisors, clinical instructors, program administrators -- from the four accredited programs; and carried out telephone

interviews with the program administrators of three of the four non-accredited programs. One-on-one interviews took place in Calgary, Edmonton, St. John's and Halifax -- all of the accredited program sites. Telephone interviews were used to gather information from three of the four non-accredited programs -- one site declined my request for their program to be included in the study.

In order to fully explore the insights and information provided by the interviewees I sorted the data into six major themes with a total of 33 sub-groupings using the methodical five step process described in Chapter 3. The order in which these themes and sub-groupings are presented has no bearing on their relative importance or relevance to this study, but is a convenient way to present the results of the interviews in a manageable fashion.

Analysis of the Data

With the exception of correcting grammar and expunging specific details and information that might enable the reader to identify places, programs or study participants, all quotations have been presented exactly as they were recorded.

Views of the Meaning of Accreditation

> How would I describe accreditation? It is a mechanism to ensure a minimum standard of competencies coming out of programs across the country to insure opportunities for portability. It's an external audit on the quality of a program to insure that it meets the professional standards. It's an opportunity for a national body to assist in the formative stages of program development. Where there aren't a lot of resources there available to them; provide that moral support if you will, advice and support if resources aren't forthcoming. (EF)

The response quoted above provides a very good summary of how the individuals interviewed by the author generally viewed and described the accreditation process.

Establishing and assuring standards. When asked what accreditation meant, the vast majority of interviewees quickly brought the concept of standards into their responses. The term *standards* was used in a variety of ways: "...department standards ... CSDMS standards ... ARDMS standards."(KY); "...a standard to which hospitals and schools comply."(LH); "... standard of practice in patient care." (LH); and, "... professional standards."(EF) As the interview data was sorted and analyzed it became clear that achieving and maintaining established standards was associated with quality, competence and safety.

Throughout the interviews there was a sense that accreditation provided proof that standards were met or exceeded, and that this proof was particularly credible since it came from a peer evaluation external to the program, and reflected national standards and expectations rather than local ones: "Accreditation allows people from outside of the profession to at least know that a program is meeting specific standards." (HG), and, "...accreditation is an agency, an external agency which will indicate that the program that we have meets the standard that has been set by our profession." (MW)

Many of the respondents related the accreditation process to assurance that standards had been met: "...here are the standards that we all work towards, and

accreditation gives witness to them being achieved, and we can reasonably assume that the graduates have got them all"(AH).

However, there were a number of individuals who freely added that while accreditation verified that a program had met set standards, it did not necessarily follow that a program that was not accredited could not meet or exceed those same standards: "...even a non-accredited program may be at the same or a higher standard, they just haven't bought into the process" (LH). The value of the accreditation process was seen to be its ability to remove doubt as programs that were not accredited may or may not be meeting standards and offering students a well-rounded education in ultrasound: "Well I think that standards being met is assured in an accredited program ...and I think that in a non-accredited program you're at the mercy of whoever the instructor is" (HG). However, programs which were accredited have already proven their worth:"Unless there is some external review of your program you really don't know" (AH), and "...there are lots of instructors who are very diligent and their standards are very high ... and perhaps they meet all of the standards but there is no way to ensure that unless you have an accreditation review"(HG).

The existence of standards was reported to be a mechanism to link the profession, as it is practiced nationally, to the programs and their curricula. Accreditation was seen as a method to assure that the programs were meeting all of the relevant standards and thereby providing their students with an education that was: credible, current and comprehensive. As LH pointed out when asked about

standards: "It's how we practice, it's the type of graduate that will come out of our program."

The philosophy behind the process. Some of the individuals interviewed had been accredited, and/or participated as members of an accreditation survey team in the past. Some had no experience whatsoever with the process, while two had extensive experience as chairs of various national accreditation committees. Those individuals who had experience with accreditation, were all familiar with the CMA's old accreditation process as well as with the new process (CMA, July, 1996).

Notwithstanding the range of background knowledge that the respondents brought to the interviews, there was a remarkably consistent picture of how they collectively felt accreditation surveys should be run. In essence their thoughts and insights can be thought of as a philosophy for accreditation surveys. Since the process is meant to evaluate a training program, it was seen as important that on-site survey team were made up of individuals who were knowledgeable of both the accreditation process and the field of sonography. Clearly to assure that these latter concerns were satisfied the membership of the survey team was reported to be a critical feature of an acceptable, meaningful accreditation visit. Ideal accreditors were described as being -- "...that true arms length, true non-biased objective presence" (KY). This became all the more important when tied to frequent references to the need for accreditation to reflect national rather than local standards and expectations: "It's a process whereby the program can be assessed on a national barometer or measuring scale rather than a program meeting its own local needs." (KY), and "...how our program

or our environment measures in relation to the rest of the country. I see it as a positive thing" (LH).

Although respondents reported that accreditation's ability to bring a national "credential" was valued, this did not prevent programs from assuring that local or provincial needs were considered: "... people are training the sonographers to meet the needs of their provinces" (OF). Although respondents indicated that they valued being assessed against a nationally recognized set of standards they did not want the process to be prescriptive or restrictive in terms of how a particular program went about satisfying those standards.

The on-site survey relies heavily on interviews with various stakeholders, and stakeholder groups. Respondents identified two concerns related to this aspect of the on-site visits; these related to the selection of the interviewees, and to that of the interviewers. In order for useful information to be obtained in the relatively short time available during these visits, SH felt that interviewing the students should be given priority: "...lots of answers come from the students...I believe that you should have a broad database from the students." This resonated well with comments made by a number of individuals who saw the primary responsibility and concern of programs as being the students, their wellbeing and the quality of education that they received.

Of no less concern was the selection of the team member(s) chosen to interview the students or other stakeholders. Recognizing the variety of roles and personnel within a program, as well as the range of backgrounds and expertise on any given survey team, LH pointed out the value of carefully matching the skills of the

team with the composition of the stakeholders being questioned: "...I like the idea of having people who are in the field with people who are exposed to the environment being interviewed." And, "...the clinical instructor would be focussing more on the student outcome. The medical advisor I would think would have a foot planted on the academic side and the other one in the clinical environment in terms of patient care."

Accreditation teams from the CMA's CCA have traditionally been made up of volunteer members from outside the CMA, and one staff member from the CCA -- commonly referred to as the "secretariat". With the changes made and/or proposed in 1996 by the CMA to the accreditation process, there was a de-emphasizing of the role of the secretariat. A number of those interviewed expressed concern that the secretariat may ultimately drop out of the survey teams: "I've heard something about the secretariat not going on some of the teams ...but my personal opinion is that they guarantee that the process will be done according to the highest standards, and consistently with uniformity" (KY).

The role of the secretariat on survey teams was valued because that individual could not only ensure uniformity from one team to the next but also brought the CMA's presence to the visits, helped to keep teams on task and track, and provided the teams with the services of an individual who could be seen as a "professional accreditor."

The new process and its impact on programs. In 1992 the 34 national professional organizations participating as partners in the conjoint accreditation process accepted a new set of statements which redefined its: "Mission, Values,

Philosophy and Operating Principles." (CMA, 1991) The CMA used these statements, the Redding Report, and member feedback to make a series of changes to the *Requirements for Accreditation* that formed the: "...basis of a new approach for accreditation of educational programs in designated health science professions" (CMA, April 1999). The intent of these changes was to –

> ...continue to strive for high quality patient care by maintaining national educational standards for designated health professionals. The new approach will attempt to be responsive to the rapid changes occurring in health care and education, and therefore will strive to achieve the following goals: (CMA, April 1999)

The document continues and describes how the new process will be more flexible, less prescriptive and will assess programs as a whole rather than as separate components. It goes on to stress the need for programs to participate in continuous quality improvement through internal self-evaluation, with accreditation acting as a validator of these processes. Finally the document states that the CCA will strive to reduce accreditation costs by modifying the way that accreditation is applied for and that surveys are performed.

Although the new accreditation process has only been in place officially since January of 1999, the CMA has regularly been providing the programs it accredits with detailed information and requesting feedback regarding the new process since ~1995. The very public way that the CMA went about designing and instituting the new process probably explains the high level of awareness and understanding revealed during the interviews. HG's comments were quite representative:

> I like the new process of accreditation. I think that there is more flexibility in it, that it's not as prescriptive but it does provide a very encompassing look at

> a program. It doesn't say: "You have to do it a specific way" anymore, but all of the elements are there. So if I had to say anything I would say that I like the new process of accreditation better than the old.

Respondents expressed frustration with the old process and pointed out that with the recent changes they no longer felt that they were being asked to guess what was expected of the program: "...their goals are quite clear, and I don't think those goals were so well known before, there was this always "Are we pleasing them?"" (AH).

The move to outcome-based evaluation seems to be the key to the high level of support for the new process by those interviewed. LH felt that this approach was: "...more in the spirit of the law than the word of the law," while KY added: "... because the new process is based on outcomes rather than a prescriptive set of requirements I think the last "limitative" kind of disadvantage is disappearing".

The current approach was seen as being: "...more of self-evaluation," (OF) and, "...not written in stone, it is meant to be as a guideline" (LH). Yet there was still concern expressed that the CMA needs to maintain a physical presence on survey teams in order to deal with conflicts: "The thought that there's a secretariat person on each team takes away I think any potential for conflict of interest with the practitioners that are on the team," (KY) and, "At least the secretariat cues people in and says "No, you're going down the wrong road"" (OF). The implication of this would appear to be that no matter how clearly the guidelines are written and presented, or how carefully team members were selected, there will always be the potential for differences of interpretation and issues related to bias and subjectivity.

As GU stated when asked how a survey team should go about doing a survey: "They should approach programs with "I'm going to find every way possible to make sure that they are accredited, I'm not going in to see how I can scuttle the program"." The comments from GU came from recollections of a very unpleasant experience that occurred when a survey team assessing GU's program appeared determined to take the opposite approach

A final aspect related to the new process was that of cost. As a result of the analysis of questionnaires sent out by the CMA, a decision was made to change from the old method of visiting every single training site associated with a given program. Instead, the CMA decided to have the accreditation survey teams go to a central facility visiting only departments that had been previously identified by the team as needing individual visits to clarify concerns brought out by the team's preview of the accreditation application documents.

Some programs use a large number of clinical sites that are geographically scattered over a large area. In order to visit all of these locations survey teams used to expend enormous amounts of time and money. The new process offers very substantial cost savings for such programs and was cited by a number of respondents as a major factor in considering whether or not a particular program might seek accreditation. As EF reported: "I will be assessing the cost-benefit analysis of the new accreditation process and seeing whether or not there have been sufficient changes."

A seal of approval. In asking those interviewed to describe what accreditation meant to them it was seen as a: "Good Housekeeping Seal of Approval," (SH) and, "...a little stamp that says we have a good program" (AH). SH went on to add:

> The questions and the process are usually fairly good at ferreting out the things that are wrong with the program, and the things that are right. So even though I don't like the process of accreditation because it's artificial I don't think there's any better way to do it necessarily than has been done, at least not something that comes to mind right away. And it's something that's good for all the programs.

The value of having a "Seal of Approval" seemed to be based on the fact that the process was an external peer process which attested to the currency, comprehensiveness and quality of a program -- "...the students who graduate are well trained and well rounded in everything that they are supposed to do" (SH). Respondents felt that accreditation made programs accountable to a higher authority and instilled a little guilt to ensure that they did the right things.

The public's understanding of accreditation. One common practice for accredited programs is to prominently display their accreditation certificates in a very public area of their facility. It would seem that displaying these documents in clear view of the general public it is to show all and sundry that the program has achieved accredited status. Whenever the question of the public's understanding of accreditation was posed to those interviewed for this study, the response was invariably: "The public has no idea what accreditation means."

EF explained the reason for displaying the certificates by stating that the public don't understand what accreditation means but:

> They see it as a Good Housekeeping Seal of Approval, but I think that's what the typical layman understands. I think the public are very clear on wanting to know that this person who is doing an examination or treatment on them actually has a credential related to that specialty

EF's view was that the accreditation of a program was seen by the public as a document verifying that the practitioners held credentials in the discipline, an assurance of quality. This latter perception meshed well with a comment made by AH with regard to the reason for displaying accreditation certificates: "...hey guys (the public) with all of our financial problems and everything else, here's what we are doing to try and maintain a certain level of quality".

Should accreditation be voluntary. Notwithstanding the consensus that the new accreditation process was better because it was not so prescriptive, the majority of respondents still felt that accreditation should be mandatory for programs in sonography. Three major reasons were cited as justification for mandating accreditation were -- ensuring a national standard of training for students; maintaining credibility within the allied health disciplines and being consistent with programs in other specialties. These contentions were borne out by HG: "I think it should be mandatory. I don't think there should be a choice, I don't see that it's any different from the other disciplines." Similarly, KY said: "...I think with mandatory accreditation the students are assured of a national training level and the profession gains more credibility in the eyes of other professions that are also using a mandatory accreditation pathway".

The upcoming accreditation of Mohawk College -- a major sonography program with large student numbers -- may soon reduce the number of non-accredited

Canadian sonography programs from four to three, with one of those currently being in the process of reevaluating its decision to remain non-accredited (personal communication). Clearly there is a high level of support for mandatory accreditation of these programs. Another issue that came up during the interviews was a need for graduates whose competence and abilities were consistent and predictable. LR, a respondent familiar with a variety of accredited programs and committees, stated:

> When you look at the huge variability that's turned out from non-accredited programs in mammography you can, I think, draw the same analogy to training programs in ultrasound. So you know, I think that the benefit far outweighs the cost of accreditation.

Many of the respondents had extensive clinical experiences in fields other than sonography -- this was primarily a result of the second discipline approach to training that is commonly used in sonography. When asked about accreditation and their views on the process the interviewees often illustrated their points by recalling events that occurred while they were working in other health fields.

Benefits Attributed to the Accreditation Process

Providing protection to the students. *The Principles and Requirements for Accreditation* (CMA, April 1999) are very clear regarding what programs are required to do for students: "...the student is the focus of the educational process," and, "...the program supports the students' educational interests and protects their rights." Ensuring student safety and safe working practices is on of the critical criteria identified by the new process -- unless the critical criteria are satisfied accreditation is not granted.

KY provided detailed insights into the links between accreditation and the protection of students. While the other interviewees were less specific when discussing this area, they did frequently make brief references to accreditation's role in assuring that the students were treated fairly, appropriately and openly.

Two other student related areas were brought up on a number of occasions -- program quality, currency and comprehensiveness; and assurance that programs do not focus solely on local needs.

As KY stated:

> The prime benefit for me when I think of a program being accredited is there's an assurance for me that student well-being is a priority because I know that the accreditation process revolves around the student and the needs of the student, and the need of that student wanting to become an entry-level graduate. There are mechanisms built into the process that assure that well-being of the client of the program -- which is the student. So what I like most about being accredited is the students are looked after, and, as a program director, I have documentation and accreditation requirements that help me pursue that well-being for our students.

Some respondents commented that at any time there is the risk, real or perceived, that students enrolled in programs in the allied health disciplines might be used more as "unit-producing" technologists than as students in the process of mastering new concepts and competencies. In times of downsizing, staff shortages and increased patient loads, this risk is greater. Accreditation provides some measure of protection against this happening -- "...we're being asked to train as many people as we can, and why can't we train in that clinic, and in this clinic and in that clinic? And when we point out that there are ingredients missing from those sites we have an accreditation requirement that can back that up" (KY).

An extension of protecting students from being seen as "working technologists" is that they challenge examinations that are national in their scope (ARDMS in the case of sonography) and which require a broader knowledge base than might be provided by local practices: "One great thing about being accredited is knowing that you have to look at a national perspective versus a local one ... I make sure that I've done research on what happens from more of a Canadian perspective" (KY).

HG summarized the important role played by accreditation in protecting students as follows:

> If you were not accredited I don't think that you would be paying as close attention to those things that need to be in place, and I think that with accreditation and the process, I think that all of the things, committees and things that are set up ...they are there for a reason -- to benefit the student and accreditation keeps you on track ... I think that if you were not accredited those things are not as important to have in place: "Well we don't have to have student feedback you know, so why bother?" I mean why would you bother?

Ensuring ongoing quality control. The accreditation process was reported by respondents as being a form of evaluation or review that requires programs to pay ongoing attention to the quality of the training that they offered to the students. GU saw the process as:"...a self examination so you find out how well you're doing ... what accreditation does is it makes you preview ... it makes you work towards achieving a quality program."

More than simply attesting to a program's meeting a set of standards, accreditation was seen to be an iterative process that needs to be used to monitor the program on a regular basis: "The other good thing about the accreditation process in

1999 is that it's more than ever based on a program's self-evaluation ... that has got to be proven to be ongoing so that it's on-site, on the spot, quality, a look at quality" (KY).

AH further elaborated on this by describing how being aware of the requirements of accreditation helped the program make proactive choices, evaluating decisions and needs against a known, external process: "...it was quality control and instead of me saying I need more books or this or that, accreditation will help us decide where we need to go with our program ... and before we go off in any direction let's get it evaluated."

The respondents described two major features related to quality control. First they alluded to the guidelines provided by the CCA as forming a guide or checklist against which programs could evaluated their own performance and the degree to which they were complying with national standards and expectations. HG saw accreditation as: "... one of those tools to be seen from the outside as excellence.". Second many of those interviewed spoke to the importance of having an external body validate a program's quality: "I know I put a lot into my program but here are all these other people who have reviewed it -- five other people -- and they are saying "You have done a tremendous job here!" (HG). This later point was particularly important since the programs that the author studied only had from one to three teaching staff, and these staff did not have formal training in education, as OF pointed out: "Accreditation is both feedback and peer review. It's also good for us to reflect back every so many years on what the heck we're doing."

Encouraging programs to improve. While quality control insures that a program meets standards and expectations it doesn't necessarily follow that a program will go beyond these. Accreditation requires programs to maintain a regular process of self-evaluation. The introspection provided by this identifies what is working well, where things are adequate and what components of a program need attention. But beyond these activities respondents saw the accreditation process as exerting constant pressure on programs to improve and maintain currency in the field. GU described accreditation's role in ensuring improvements in a program's overall quality by saying -- "...and maybe in some instances you already know what you need to do but accreditation gives you the incentive to make sure it gets done." Similarly OF remarked: "It makes us accountable to constantly improve on where we are so it doesn't keep us stagnant and get us complacent in where we are when everyone else is running ahead. We're always learning from each accreditation that comes." As HG pointed out: "I think that with accreditation that people welcome positive feedback, or suggestions that perhaps somebody never thought about before."

Assisting programs to grow and evolve. Having provided support to identify programs' strengths and weaknesses, and pressure to improve program quality, accreditation was also reported to play a key role in assisting programs -- both new and old -- to grow and evolve. GU described an ideal accreditation survey team as one whose approach was: "We're not here to pick on you but let's have a look and see where we can help you and what we can suggest to make the program better." While this was not always the way that respondents found the team members to

behave during accreditation surveys, it was an approach that all hoped for. The potential for the team to provide guidance was reported to being particularly important by unseasoned instructors who were in the early stages of putting together a new program:

> It was good for me at that early stage to have someone lay out: "Okay this is what we expect," and then to see how I came out because there really isn't anybody that can come in and give you a job performance thing, you know? That meant something to me, it really had no big impact on anybody else but me ... but I welcomed it because I had no idea, no idea (AH).

In discussing how on-site visits were run OF said: "A lot of it was informal, there were a lot of good tips that were given back and forth and that's a thing that we very much value in accreditation." This opinion was echoed by MW: "...maybe they'll come up with an idea that will help us to make the program work better. So I'm looking forward to that exchange of ideas," and LH who added that the on-site surveys provided an opportunity to: "...engage in a conversation around what is being done elsewhere. You know there are other good ideas out there in terms of how to operate."

However, the concept of sharing ideas and insights into how programs could be improved was not seen as a strictly one way undertaking; SH reflected the view of a survey team member by saying: "You always learn from seeing other things, whether they are doing things well or not, it would give me better insight into how we can improve our program."

Providing leverage to bring about change. Given that a program has identified where it needs to focus its attention, and assuming that it knows how it wants to

achieve its goals in pursuing improvements or change, it must often access additional resources in order to succeed in bringing its plans to a successful conclusion. Respondents frequently spoke of accreditation as being a significant source of leverage to access support for changes, for justifying additional resources or for supporting a particular stance taken by a program.

When asked how the administration viewed recommendations made by survey teams SH replied:

> The provider of the fund that provides the program has to answer to the accreditation process...If the accreditation team comes in and says that there's not enough classroom space, there's not enough equipment,...it's great leverage because I think the administration respects accreditation and if things can't be accredited, if it's provisional -- absolutely, it's great for a program and that's the one key point.

The issue of leverage was seen to be ongoing in some instances since programs that are either required to make changes following a survey, or that wish to effect major changes between surveys, are required to submit updates and reports to the CCA. OF said that the CCA's recommendations, and accreditation requirements -- "...give us the data by which we can rationalize our changes, or even go back and get what we need to get", and, "...when the crunch comes, I can use it as leverage to get what we really need and get the program up to standards. So it does carry a lot of weight."

Although the focus of this study was to look at the programs in sonographic technology, some of the benefits cited affected much wider group of individuals than the technology students. LR made this latter point very clear by explaining how

accreditation requirements were used to help to justify emergency funding to acquire additional imaging equipment for the ultrasound department:

> We're coming up for accreditation...we don't have enough equipment, we don't have any high end equipment, we're trying to train radiology residents and ultrasound technologists on second rate equipment and not getting enough scan time. And so I think accreditation is a tool that can be used; it's one of the many tools we used in this case but nonetheless it was one that we cited.

The requested equipment was approved and received. Acquiring updated imaging equipment not only improved the lot of the technologist training program, but was seen to also help the residency program, the patients and the department staff in general. And while accreditation was not the sole reason for the department getting the new devices, as AH said:

> So again, that's my leverage. I need these regardless but accreditation backs up what I need, and ... there will be some recommendations in there that will force the hand of the region to carry out certain improvements.

Exerting political pressure in support of program goals. OF, a strong supporter of the accreditation process, was concerned that in the absence of a single national accreditation process, provincial colleges -- as in "College of Medical Radiation Technologists" --, and professional societies, might try to fulfill accreditation's role. Unlike the role presently played by the CCA, OF felt that colleges would lack the national perspective while the professional society -- the CSDMS -- would lack the CCA's "at arms length perspective."

> ...and then we have societies entering into the picture and societies politicking against -- not wanting this process and wanting to do their own process and trying to discredit this process ... and then ...all of these colleges across the country wanting to do their own licensure for each province ...people aren't well informed about what the accreditation process can do for them.

Politically a national body may be easier to sustain and justify than the alternate options described by OF. This point is further strengthened by the recent Agreement on Internal Trade (AIT, September, 1994) which gives legislative support to efforts to ensure national portability of skills and licensure across Canada. Any move to replace the current portability of credentials in sonography with some version of provincial certification would undoubtedly violate the spirit, if not the letter, of the AIF. In point three of Chapter Seven, Annex 708, Part II of the AIF -- *Development of New Occupational Standards and Changes to Existing Standards* the following is stated:

> If a Party considers it necessary to make changes to existing standards in respect of an occupation, the Parties agree that the process for making such changes should occur in a manner that will foster reconciliation and avoid the creation of new barriers to mobility.

Assuring portability of professional credentials for graduates. When discussing the benefits associated with accreditation, a number of respondents addressed the important role played by accreditation in assuring portability. In this particular context portability referred to a graduate's professional credentials being accepted anywhere in Canada -- and, as the examinations that the graduates write are American exams, it follows that the professional designations are also acceptable in the US.

Many of the comments made by the respondents linked accreditation to ensuring access to the ARDMS examinations, and in some program models this is true (ARDMS, 1999). Although the ARDMS does allow students from non-

accredited programs to challenge its examinations it only does so for students who are in:

- a second discipline program that offers a minimum of 12 months of full-time clinical experience in sonography,
- a first discipline program of four years duration with a minimum of 24 months in a full-time clinical setting in ultrasound, or,
- a Bachelor's Degree that includes a minimum of 12 months of full-time clinical experience in ultrasound (ARDMS, 1998).

CMA accredited programs have a great deal of flexibility and do not have specific requirements for clinical experience identified by the ARDMS. Being accredited permits programs to shorten the period of clinical experience required thereby reducing overall program length. This allows students from a 12 month, second discipline model to access the certification examinations one year after commencing their training.

As the credentials offered by the ARDMS have been adopted by the CSDMS as their professional designations, having these allows Canadian sonographers to work anywhere within Canada and assures portability of employment. Without accreditation AH felt: "...it would jeopardize the students writing the national (ARDMS) examinations and portability within the country would be threatened ...if we withdraw from accreditation we should close down the program because at that point this program no longer meets national standards."

There was also an interesting political piece brought into the concept of portability. When OF was asked why portability was so important the response spoke to the provincial government's belief that everyone has the right to be trained in the profession of their choice, however: "If they don't get employed here at least they're going somewhere else to get employed. They will return home at some point in time, they're not a burden to society." In a similar vein LR added: "...you know, these technologists, can presumably go anywhere in the country."

But beyond the perception that portability was linked to accreditation, there was also a feeling expressed by certain of those interviewed that coming from an accredited program gave an advantage to the graduates, further enhancing their ability to obtain employment wherever they might be seeking it:

> I think for the person that's applying for a particular program it's important that that person seriously consider applying to an accredited program. Because as you know, in the job market it's competitive, and if you have two applications on your desk for an ultrasound tech -- one from an accredited program, and one not, the preference might be given to the tech from an accredited program since you know what you're getting. You know you are getting someone who has met the standards that have been set (LR).

Enhancing program and graduate status. During our discussion of the advantages of being an accredited program, SH described how being accredited could influence individuals to apply to a program, and how this had a ripple effect on the graduates coming out of it:

> It is a selling feature, first of all because everyone is looking for the best students to take into the program. Applicants know that we are accredited and I think that that makes a difference to some of them -- it probably makes a difference to the ones that we want to have in, those that are concerned with getting the best education possible. Those are often the best candidates and

> the ones who do the best as sonographers. So from promoting the program for the applicants I think it's great.

Accreditation was also seen as having the potential to bring internal recognition to the program: "The reputation of the school benefits from being accredited. It carries a lot of weight when we can show and demonstrate by documented proof that we've got an outstanding accreditation and the administration of this institution beams from ear to ear" (OF). As well, such recognition may influence both the sites involved in the program. Graduating from an accredited program was said to influence the overall desirability of its graduates by potential employers: "To be a graduate of a school that has national recognition has meaning and value for the graduate, and I think it has for the workplaces that participate on the clinical side." (LH) and, "If we can maintain a reputation for having high standards as we do for many of our programs here we get called upon for our students to be employed by their institution" (OF).

When probes were used to gather further details on this area, HG added that: "My guess is that some of the other programs that are not accredited probably look upon us as being the "Dudley Do-Rights" who are going through the process." When asked the same questions AH replied: "Accreditation brings a certain level of acceptance of the graduates and a certain level of cooperation without which I think the program is no longer at the same level as all of the other programs in Canada

Ensuring that graduates are competent. In 1998 the CSDMS published its *National Competency Profiles*, a set of documents that identified the specific skills and competencies expected of generic entry- level sonographers in Canada. These

profiles were developed from data obtained from two major national surveys of the CSDMS's entire membership and have become major reference documents for assessing sonography programs for currency and curricular comprehensiveness.

A number of respondents distinguished accredited programs from non-accredited programs by using the degree to which a program covers the competencies identified in the *National Competency Profiles*:

> In the *National Competency Profile* there may be some skills that a program cannot teach. So if we weren't accredited we wouldn't have to worry about that skill, we would just teach what we do. But in an accredited program we would have to find the resources to allow that part of the *National Competency Profile* or skill so that the graduate would attain them. One example is breast ultrasound. Not every place does breast ultrasound but the *National Competency Profile* requires them to know this (KY).

KY's comments also explained references made by other respondents who reported that graduates of accredited programs were often preferred when employers had a choice between them and graduates of non-accredited programs. As KY pointed out:

> Someone from an accredited program has been taught 100% out of the *Scope of Practice* or the *National Competency Profile.* The non-accredited program has no accountability to that *National Competency Profile* so I might be getting a graduate that has 80% of the *Scope* or what we now call the *National Competency Profile.* So as an employer I would be wise to take the accredited graduate because I'm getting someone who can doesn't need to do all those skills right away but has the ability to grow with my work site if we get into more procedures or skills.

The issue of competence seemed not to be a matter of graduates from non-accredited programs being thought of as incompetent, but rather that they may not have been given an opportunity to gain as many competencies during their training program as graduates from accredited programs. To some extent accreditation was

seen to compel programs to be complete while those programs that chose to remain non-accredited might have components that are either missing or that fail to meet the standard: "Accreditation is a way of, if you will, holding the training programs to a particular standard so that the product ...the ultrasound technologist ...achieves a certain level of competence and has had appropriate training in ultrasound" (LR).

Relating standards and competence to safety. The discussion of standards and competency led into remarks related to safety. Respondents did not restrict their comments to assuring patient safety, but, on a number of occasions, related accreditation to ensuring that the students were also safe. FT recounted a situation where a male student was being pressured by the department's charge technologist to perform an endovaginal study on a patient without having a floor technologist in the room with him during the procedure. The department was busy, the technologists were anxious to finish the day's work. The student was uncomfortable with this particular patient and felt that doing such an invasive study without a witness might place him at risk of allegations of misconduct. Being very concerned about being placed in this position he recalled that accreditation requires that students be supervised when working with patients and was able to use this argument to resolve the situation.

Clearly, in this scenario, the student felt that accreditation gave him a degree of protection and the technologists were willing to revise their expectations in light of that. While this is by no means the only way that students are, or perceive themselves to be, protected by accreditation it serves as a suitable example of its potential. Of

course this is only effective if the student is aware of what accreditation requires of a program.

In terms of patient safety the interviews revealed that accreditation was seen to ensure that programs were training to a known standard and depth: "...patients who will be using the services of our graduates will also be given a suitably standardized procedure." (MW) and, "I see it as an external process that ultimately works towards ensuring patient safety by making sure that training programs meet a certain standard of training." (PF), and:

> When we look at public safety and competency and what goes into the training of a sonographer I think that if you are going to run a program you should do it right. And accreditation gets you on the right road so far as looking at the responsibility towards the students, and the public. And because sonographers are not regulated, maybe there's more reason to be accredited (AH)?

Disadvantages Attributed to the Accreditation Process

Direct and indirect costs. The CCA operates accreditation on a cost-recovery basis, and, for the most part, its activities are carried out by volunteer surveyors. While this has traditionally been the case, the shift from the "old" process to the "new" approach has substantially reduced overall costs for many programs and this should be borne in mind when considering some of the comments in this section.

The issue of cost was spoken to by virtually every respondent and yet none was able to place an actual dollar figure on what accreditation costs, rather they expressed the amount in qualitative terms: "We don't have to accredit our program but we do, and it's pretty costly." (GU) and, "Costs have been really expensive and

the hospitals are just unwilling to consider paying that kind of money for an external review process when they are satisfied that we are getting good applicants and we're producing good graduates" (PF).

The individuals interviewed, and most particularly those involved in completing the accreditation application forms, saw costs as being made up of both direct (accreditation fees) and indirect (time, manpower, additional resources needed) components. The actual cost of accreditation depends on how you look at the indirect costs. HG stated: "...it's a lot of extra work. So on top of your teaching responsibilities and all of the administration that you do on a regular basis, ...accreditation is a lot of work ...a lot of manpower ...a lot of time and effort." AH confirmed this by saying that: "The first time that I was accredited they actually had to have somebody come in for so many weeks and replace me while I spent dedicated time putting the application together." It should be noted that while most agreed that the time commitment needed to complete the application was enormous the first time around, this became less of an issue on subsequent surveys, and has been reduced somewhat by the new process. As AH stated: "It's a tremendous amount of paperwork required but I know that that is what they need to evaluate things."

The contention that the process created extra work was not only associated with the need to submit periodic accreditation applications but was also seen to be present whenever any major addition or change was made to a program: "...because the programs accredited I have to let them know if I make any changes because that's one of the stipulations right?" (AH).

A further factor seen to add to the time demands created by the accreditation process was that while the actual documentation might be assembled and authored by one individual, it often required input, approval, and verification of facts from numerous individuals and stakeholder groups. In order to ensure that the documentation is complete, up-to-date and reflects the common view of the program as a whole is:

> ...incredibly time consuming, from every angle. From preparing the process, having to get everyone involved to read it, to approve it and sign it, and yet always walking around on pins and needles ...what didn't you do, how come you did it this way, how come you didn't fix that up (OF)?

Respondents also felt that accreditation forced departments to consider the resource needs of programs in relation to those of the clinical departments. The interview subjects acknowledged that having a program required departments to be willing to invest staff, equipment and resources to support the students as best as possible: "In an ideal environment we would have more staff, and more equipment you know, supplement it so that we actually had a better opportunity to teach" (LH). While programs might benefit from being able to compete for department dollars, the costs are actually borne by the hospital or, in some cases, by the institution offering the program. From their point-of-view the costs of accreditation were more likely to be considered a disadvantage than a benefit as a certain degree of discretion is removed from programs once they pursue accreditation.

Small pool of available surveyors. A concern raised by a number of respondents was the limited number of surveyors available. The CMA's 1999 *Terms*

of Reference for Surveyors specify that surveyors should have the following qualifications:

1. Education in or knowledge of the current practice of the designated health science profession;
2. Understanding of the educational process and its application in the designated health science profession(s), ideally acquired through participation in an educational program for the profession;
3. Stated support for the accreditation process as a useful method of maintaining educational standards in the designated health science profession;
4. Effective communication and problem-solving skills.

Mounting a peer review process using volunteer surveyors means that a supply of willing, discipline specific individuals has to be available to make up the teams. In each case, Canada's eight sonography programs -- both accredited and non-accredited -- are staffed by one, two or three instructors. It is this small pool of individuals who must constitute the core group of potential team members for the CCA's sonography survey teams.

The issue of the small pool of surveyors was addressed by AH:

> I've been involved for so long and don't see a lot of changing faces. The same people get used over and over again, only because I guess the companies and business they work for won't allow them to take the time away. And many people are contented to stay and won't give up and pass the rod on to someone else. It's unfortunate. I think that it's a very small community that is well informed about accreditation and a very big community that probably thinks it's a big waste of time.

An unexpected insight came out of questions and probes related to the small pool of available survey team members. Although many of the clinical instructors in sonography taught in non-accredited programs while others were employed at accredited sites, they all described themselves as being members of a very small community. More importantly many of the members of this "community" had been involved with the beginnings of sonography in Canada and the formation of the CSDMS, and training programs. Since these individuals not only knew each other, but were well known and respected in the field of sonography, comments were often made equating program quality to the high level of trust placed in this small community of educators: "The program is only as good as the people who are running it and that's why I'm saying that I think that the other programs in Canada are good programs run by good people. So accreditation isn't crucial at this time" (SH).

The degree to which these key stakeholders were familiar with each other was based not only on their common involvement with teaching sonography, but on the fact that when they had initially trained in the field there were even fewer practitioners and formal programs in place. Further, being part of a rapidly growing new discipline, these same individuals often interacted, and are still continuing to do so, on a variety of national committees, association projects and other activities related to the organization of sonography in Canada:

> The ultrasound community is so small in Canada, with only eight programs, that all the instructors know each other and serve on boards here and there, provincial and national societies. So it's very hard to have a poor quality program because it's like living in a small town and everyone knows what everyone is doing and so the accredited programs have that comfort

> knowledge so to speak that the graduates in the non-accredited programs actually are top-notch (KY).

The challenge of maintaining objectivity while surveying. EF addressed issues related to a lack of objectivity by survey teams saying:

> There were some flaws in that accreditation process in the on-site visit. I don't believe that the survey team were cognizant, perhaps because it was a new program, and a new experience for the people who were surveying, but in some respects they stepped beyond the bounds of their role and were becoming involved in areas that were not within their mandate ...had we not had a problematic team, had the team had more experience across programs, the results might have been very different.

The description of a team as being "problematic" was a recurring theme with a number of other respondents. AH related that: "...there was no insight. It was a matter of personalities. I think it wasn't so much the personalities as their backgrounds," while GU stated: "I must admit there were times when I thought these guys were like a broken record, get off our case already, I've had enough because we've fixed everything that could be fixed. We had reached that point with the accreditation team where it had gotten personal."

What the respondents said they expected from the on-site visit was a team made up of individuals who could: "...really criticize properly," (AH), behave in a constructive, proactive fashion, and: "...evaluate not by my (their) standards but by what their (our) outcomes and success were" (OF).

Other than having experienced team members on the on-site visits, those interviewed expressed a belief that objectivity was best assured by maintaining a presence from the CMA. As OF related: "If you don't have the good guys from the

CMA people to pull you back and say "You know you have an incredibly high standard program, you can't expect that from every program."" In essence it all goes back to the standards -- what is needed, what is reasonable, what is optional. The CCA staff is intimately familiar with the accreditation process and can play a key role in interpreting its intent.

Political resistance to the process. Applying for accreditation and being successful in achieving accredited status is a significant undertaking requiring the various stakeholders of a program to put on a united front. Program organization and cohesiveness is a key component to what the CCA sees as being an acceptable submission, while a lack of clear lines of communication and authority for issues related to program design and policy are carefully scrutinized. Although only raised by one individual, a significant political issue was brought up when discussing the downsides of being accredited. OF was describing an accreditation application that was being put together for one of the allied health programs that had been operated for some 20 years by a local institute in cooperation with a number of local hospitals. Due to the CAMRT's mandate to move to a baccalaureate program the hospitals were in the middle of shutting down their old model and starting up the new program with the university. OF was given the task of authoring the application for the program to be accredited and found that:

> ...we're in a conjoint arrangement, so it was our (the hospitals) turn to do the submissions -- we used to flip it -- but we couldn't get their (the institute's) cooperation this year because we were going with the university, and it's a political thing. So that was one of the hardest things for me to do – to pull it together knowing that they (the institute) and I , had to make them (the CCA)

> aware of some of the shortcomings. All the issues that they (the CCA) had were not with us, but with a program that would no longer exist.

Operating a national accreditation process with local programs that are sometimes torn between regional needs, historical models and pressures brought to bear by the professional associations that offer the credentialing examinations, are seen as a political issue.

Composition of survey teams. Many of the individuals who were interviewed remarked on the make-up of survey teams being like a coin toss; sometimes you were lucky, sometimes you were not and, unfortunately, sometimes you could never win. The fact that teams are small means that the potential influence of one or two individuals can be quite significant, and, these individuals can sway a team's decision regarding accreditation one way or the other.

OF's comments were quite representative:

> When you're filling out these submissions you're second guessing -- who are the team members, how do you think they are going to respond, and... I do find from team to team to team there are a lot of inconsistencies, and ...it would be nice to have teams who were able to come out and do it, and that were experienced enough all the time, but it doesn't happen.

Sonography programs in Canada are also subject to the unusual situation whereby survey team members may actually come from non-accredited programs -- "I realize that people that are coming to accredit us are from unaccredited programs" (MW). And while this latter statement was not followed by any indication that this was wrong or represented a lower quality of participant, the author was left feeling that it was a situation that the respondents acknowledged and tolerated, rather than one which they were truly comfortable with. Indeed the level of honesty exhibited by

those individuals interviewed by the author was encouraging. While some individuals felt that teams might come to a program determined to find problems with the program, others voiced concerns that teams might be inappropriately lenient with their assessment of a program's quality: "You know you can get people (teams) who are blown away by a program but shouldn't be, because they may be coming from a program that's not as developed and therefore it looks really great and they can't pick out the shortcomings" (OF).

Time constraints. The CCA, training programs and team members, all strive to reduce the costs of the accreditation, and to minimize the disruption caused to all by the on-site visit -- a critical component of the accreditation process. Many of the respondents brought up the fact that the on-site visits occur over a very short time frame, and that this "snapshot in time" may or may not adequately reflect the program and its routine activities accurately.

Two major issues were revealed by this portion of the interviews -- first, could the team be misled and either over or under rate the quality of a program, and second, did the team have enough time and opportunity to interview the "right" individuals in sufficient detail?

GU stated: "Well I guess one of the things that I've often questioned when they come through and do an accreditation is the way they try to see so much in such a short time...it was like a traveling road show -- fifteen minutes here, twenty minutes there" and in later comments went on to add:

I don't think that they get a good enough overview of essentially what the

> department is about and so therefore, if at any given moment on that given day something goes haywire in the process -- that's the snapshot that the accreditors get. And I'm not suggesting they come for a week but I think that an hour is pretty iffy for a program. But I think that that should be looked at and I think that even if they set aside a half day for each center in each city and walked around and talked to the staff they could see how things really were. I think that that would be better because I believe that right now there isn't enough time set aside.

Reasons for Being an Accredited Program

After asking respondents to identify their perceptions of the benefits of being accredited respondents were questioned as to why their particular program had elected, or might chose to become, or remain, accredited. The data revealed that programs sought accreditation for a variety of reasons ranging from government directives to the program's historical context.

Government regulations may require programs to be accredited. In one particular province the government department responsible for postsecondary education required any and all programs that had access to a national accreditation process to apply for, and maintain accredited status. So here was an example of a provincial government insisting that a sonography program pursue a process that would otherwise be optional (KE).

Access to the ARDMS examinations. Since the ARDMS controls access to its examinations, and can specify the various combinations of educational background and clinical experience that are required for an individual to be granted approval to write these papers, it is well within its power to approve or deny access to programs that are non-accredited.

With the current flexibility that ARDMS allows, accreditation is only mandatory if a program model is a first discipline program of less than 48 months duration with fewer than 24 months of clinical practice. At this time there is only one program stream in Canada's formal sonography training programs that needs to be accredited to meet the requirements specified by the ARDMS, however, that could change at any time. As EF volunteered: "...if accreditation were essential for access to certification exams, that's a given (attaining accredited status) there wouldn't have to be any discussion, it would just happen." GU noted that accreditation was not presently required of sonography programs in Canada, and so: "The measuring stick of the graduate is that they write the American examinations, and that they pass those successfully. As far as we're concerned they have qualified. So it's not the measuring stick at the moment."

Program status. When asked why a program had sought accreditation, only one of the individuals who were interviewed brought up the status conferred to a program by achieving accreditation.

KY put it as follows:

> ...there is a desire to become accredited because they (the program staff & stakeholders) want to be on par with the accredited programs in the public's perception. The public may not know that a non-accredited program is as good as an accredited, and also my view is that if I was a program director of a non-accredited program I would just look forward to the time that I could be accredited because you're more at risk of being criticized, being accountable for things that are maybe not even under your control.

Historical context. Sonography comes second only to magnetic resonance

imaging as being the most recent discipline among the umbrella of "diagnostic imaging." The significance of this is that the majority of its early practitioners came from radiography, or nuclear medicine backgrounds, all of which were, and still are, offered only by way of accredited programs. Furthermore, the sonography programs developed in environments where training programs were in place for other allied health professions.

The fact that practitioners came into ultrasound as a second discipline from an allied health background meant that the program instructors were also. Because of the route that these individuals took into this new field, the program instructors came with previous experiences with, and exposure to, programs which were accredited:

> I think that we've been very lucky in ultrasound that in the past usually the instructors would have come from accredited programs, you know in X-ray, nuclear medicine or an allied health background; so they are familiar with being an accredited body. So that they have brought that into the profession of still maintaining the importance of standards preservation, even if it was voluntary. So we've been lucky that way (HG).

Respondents suggested on a number of occasions that their previous backgrounds made it seem natural to design training programs that were accreditable even if a formal application was never made. This was not unexpected as many of the tools specified in the various accreditation requirements of the CCA are useful when designing and assessing programs and that was the challenge faced by all of the eight Canadian programs when it was decided that a formal training program would be established.

Again, HG added clarity by describing the effect of being a new program in a facility that had other programs already in place:

> I think it's an expectation, the way that we're set up here with all of the allied health professions under one administration, it's just an expectation to be accredited. You know it's not like all of these people are accredited, but these are voluntary therefore we don't spend money on that. You know it isn't an issue you know. I think we are all health professionals, it's the expectation to be accredited and we want to maintain that excellence of being accredited.

Perceptions of a positive cost/benefit ratio. When costs were considered by themselves they appeared to be one of accreditation's downsides, yet when looked at comparatively, a number of those interviewed considered the results to be a justification for pursuing accreditation. Comments made by KY are representative of the views expressed by a number of others:

> ...you want to be offering something of good quality. So if accreditation is synonymous with high quality, you've got to pay for it. And the results might not be immediate but it would sustain your program, the viability of the program is at stake...to maintain standards costs money and if those standards are a priority, then the money becomes justifiable. And the public deserves high standards and above all safe health care, so it's just the cost of quality.

Respondents often mentioned the costs of accreditation and spoke of how these had to be balanced against the benefits derived from the process. However, actual dollar figures were never given, and none of the interviewees addressed cost versus benefits other than in qualitative terms. What was evident was that the individuals who the author spoke with regarding these perceived benefits felt very strongly about their importance to the program, its students and the general public.

Reasons Given for not Being Accredited

Respondents also offered their opinions on why their programs were not actively pursuing accreditation. Many of the same reasons that were cited for not being accredited were similar to those given by programs for seeking accredited

status. The difference was often in the way that a program interpreted the information. For instance, while accredited programs reported that accreditation enhanced their status, the non-accredited programs stated that accreditation would not change them or the way that they operated. Similarly while one provincial government was reported to require programs to be accredited, another one actively dissuaded the pursuit of accreditation.

Being accredited wouldn't change the program. The graduates of Canada's eight sonography programs all write the same ARDMS examinations. The programs themselves have ready access to a number of key documents -- the CSDMS *National Competency Profiles* recently approved by the CCA (April 28, 1998), and to the CMA's *Requirements for Accreditation (April, 1999).* When respondents from non-accredited programs were asked why a program might chose to forgo accreditation, or decide not to renew its accreditation status they all made similar comments: "The status quo (administration) has never indicated that we did anything less than accreditation is going to put the gold stamp on and say we did." (MW), "We've looked at the accreditation process in the past and we're doing all the right things according to what they require anyway." (PF), and, "We don't do anything differently for the ultrasound program than we do for any of the accredited" (EF).

The interviews revealed that the differences between accredited and non-accredited programs were seen by administrators of the non-accredited programs to be differences in process rather than procedure. PF said: "...We have an evaluation protocol, we have course outlines, check mechanisms. We have an advisory

committee that's made up of physicians, managers from the various hospitals as well as a clinical instructor committee." As is clear from the *Requirements for Accreditation*, these are all mandatory components and features of accredited programs, so as PF illustrated, the same procedures and structures are in place. EF described a similar situation saying: "You know we can pull the same documents together for accreditation of the (sonography) program as we do for the others."

There was also evidence that respondents felt that not seeking accredited status was not seen to affect the level of support provided to a program by its sponsoring institution/hospitals. So while the design of the program was not reported to be any different in the case of non-accredited models, the interviewees also felt that there was no difference in the way that the program was viewed or treated:

> ...but I don't see any way that the program here has been negatively impacted by the lack of accredited status -- both internally and externally. I think it's recognized externally; it has the same level of support internally as any that would have an external audit (EF).

The ARDMS examination results and employment rates were cited by two individuals as evidence that non-accredited programs were able to provide equivalently good training in sonography as those programs that were accredited. While accreditation was seen as an external peer review; success on the ARDMS exams and obtaining and retaining employment as a sonographer were seen in much the same way: "...results on those ARDMS exams really speak for themselves, and the employment rate, and the fact that our students continue to be employed ...students remain employed for long periods of time so it says something about how well they're doing." (PF).

Government may discourage. It was notable that while one of the sonography programs was required to pursue accreditation by the provincial government's post-secondary education policies, there was a different view espoused in another province. In one instance changes in procedure initiated by the provincial government made it very difficult for a program to apply for accreditation if it wasn't mandatory. As MW explained: "We had to have some sort of special circumstance in order to create a need to be accredited. The college just wasn't going to pay for any program that didn't have to have an external review " and, "...any program that didn't need to have an external stamp of approval of accreditation was discouraged from doing so at that time. It was pretty much economy."

Substitutes for Accreditation

All of those interviewed were asked whether they felt that some other system, body or mechanism could stand in place of accreditation. Their responses all fell within one of the three general categories that follow.

Self evaluation. Although ongoing self-evaluation is a key component required by the *Requirements for Accreditation*, it was reported to be in place by all of the programs whether accredited or not. When asked what else could stand in place of accreditation two varieties of self-evaluation were described: "We have our own internal evaluation which is probably why we did so well or do so well when we go through the accreditation process; because of our evaluation process, our own, right?"(AH), and:

We have a very detailed program review process with a number of evaluation

> tools that are used on an annual basis, and a full blown program review --it's an internal audit but external to the program; which is used for every program in the institution. And those reports go to all stakeholders (EF).

All of the respondents who suggested that a self-evaluation might serve in the absence of accreditation did acknowledge that the credibility of the results would be far less than would be the case for a review by an external body as that would - ...carry a little more weight than if we said: "Look, we've assessed our own programs and we think this and this and this" (GU).

One program evaluates another. In order to have a process that was closer to a peer review, GU suggested that one sonography program could come in and evaluate another program. While this approach would likely be no cheaper than the current service provided through the CMA, it would achieve two ends not satisfied by a self-evaluation. First there would be less likelihood of the process being seen as "going through the motions", by having individuals from outside the program assess the organization, and delivery of a different sonography course would be more credible than having that course evaluate itself. Second, as GU pointed out, with a self-evaluation: "You can't see the forest for the trees and you don't get another perspectives on what you're doing, and it's not able to achieve the same thing." However, having one sonography program come and assess another sonography program: "...would certainly be far, far better than doing our own program ourselves. And I think in many ways we might be able to achieve the same thing."

Professional society. While the first of the two options discussed above

operates at a local level, the second moved to a provincial or, inter-provincial relationship. The final suggested substitute for the role played by accreditation was to use the CSDMS as the accrediting body. Unlike the first two options this was the only one which might be seen to represent a national evaluation of a program. As LR offered: "...there's the Canadian Society of Diagnostic Sonographers and maybe that body could be the one that carries the torch if the CMA was not involved. They (the CSDMS) would have all of the details." and:

> Well again the first thing that I thought of was the provincial regulatory body but that would make, that would destroy the national ...the value of a national audit so to speak. So going back to a national body rather than a provincial body I can only think of the profession itself. So if the CSDMS itself accredited the programs they could hopefully maintain the same standards and look, and revolve around the student and graduate. However, an arms length body is, ...it just makes more sense to have an arms length body to do it. Somebody in an audit, in an audit position that doesn't have so much conflict, so much conflict of interest (KY).

The respondents clearly identified that no matter what system was used to stand in place of the CMA accreditation process, two major challenges would have to be met. First the process should be seen to represent national rather than local or provincial views of sonography. Second it should be an objective, credible process that operates free from influence or bias.

Summary

Six emergent themes were identified during the analysis of the interview data -- Views of the meaning of accreditation; Benefits attributed to the accreditation process; Disadvantages attributed to the accreditation process; Reasons for being an accredited program; Reasons given for not being accredited, and, Substitutes for

accreditation. These themes were used to organize this chapter. Depending on the richness of the data in each, the individual themes were sub-divided into as few as three, and as many as ten key issues. This chapter presented each issue, and outlined the views of the 14 respondents who were interviewed by the author.

CHAPTER 6

ADDITIONAL EMERGENT ISSUES

This chapter presents issues which came out of the analysis of the interview data but which were not directly related to the original research questions. During the review of the data the author identified four areas outside the original scope of this study that he felt were significant -- The value of being an accreditor; Competence and stifling of creativity; The effect of being involved in a training hospital; and, Downsizing and cutbacks and their effects on training programs. These four issues have been included since this was an exploratory study and they emerged from the analysis of the interview data. The analysis used for the reporting of these issues was the same as the process described in Chapter 5.

Other Issues Identified During the Interviews

The value of being an accreditor: One striking feature of the eight formal programs that offer sonography training in Canada is that they are widely scattered across the country, sited from St. John's, Newfoundland to Vancouver, British Columbia. The significant geographic distance between programs emphasizes how each one is isolated from the other.

Being a specialized field, and typically run as second discipline offerings, the staff of these programs have limited access to colleagues working locally in similar settings -- although as second discipline programs in magnetic resonance imaging begin to organize themselves in Canada, there may be some opportunities to "compare notes". Although any one of the sonography program instructors can

telephone, or in a number of other ways contact instructors at the other programs to discuss issues related to course design, curriculum delivery and program related concerns, they can't conveniently sit down one-on-one. Respondents volunteered that because each program worked in relative isolation, instructors and other stakeholders could not access the detailed insights and information from colleagues that they would like to. These comments came out during our conversations because some of those interviewed reported that being on a survey team as one of the accreditors provided an opportunity to talk with distant colleagues face-to-face. Participating as an accreditor provided a focussed opportunity to get together with colleagues and share ideas, and discuss common problems and potential solutions.

Two respondents spoke at length on the value of being on an accreditation team; how it provided a far clearer view of what accreditation really meant, and how it made the individual aware of views beyond those held locally. Comments such as: "I saw myself as a stakeholder in the process, and that it was not a policing issue but a collaborative, self-evaluation." (KY), were revealing since they identified that some of the stakeholders might indeed see the process as a policing action. KY's experiences as an accreditor resulted in a shift in attitude and resulted in KY viewing accreditation in a more positive way as described below:

> ...being a surveyor and having the opportunity to have a couple of visits now, as I mentioned before, you can't help but look at better ways of doing things. So you can't help but absorb by osmosis, that your program and the one you're surveying are teaching the same thing and there are two strategies and each benefits from the other. So I guess that the best thing for me, both professionally and personally, has been the more wide-angled view of education rather than just meeting my own local needs (KY).

HG expressed much the same feelings as KY but added an aside pointing out that being an accreditor gave the team member an opportunity to ask specific questions of the program being visited so that the program was fully revealed with nothing left hidden. KY went on to say: "...when you're (the program) through the process of accreditation I think people feel really good about it, because they know that you know everything about their program and that you approve of that program. And that makes them feel really good."

After identifying this thread in the data, I asked colleagues from health programs outside sonography to describe how being on accreditation teams had affected them. The most common advantage that they cited was that as well as giving them a more national view of what was happening in their own fields, it helped them to get to know other instructors on a more personal basis. It allowed them to establish closer ties with key members of their peer groups. By being able to get to know one another it was reported that subsequent communications were more likely to be open and productive.

Competence and stifling of creativity. Professional bodies such as the CSDMS and CAMRT have taken very active roles over the last five years in identifying, validating and sorting the various competencies expected of entry-level practitioners in the disciplines they represent (CSDMS, 1998 and CAMRT, 1999). The federal government has also been involved in this arena through the work of Human Resources and Development Canada (HRDC) which has abetted this by providing funds to support the development of documents such as the CAMRT's *National*

Competency Profiles for Nuclear Medicine. A key feature of publications like the *CSDMS National Competency Profiles* is that they provide a categorized listing of all of the generic skills and tasks that a new graduate is expected to be able to perform with a high level of confidence while unassisted. In essence these documents provide a "national" job description for new entry-level employees.

Since national competency profiles provide detailed information on what is expected of new graduates, they have been very useful to training programs in order to assist with course design, curriculum validation and program revisions. These documents represent the most current, publicly available compilations of what is expected of Canadian graduates in the allied health fields, and are important references used by the CCA when evaluating programs.

My discussions with OF revealed a different view of the move to identify discipline specific competencies than that of most of the respondents:

> I think that competencies have become too prescriptive. I think that they have stifled any creativity whatsoever. I don't think that people will go past what the scope of the job is and go the extra mile. I think it's terrible now but I think that people wanted that safety factor, they wanted to know the -- "You can measure up to the standard, you can do this ten times without any issues." And because of that, that is where you'll perform because you now know yourself this is what they're looking for. So you've limited yourself. You won't go back and make a mistake and explore and try something new. Why would you take that risk -- you might have to wear that. Anyway I think we've done a big disservice to the health industry.

OF was the only respondent to express this view of the move to identify the specific competencies needed to perform at an entry-level within each health discipline However, it was seen as a significant comment since these competencies

form the very basis of program design, validation and much of the accreditation process.

The effects of being involved in a training hospital: During the interview sessions a number of respondents clearly identified that they felt that the department staff were very aware that having a training program associated with the facility altered their roles when compared with the staff employed by hospitals that were not involved with training programs. One of the respondents reported that staff felt that having students on site placed higher expectations on them as sonographers, and that depending on how they viewed that, individual sonographers might react quite differently:

> ...they (staff) felt that they really have to know their material so they bone up a little more. They're scared to get a question (from students) that they can't answer. So some staff will actually refuse to have students since they don't want to be put in that situation. But others (sonographers) will take time to really explore what they are doing and probably try not to take shortcuts as much as they used to (OF).

LH felt that the sonographers hired by departments that were involved with training programs were different from sonographers found in facilities that were not involved in training: "I believe that we have staff who have additional capabilities, or different capabilities than might be needed elsewhere in a non-teaching environment." This contention was supported in part by a comment made by AH:

> My biggest challenge is trying to put out students who have got enough experience in all of the areas that employers think they should have. It's unbelievable what they expect a new grad to know. And not just know, but know how to do it and do it well.

Respondents attested that if a program is required to train students, and the expectations for these students are high, then the range and quality of the learning experiences provided to the student must also be. In the clinical environment much of what a student learns is a result of interactions with staff. If the staff do not have the skills to meet the needs of both the department and training program, they cannot adequately meet those of the students.

Downsizing and cutbacks and their effects on training programs. The realities of reduced health care budgets, and downward shifts in the staff-to-patient ratio during the last decade is a matter of public record. While the degree to which individual provinces have been affected varies, there is little doubt that all have fewer resources and greater demands for service than was the case in the past.

Of all of those interviewed OF was the most vocal, and helpful, in detailing concerns related to how these reductions have changed the environment in which training programs function. In the course of our discussions OF identified four major areas of concern -- staff morale, reduced opportunities to learn/teach, experiential "flattening" and a greater frequency of errors.

As a result of downsizing OF reported that staff now have greater workloads. The heavier workloads mean that they are able to take fewer breaks and feel that they can't do everything that that they once did within the available time. The effect on students has been that they are often surrounded by: "...a lot of very discontented staff whose morale is incredibly bad. The technologists don't see any let-up, and don't see any light at the end of the tunnel because there isn't any." Clearly this is not

likely to provide an adequate, let alone positive learning environment. Students placed in such surroundings can hardly be expected to feel excited about their anticipated careers, and might wonder whether or not they had made the right choice in enrolling in the program.

In the face of increased workloads staff often feel pushed to get the day's patients done. Students, no matter how gifted, need time and practice to master new skills, and with the pressure to complete a set number of cases in a given time technologists have to consider how they are going to finish the work. Thus a sonographer might say: "...Stand there and observe I can't be bothered right now." Having to choose between completing the workload or the intangible benefits of helping a student to learn is not a new dilemma for department staff. What was reported as having changed is the extent to which the balance has shifted in favor of just getting the patient studies finished. The pressures could be described by -- do more with less, do it faster, be more efficient. One technologist quipped: "We've become so good at doing more with less that we're working towards doing anything with nothing."

According to the respondents, as departments grew they established an experiential hierarchy ranging from new graduates, through those technologists who had a few years experience to the so-called "old hands" -- individuals with decades of experience. Cutbacks have substantially changed the experiential mix with hospitals often shifting their hiring practices to take on a large pool of casual workers. Since the hospitals often do not have to pay benefits to casual staff they are cheaper to hire.

However, these individuals are also likely to leave at the first offer of a regular position, often ending up in working in small private clinics. Of course when the cutbacks first came about the departments generally followed the union contracts and let go those individuals who had the least seniority. The net result of these changes has been an increase in the number of departments staffed with many inexperienced technologists working side-by-side with a few seasoned technologists. Unfortunately the senior members of the department often become disproportionately busy trying to handle all of the difficult problems, and dealing with all of the challenging cases leaving little if any time to spend with what are seen as optional activities -- this frequently includes mentoring the students. Another frequent result of this situation is that the senior staff either leave the field, or go elsewhere :

> We're losing a lot of our very experienced people who have had it up to here . There's no time to mentor, no time to exchange information whatsoever. And so you have a lot of people who had the love and desire to teach who are so darned burned out that it's taking two or three times as long find the resources they need to get the job done, whereas someone else (an experienced staff member) knew it "just like that."

The public has an extraordinary high set of expectations when it comes to health care, they want access to immediate -- or close to it -- error-free medical diagnosis and treatment and are seen as becoming more and more litigious if they feel that the system has failed them in any way. As workloads increase and technology becomes more complex, the opportunity for errors also increases: "We're finding errors here we haven't seen before . And people (staff) are more aware of lawsuits, and students are right in the middle and it's all due to the fact that no one has the time to do the extra double check."

In such an environment, whether real or perceived, students can't help but suffer. The ready and regular access to patients, advice and guidance from working technologists, and opportunities to freely question the rationale behind how studies are performed are key to providing a quality learning environment in a clinical setting. An overly busy department staffed by technologists who are worried about being taken to court can hardly be seen as being able to provide such an environment.

Summary

During the course of the interviews a number of the respondents added information beyond the scope of the original research questions. The author identified four significant areas from the analysis of the data -- The value of being an accreditor; Competence and stifling of creativity; The effect of being involved in a training hospital; and, Downsizing and cutbacks and their effects on training programs. Since this was an exploratory study the author included a brief description of the respondents' views on these four areas. Respondents reported that being an accreditor helped to them to better understand the accreditation process and provided opportunities to form closer relationships with colleagues. One respondent felt current moves by professional associations to identify national competencies for their membership were associated with reduced creativity among practitioners. A number of interviewees ascribed different characteristics to departments associated with training programs than with departments that were not involved with training students. Downsizing and cutbacks in the health care industry were reported to have

negatively affected the learning environment provided to students in sonography programs.

CHAPTER 7

DISCUSSION OF THE FINDINGS

In this chapter the study's findings and their relationship to the four research questions that underpinned it are examined. Where possible the findings have also been compared with those of the 1992 survey done by Redding and Associates for the CMA -- the only major document found by the literature review to have a focus similar to that of this study.

Purpose of the Study

This descriptive study was undertaken to explore why four of eight Canadian programs in diagnostic ultrasound have voluntarily enrolled in the CMA accreditation process.

Research Question 1

How do each of the stakeholder groups describe accreditation?

To gather the data for this study the author interviewed 14 individuals representing seven of the eight Canadian programs in diagnostic medical ultrasound. Of the 14 respondents, three were program medical advisors, four were clinical instructors and eight were program administrators. In the case of those interviews held with stakeholders from accredited programs -- Edmonton, Calgary, St. John's and Halifax -- the author conducted in-person, one-on-one interviews. To gather information from the non-accredited programs -- Winnipeg, Hamilton, Toronto and Vancouver -- I relied on telephone interviews with three of the four program administrators -- one site did not agree to participate in this study.

An analysis of the data revealed that each of the three stakeholder groups described accreditation in very similar ways with no sunstantial differences being evident from one group to the next. Representatives from the accredited and the non-accredited programs described the process in very similar ways. When asked to describe the accreditation process interviewees used phrases such as: Accreditation assures that minimum standards are met; It's a peer review process; It's an external audit; The process is a national one that helps programs to grow and evolve; and, Accreditation assures graduates that their professional credentials will be portable.

The descriptions given by the respondents were consistent with those published by many current accrediting bodies (CMA, 2000; Council for Higher Education Accreditation, 1996; Joint Commission on Accreditation of Healthcare Organizations, 1994). The study's findings revealed that stakeholders shared a common view of the meaning of accreditation regardless of the program that they were associated with.

The individuals interviewed were typically senior members of their departments with considerable experience in sonography. Even though those interviewed had varied backgrounds and had personal exposures to the accreditation process ranging from none to being the chair of a national accreditation committee, they all expressed a clear understanding of what the process was meant to achieve and represent.

When the research question -- How do each of the stakeholder groups describe accreditation? -- was compared with the results of the Redding survey it revealed the following:

1. The majority of respondents in the Redding survey felt that accreditation ensured that standards were met (94 %), and described the process as a peer evaluation. Both of these findings are consistent with those of this study.
2. As with this study Redding reported a high level of support (95 %) for the accreditation process: "...providing an "external" audit for programs".
3. Similarly, the 1992 survey reported that 93 % of those who returned their questionnaires agreed that the process should: "...promote portability of qualifications for graduates".
4. Although Redding's survey did not speak to the evolution and growth of programs it did ask respondents to indicate whether or not they felt that accreditation should: "...advise and assist new educational program". 82 % were reported to agree with this.

While the Redding survey asked questions of a wider range of stakeholders, the questions were not open-ended and provided very limited information regarding both context and reasoning behind responses.

Research Question 2

What value is placed by the stakeholder groups on the program being accredited?

The analysis of the interview data identified ten emergent themes related to stakeholders valuing the accreditation process -- Providing protection to the students; Ensuring ongoing quality control; Encouraging programs to improve; Assisting programs to grow and evolve; Providing leverage to bring about change; Exerting political pressure in support of program goals; Assuring portability of professional credentials for graduates; Enhancing program and graduate status; Ensuring that graduates are competent; and, Relating standards and competence to safety. These themes are addressed individually and in sequence in this chapter. The order of appearance has no bearing on the author's view of their relative importance or significance to the study.

Providing protection to the students. Participants in accredited programs, and more particularly those individuals employed as clinical instructors, identified the important role played by the accreditation process in protecting students. Respondents such as KY and HG described three major areas where students need protection -- program content, program policies, and student safety.

Program content. Since non-accredited programs do not have to ensure that their students are taught: "...100 % of the *Scope of Practice* or the *National Competency Profile* " (KY) students enrolled in these programs may not necessarily graduate with as many skills as those who attended an accredited program. KY contended that students from non-accredited offerings might be seen as having fewer skills and could have poorer job prospects, a lower level of perceived professional

credibility, and somewhat limited portability when compared with graduates from accredited programs.

The accreditation process requires training programs to design their curriculum using a set of national standards and expectations. This process helps to ensure that students receive a broad-based education that includes sufficient theory and practical experiences for program graduates to function competently as entry-level sonographers in Canada. By clearly identifying the minimal curricular expectations for sonography programs, and later verifying that these are in place, accreditation protects students from participating in programs that only teach selected portions of the "national curriculum", or that provide training that focuses on local needs and practices.

Program policies. In the course of the interviews many of the respondents brought up the issues of staff shortages, increasing clinical workloads and the difficulty in finding enough time to deal adequately with the needs of the students. While none of those interviewed claimed that accreditation was able to guarantee that programs would be immune from the generally negative effects of these issues, they suggested that the accreditation process was a counterbalance that acted to minimize the extent to which students were affected.

Departments have to balance staffing and workloads to meet the demands for clinical service. To do this they rely on both written policies, and the culture that naturally evolves when a small group of individuals works closely together on a given set of tasks over a number of years. The accreditation process sets specific

expectations, standards and guidelines that the programs, and the clinical facilities utilized by them, are required to comply with. In much the same way that municipal, provincial and federal regulations and legislation must be in compliance with one another, so must the policies of departments, training programs and accreditation. By having nationally endorsed standards and guidelines established and published by the CMA, programs can ensure that their students are protected from departmental policies -- both formal and informal -- that do not treat them in an appropriate fashion.

One of the interviewees described a situation which had occurred with a student that provides a practical example of how this can work. The anecdote was recounted as we were walking and was not recorded on audio-tape but was part of my field notes. As the respondent described:

> The department had been busy and a male student was directed by one of the staff technologists to perform an endovaginal study on a patient. This student was very apprehensive about performing such an invasive procedure on the young female patient without having another technologist present during the study. Essentially he felt that without having a witness present he might be placing himself in jeopardy and run the risk of being accused of a variety of improprieties. The technologist who had told him to perform the study initially refused to have a graduate technologist present as the department was too busy to spare one. However, remembering that accreditation requires students to be adequately supervised he was able to convince the sonographer to place a staff member with him during the procedure (HG).

Without being able to use the accreditation guidelines to support his request this student may not have been able to avoid performing the study without the protection of having a staff member present. In his eyes at least, the accreditation

process provided him with a mechanism to assure that he was not required to function as a regular staff member while still in training.

Student safety. Students working in a hospital environment are exposed to the same workplace hazards and risks as the regular staff members are. They are expected to perform sonographic studies on patients with communicable diseases, participate in transferring patients from wheelchairs to stretchers, and place the same repetitive stresses on the joints and muscles as the graduate sonographers do.

The CMA's *Basis of Accreditation* is very clear on issues related to ensuring that students are provided with a safe work environment, and that they are fully informed regarding real and potential hazards associated with the clinical sites. The CMA's concern with student safety is summarized as follows: "The program ensures student safety and exposure to safe practices (Critical Criterion) (Requirement 2.4, *Basis of Accreditation*, 1999). This requirement is one of eight identified in the *Basis of Accreditation* as being critical, non-negotiable items that must be satisfied for a program to achieve accredited status.

In order to satisfy Requirement 2.4 programs must adequately document evidence that student safety has been ensured throughout all phases of the program; their physical, psychological and academic well-being has been supported; and the working environment meets all applicable safety standards.

Ensuring ongoing quality control. During the interviews respondents often stated that one of the most important benefits of the accreditation process was its insistence that programs participate in ongoing self-evaluations. Critically comparing

the degree to which a program is meeting the standards and expectations laid out in the *Basis of Accreditation* was reported to have value when it was repeated on a regular basis and used to monitor program quality.

While the interview data did not suggest that only accredited programs could offer and maintain credible, high quality educational opportunities to sonography students, it did support the contention that non-accredited programs were not compelled to participate in regular, objective self-evaluations. More importantly interviewees indicated that accreditation requires programs to act upon issues and deficiencies identified by these self-evaluations and thereby assures a level of program accountability and quality that might not be there without the scrutiny of an outside agency.

When asked to identify the three most beneficial outcomes of the accreditation process the Redding study cited "self-evaluation" as being among the top three -- "maintenance of standards," and "objective, peer evaluation" were the other two. This finding correlates well with those of this study. However, since the questionnaires sent out by Redding did not ask for any clarification or explanation from the 366 respondents who responded to this question it is only possible to acknowledge that the self-evaluations were valued by these individuals. The significance of this study's findings is that although self-evaluations were reported to be highly valued and can be done without the involvement of an outside agency, accreditation was seen to provide an external check that ensures that they are actually done, and that they are done on a regular basis.

Encouraging programs to improve. The analysis of the interview data revealed that many of the clinical instructors, and most of the administrators from the accredited programs, felt that the accreditation process not only requires programs to meet standards but also encourages them to strive to continually improve. Respondents reported that the accreditation process functions to prevent programs from operating as isolated local offerings by making the various stakeholders work together to create and maintain quality programs that are current, comprehensive credible courses that provide sonographic training from a national perspective. Three of the critical criteria identified in the *Basis of Accreditation* (1999) relate directly to the point made above: "The program provides verifiable data on student learning outcomes to demonstrate that students attain the competencies specified in the national entry-level competency profile for the profession. (Requirement 1.6),"and, "The program ensures that its personnel fulfill their responsibilities for student education throughout the program. (Requirement 4.4);" and, "The program evaluation process results in timely program improvements (Requirement 5.4)."

The interviews suggested that the "public" nature of the accreditation process makes the stakeholders -- instructors, administrators and medical advisors -- feel more accountable for the programs, and helps to ensure that these groups maintain an ongoing and active interest in program quality. As LH stated when discussing the impact of accreditation on the various program participants: "This is a partnership, an investment". Throughout the interviews with representatives of the accredited programs it was clear that the various stakeholder groups recognize each other's

importance and that programs can only satisfy the accreditation process if they have the ongoing and appropriate support of all three stakeholder groups. It was also made very clear that the major contributors to a program's success are the clinical instructors as it is these individuals who deal with the students on a daily basis, present the majority of the curriculum, and produce most of the documentation used for program self-evaluations.

Assisting programs to grow and evolve. Like many technologies, sonography has undergone substantial growth and change over the years. The eight programs that this study researched are small and each depends on the expertise of a few dedicated individuals to provide a suitable learning environment for their students. The data analysis revealed that the on-site visits by survey teams were looked upon by the clinical instructors as opportunities to gain insights into what was happening in other programs, to see how the profession is practiced elsewhere and to compare notes with colleagues from other sonography programs.

According to the CMA's 1999 publication -- *Program Assessment Report and Procedures* (p. v) -- "...a survey team includes one physician or scientist, one or two technologists and one educator. A member of the accreditation secretariat accompanies the team as a resource on accreditation procedures." The make-up of these teams is important since it assures that site visits are conducted by a variety of peers who can look critically at programs to ensure that they meet acceptable standards that are consistent with current clinical and educational practices.

For the staff of small, relatively isolated programs such as the eight Canadian sonography offerings, the opportunity to have in-depth discussions with the survey team members was reported by the respondents to provide valuable feedback. Most importantly those interviewed often explained that these visits helped to establish personal contacts with the professionals who worked in other programs. The accreditation visits provide a venue for instructors and other stakeholders to share ideas and insights regarding the design, delivery and evaluation of sonography training.

Unlike many professional bodies and their associated programs the number of individuals employed by the eight schools of sonography is still small enough for the instructional staff of each program to know each other by name. However, the accreditation visits allow the team members to gain an understanding of how program personnel function in their own work environment, and often help to nurture long term professional relationships among the individual programs and their staff. These relationships provide a form of cooperative mentorship that a number of the respondents reported as being a valuable benefit that can come out of participating in the accreditation process.

Providing leverage to bring about change. While respondents acknowledged that the accreditation process helped programs to identify their strengths and weaknesses and acted to encourage program growth and development, they also clearly valued having accreditation to back up the requests and proposals needed to bring that growth and development about. The accreditation process can influence the

rate and extent of program changes by applying one or other of two major sources of influence. In the first case the CCA may provide one or more written recommendations for program improvement in a program's accreditation report. Recommendations may be minor or major in nature but must be addressed if the program's accreditation status is not to be jeopardized. The second way that a program can be influenced is by referring to *the Basis of Accreditation* and using its directives to justify a proposed action or change.

The medical advisors and program administrators made frequent references to the important role played by accreditation in assisting them to get the support for the resources needed to bring the training program up to acceptable standards. The data showed that accredited programs may be more demanding in two ways. First, as these programs are held to a set of national requirements by the CMA, they must be able to provide a wide range of clinical learning experiences to their students in order to ensure that a truly national perspective of the current practice of sonography is presented during the training program. Second, because they must demonstrate that they participate in, and respond to regular self-evaluations, they are compelled to be introspective and responsive to program needs. While these factors may or may not be true of the non-accredited programs, respondents reported that they definitely were for the accredited offerings.

Exerting political pressure in support of program goals. In the case of the eight programs investigated for this study sonography was not the only training program offered by the hospital or institution. The schools of sonography are small

both in terms of staffing and student intakes, and have to compete for funding and other forms of support with other programs, departments and hospital or institutional priorities. Respondents reported that having a national accreditation process adds credibility to the program and its goals and provides support that comes from beyond local boundaries. As OF described: "I use accreditation as a political ploy to get what I need."

Assuring portability of professional credentials for graduates. Access to the ARDMS examinations -- currently accepted across Canada as the professional credentials needed to work as a diagnostic medical sonographer -- is limited to individuals who meet the examination prerequisites set by the ARDMS. Even though it is possible to challenge the ARDMS examinations by graduating from a non-accredited program, many of this study's respondents commented that their graduates would lose access to the certification examinations and thereby jeopardize their portability of employment if accreditation was withdrawn. These respondents came from two of the three stakeholder groups -- the program administrators, and the medical advisors.

The CSDMS has chosen to accept the ARDMS examinations and their credentials as the standard for sonography professionals in Canada. The ARDMS recognizes eight different prerequisites to access its. Unless the CSDMS changed its stance, or the ARDMS revoked a number of its prerequisites, Canadian graduates from the seven of the eight Canadian programs would have no difficulty getting approval to write the American papers. The only program that might be affected

would be the first discipline program currently offered by Mohawk College. Since this is a three year first discipline program open to high school graduates, it must be accredited, if it were not accredited it would have to become a four year program in order to ensure that its graduates could challenge the ARDMS examinations.

Enhancing program and graduate status. Representatives of all of the three stakeholder groups said that being accredited resulted in programs being viewed differently. They stated that prospective students were more likely to apply to and attend an accredited program since such programs are seen to offer better education than might be available at a non-accredited program. A number of individuals felt that being a graduate of an accredited program made the graduate more desirable as a potential employee, and related that this was something that they looked for themselves when seeking new staff members. During the interviews the respondents often equated accreditation with an assurance of a program, and the departments associated with, it achieving high standards, and although non-accredited programs might also provide quality training, the accreditation process provides a level of assurance that everything that should be in place is in place.

Ensuring that graduates are competent. When discussing the issue of competence, the respondents described the major difference between accredited and non-accredited programs as being the number of competencies that are taught, rather than the depth to which the students master a particular skill.

The *CSDMS National Competency Profile* identifies the specific skills expected of an entry-level sonographer working in each of the following areas and

specialties -- Ultrasound Physics and Instrumentation; Abdomen; Neurosonology; Obstetrics and Gynecology; Opthalmology; Cardiovascular Principles and Instrumentation; Physics; Adult Echocardiography; Pediatric Echocardiography; Vascular Physical Principles and Instrumentation; and, Vascular Technology. Since the skills identified apply to entry-level performance, accredited programs are required to provide sufficient class time, and opportunities for clinical practice to assure that program graduates are able to competently perform a full range of the procedures outlined in the *CSDMS National Competency Profile.*

The interviewees stated that students who train in a non-accredited program may or may not graduate with as many skills or competencies as those who complete an accredited course. This was supported by a number of individuals who claimed that when new employees who came from a non-accredited program joined the department they often took longer to learn all of the procedures performed there because they had not been exposed to a full range of clinical practice as students. However, no one suggested that these individuals were less capable, they simply stated that it took longer to fully integrate them into the departments.

Relating standards and competence to safety. Comments related to the links between accreditation and the assurance that standards were being met occurred throughout the interviews. In many cases the respondents indicated that meeting national standards proved that their internal quality control mechanisms were adequate and that no major deficiencies were present. On a number of occasions individuals indicated that patient safety is assured if programs meet the standards

identified by the CCA. The basis for this contention was that by satisfying accreditation requirements programs have to: "...meet a certain standard of training" (AZ). Since negligence can be defined as failing to provide: "...a fair, reasonable and competent degree of skill" (Good, 1973, p. 52), the ability of a program to objectively verify that its graduates possess the all of the skills needed to function as entry-level sonographers protects the program, its students, and the public. According to the three respondents who addressed this particular issue, the accreditation process and its focus on assuring that programs provide training in those skills and competencies that are both generic and current, adds a degree of protection that might not be present in the non-accredited offerings. This concern may be especially valid since the practice of sonography, unlike most of the allied health care professions in Canada, is not presently regulated by the provinces.

Research Question 3

What impact does accreditation have on the way that a program operates?

Although none of the themes and issues identified by the data analysis clearly addressed this particular question, many of the respondents provided useful insights in the course of the interviews. Two major categories of comments were identified when considering the impact that accreditation has on the operation of programs -- The need for resources and specific learning opportunities; and, The responsibility to demonstrate compliance with accreditation requirements.

The need for resources and specific learning opportunities. Accredited programs are required to ensure that they cover all of the competencies identified in

the national competency profiles for the discipline they are teaching. In order to do this the programs need to provide their students with a broad range of didactic classes and practical and clinical experiences. Since summaries of ongoing program self-evaluations, student feedback, and the results of employment and certification examinations must be submitted with applications for accreditation, programs must make sure that they provide adequate access to all of the resources needed to meet the CMA's requirements.

Respondents identified five program areas that accreditation influenced -- Providing adequate classroom space and teaching resources; Didactic and clinical teaching; Required committees and reporting structures; Access to a full range of patients and equipment; and, Staff competence.

Providing adequate classroom space and teaching resources. During the interviews the provision of a dedicated space for program students to attend classes was reported as being one of the items that the accreditation survey teams look for. In order to become accredited the respondents stated that a suitable site equipped with a representative collection of current textbooks, journals and audiovisual resources must be available to the program's students.

Didactic and clinical teaching. Programs offering training in sonography may present the curriculum in a number of ways. However, accreditation requires all programs to cross-reference their curricula to show how the program covers the competencies identified by the national profiles. Furthermore, the CMA requires that the personnel responsible for teaching the students hold all of the: "...relevant

educational, technical, medical and other expertise to support student learning to the level required to meet the objectives" (CMA, January, 1999).

A number of those interviewed indicated that accredited programs have to teach all of the national competencies and, where resources or opportunities are not present, they have to find them. These same individuals related that being accredited means that a program must be able to prove that what should be in place is in place. This was described as always having to be prepared to explain what the program is doing in order to meet all of the accreditation requirements.

Required committees and reporting structures. Although the accreditation process does not consider itself to be "prescriptive" it does require that programs provide a variety of written evidence to demonstrate that accreditation requirements have, and are being met. Typically this "evidence" includes -- program organizational charts; ARDMS examination results, and employment statistics for program graduates for the most recent five years; summaries of program self-evaluations; curriculum vitae for program staff; and minutes of key committees such as the Faculty Liaison, Hospital Liaison and Program Advisory committees

The individuals who were interviewed for this study felt that because of accreditation their programs had to ensure that a number of specific committees, forms and procedures were in place in order to satisfy the CMA that their programs were in full compliance with accreditation requirements. While representatives of the non-accredited programs claimed that their programs also had all of these

mechanisms, they volunteered that they done so of their own will even though they were not compelled to do so.

Access to full range of patients and equipment. Sonography, as it is practiced in various departments, is affected by a number of factors including -- patient demographics, the variety and currency of the available equipment, the size of the department and their staff, and the focus of the facility (pediatric hospital, cancer center, private clinic, general hospital, cardiac clinic and so on). In order to satisfy the requirements of the accreditation process programs must provide their students with opportunities to become competent in the full range of skills identified in the national competency profiles for their profession.

Respondents explained that accredited programs could not tailor their programs to just meet local goals and resources, but must somehow find the resources to provide the students with training that provides an overview of sonography as it is practiced nationally. As a result of this, accredited programs were viewed as having to offer "complete" learning experiences for their students, and cannot elect to leave portions of the curriculum out.

Staff competence. A substantial portion of the sonography training program is delivered by having the students gain hands-on experience by performing patient studies in the clinical departments. In order to ensure that these studies are performed safely, fully and to an acceptable level of quality, the students are supervised graduate technologists. Since there are usually more students than there are clinical instructors,

much of the supervision and direction is provided by the general staff of the departments.

When discussing the ways that accreditation affected the organization of programs a number of individuals remarked that it encouraged the technologists to be more careful with their own work, to try harder to adequately address student concerns and questions, and that it made departments more accountable for ensuring that all of the staff were adequately trained to perform the procedures that they were expected to perform. A few respondents acknowledged that they felt a greater responsibility to perform their work professionally and competently because the program was accredited.

The responsibility to demonstrate compliance with accreditation Requirements. Many of the respondents from the non-accredited programs reported that they felt that their programs had all of the same features as the accredited offerings, and that becoming accredited would not require them to do anything more than they were already doing. The individuals from the accredited programs said much the same thing when asked what would happen if their programs dropped out of the accreditation process. What did come up repeatedly in the interview data was that being accredited carries with it a responsibility to prove that a program is meeting all of the accreditation requirements. The non-accredited programs can choose which requirements to meet, and do not have to furnish proof that they have done so to any outside agency.

Research Question 4

Why have four programs elected not to pursue accreditation?

The interview data revealed three major reasons why four of Canada's eight sonography programs have chosen not to pursue accreditation -- *The cost versus benefit ratio; Government discouragement; and, Being accredited would not change the program.*

The cost versus benefit ratio. Being accredited involves two different categories of costs -- direct costs and indirect costs. The direct costs of accreditation are the accreditation fees paid to the CMA to cover the costs of the on-site survey, and for the administrative costs borne by the CCA's office in Ottawa. The indirect costs are difficult to quantify accurately. The indirect costs include, but are not limited to, -- the time and manpower expended to complete the accreditation applications and to maintain required program committees; teaching resources beyond those which might otherwise have been deemed adequate; ensuring that program staff maintain ongoing professional development; and, the time and manpower devoted to regular program self-evaluations.

No matter how it is calculated, accreditation has real costs associated with it. Benefits, on the other hand, are more subjective. Most of the individuals representing the non-accredited programs claimed that there are two objective measures of a program's success -- graduate employment statistics, and the certification examination results. Since the same individuals saw no difference in these two

indicators for the accredited versus the non-accredited programs, they stated that accreditation offered no tangible benefit and therefore, is difficult to justify.

Government discouragement. Ultrasound training programs in Canada follow a number of different models. In the case of those offerings that utilize the services of community colleges or technical institutes, they are subject to the regulations under which the college or institute operates within the province that it is located. While in one of the provinces investigated for this study government regulations required that the sonography program pursue accreditation, in another province there was a program that was actively dissuaded by a branch of the provincial government from applying to the CMA for accreditation. This finding resonates well with the conceptual model presented in Chapter 2. Notwithstanding the fact that ultrasound as a profession is unregulated, provinces can, and do, apply various pressures to regulate aspects of the training programs.

Being accredited would not change the program. The documentation published by the CMA related to accreditation is readily available to the general public. These documents identify the mission, values, philosophy and operating principles of the CCA, and clearly describe the various requirements for accreditation. Whether accredited or not, programs can obtain copies of the same resources, textbooks, national competency profiles and ARDMS guidelines. Department staff, and clinical personnel from all of the sonography programs are expected to have the same skill sets, perform the same procedures, and teach the same material regardless of the program they are associated with.

When respondents from the non-accredited programs were asked why their program had chosen not to seek accredited status they often said that they were already doing all of the same things that the accredited programs were. These individuals felt that going through formal accreditation process to acknowledge this would simply add to the workload while not changing their program in any way.

Summary

An analysis of the interview data provided insights into the four research questions that underpinned this study. Regardless of the stakeholder group they represented the individuals interviewed for this study described accreditation in the same way.

There were no ubstantial differences between the descriptions provided by the respondents from accredited programs when compared with those from representatives from the non-accredited offerings.

Stakeholders involved in accredited programs valued the process and identified ten separate themes related to the benefits associated with being accredited -- Providing protection to the students; Ensuring ongoing quality control; Encouraging programs to improve; Assisting programs to grow and evolve; Providing leverage to bring about change; Exerting political pressure in support of program goals; Assuring portability of professional credentials for graduates; Enhancing program and graduate status; Ensuring that graduates are competent; and, Relating standards and competence to safety.

The interview data revealed that accreditation impacts the way that programs operate in two major ways -- The need for resources and specific learning opportunities; and, The responsibility to demonstrate compliance with accreditation requirements. Further, the analysis identified five program areas that accreditation influences -- Providing adequate classroom space and teaching resources; Didactic and clinical teaching; Required committees and reporting structures; Access to a full range of patients and equipment; and, Staff competence.

When asked why four of the sonography programs had not pursued accreditation the respondents offered three major reasons -- The cost versus benefit ratio; Government discouragement; and, Being accredited would not change the program.

CHAPTER 8

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This chapter presents an overview of the study and its key findings. The study's four specific research questions are used to provide context for the findings, which are then followed by conclusions drawn from the data analysis. The chapter includes a section on recommendations, followed by a revised conceptual model, personal reflections and a summary.

Overview of the Study

The purpose of this descriptive study was to explore the reasons that four of eight Canadian programs in diagnostic ultrasound technology voluntarily chose to enroll in the accreditation process of the CMA. The study was guided by four specific research questions -- these are presented later in this chapter.

To gather the data for the study I interviewed 14 individuals representing three major stakeholder groups from the programs. The stakeholder groups were -- the clinical instructors, senior administrators, and the program medical advisors. For the four accredited programs I carried out one-on-one, in person interviews with representatives of all three groups. These interviews took place at the program sites in Edmonton, Calgary, St. John's and Halifax. For the accredited programs I interviewed four clinical instructors, four administrators, and three medical advisors. To obtain data from the non-accredited programs -- Vancouver, Hamilton, Toronto and Winnipeg -- I held one-on-one telephone interviews with administrators from

three of the four non-accredited sites. One site was not willing to participate in this study.

To maximize the data obtained I audio-taped each interview and/or used field notes. To assure that confidentiality was maintained I transcribed all of the tapes myself, and used a random two-letter code to identify each of the study's respondents when quoting from the transcripts. Current brochures from the eight programs and other published information available to applicants were used to provide additional information on the context under which each program operates.

As this was a descriptive, exploratory study I used semi-structured interviews that were guided by a set of stakeholder-specific interview guides. These guides are included as Appendices A, B and C. The data from the interviews was analyzed using a methodical five step process described on pages 42 and 43 of this study.

Key Findings

The key findings are presented in this section under the four specific research questions that underpinned the study.

Research Question 1. "How do each of the stakeholder groups describe accreditation?"

1. The three stakeholder groups all described accreditation and the accreditation process similarly. Their descriptions were consistent from one group to the next.
2. The 11 respondents from the accredited programs and the respondents from the non-accredited programs described the process using equivalent terms and demonstrated no differences in their understanding of accreditation.

3. All of the respondents provided descriptions of accreditation that were very consistent with the descriptions published by accrediting bodies such as the CMA, Council for Higher Education and others.

4. Regardless of their varied backgrounds and previous experiences with the CMA, the respondents were able to provide clear, consistent descriptions of accreditation.

Research Question 2. "What value is placed by the stakeholder groups on the program being accredited?"

1. Accreditation ensures that students are protected in three general areas -- Program content; Program policies; and, Student safety.

   1.1 Program content. Accredited programs are required to ensure that their program teaches all of the competencies and skills identified by the profession's national competency profiles.

   1.2 Program policies. Programs that are accredited must demonstrate that they have policies in place that prevent their students from being treated inappropriately. These policies are primarily intended to protect students from viewed as "unit-producing" staff members.

   1.3 Student safety. A major requirement of the *Basis of Accreditation* is the assurance that program students are provided a safe work environment and have full access to, and awareness of, services and resources that support or enhance their safety. This requirement includes aspects related to their physical, emotional, and psychological well-being.

2. Programs that are accredited must participate in regular self-evaluations. By

continually reviewing the degree to which the program complies with the requirements of accreditation, programs are ensured of ongoing quality control.

3. Accreditation encourages programs to continually improve. Its focus on national standards prevents programs from simply meeting local needs and makes them strive to offer training that provide the students with a broad, current and comprehensive view of sonography.

4. The accreditation process assist programs to grow and evolve by providing feedback to programs. The on-site visits by the survey teams often result in program staff establishing new professional relationships and contacts with their peers from other programs.

5. Accreditation can provide programs with leverage to bring about change. This may speed up the rate of change or result in a change in its degree and extent. Programs often find the recommendations made by the CCA to be useful tools when seeking additional resources.

6. Programs may use accreditation in order to exert political pressure to support program goals, and to assist them when competing with other groups or departments for support.

7. Access to the profession's certification examinations is assured by being an accredited program. The credentials obtained by successfully challenging these papers allows graduates to work anywhere in Canada. Thus, accreditation is seen to assure the portability of professional credentials within Canada.

8. Both the programs and their graduates gain status when a program is accredited.

This makes the graduate more desirable as potential employee, and makes the program more attractive to potential students.

9. Graduates of accredited programs are more likely to possess a greater number of competencies than graduates from non-accredited programs. This allows the graduates of accredited program to more rapidly integrate into the clinical environment, and makes them more flexible in terms of the procedures that they are capable of performing.

10. Accredited programs are required to meet a wide range of published, national standards. Meeting these standards assures that there are no major deficiencies present in the training model. Graduates for these programs are assumed to possess the skills and competencies needed to function safely as entry-level practitioners thereby protecting the employer, the public, and the profession.

Research Question 3. "What impact does accreditation have on the way that a program operates?"

1. In order to become, and remain accredited, programs need resources and must provide specific learning opportunities.

1.1 Accredited programs must provide adequate classroom space and comprehensive variety of current textbooks, journals and audiovisual materials. Classrooms need to be equipped with audiovisual devices consistent with current trends in educational delivery.

1.2 Program curricula must be cross-referenced to the competencies identified in

the national competency profiles for the profession in order to ensure that all of the competencies identified in the profiles are taught. Also, all of the program's teaching personnel must hold relevant expertise consistent with their teaching responsibilities.

1.3 All accredited programs must establish and maintain a variety of committees and reporting structures to provide "evidence" that they comply with the requirements listed in the *Basis of Accreditation.*

1.4 Students enrolled in accredited programs must be provided with opportunities to access to a full range of patients and equipment.

1.5 Students gain much of their hands-on experience by working under the supervision and guidance of staff members. Accredited programs must ensure that the staff who supervise students are competent practitioners.

2. Accredited programs have on ongoing responsibility to be able to prove that they meet the requirements of accreditation. This can be achieved by programs actively participating in comprehensive record keeping, and by carrying out self-evaluations on a regular basis.

Research Question 4. "Why have four programs elected not to pursue accreditation?"

1. The direct and indirect costs of being accredited exceed the value of the perceived benefits of enrolling in the process.

2. The regulations and policies of the provincial government discourage participating in accreditation processes that are not mandatory.

3. Participating in the process would not change the program since it already meets

all of the same standards, and has all of the same committees and structures as the accredited programs have.

Conclusions

The study's findings supported the following conclusions:

1. Stakeholders in the eight sonography programs in Canada have a clear and consistent understanding of the CMA accreditation process. This contention is supported by the fact that each stakeholder group described the process using similar terms, and that these descriptions were equivalent for respondents from both accredited and non-accredited programs.
2. Participants in the accredited and non-accredited programs have the same understanding of the accreditation process.
3. Accreditation is a student-focused process that effectively protects their interests. Although the study did not involve students as respondents, those interviewed work directly with this group and frequently supported this conclusion.
4. Accreditation encourages and aids programs to exceed minimum national standards. The respondents repeatedly spoke to the value of interacting with peers from other parts of the country. Accreditation provided opportunities for this to happen and for professional relationships to evelove.
5. The recommendations made in accreditation survey reports provide programs with objective support and a source of political influence to make changes.
6. The portability of professional credentials is seen to be enhanced, and sometimes

ensured, by being an accredited program. The data analysis showed this to be a perception rather than a reality as portability is really linked to the ARDMS credentials.

7. Accreditation is valued by employers and by potential students. This conclusion was supported by the study's respondents who often played a role in the hiring of staff, and selection of program students.

8. Staff of accredited programs reported a link between the process, program comprehensiveness and safety. Graduates of accredited programs are viewed as being safe practitioners who possess all of the entry-level skills identified in their profession's national competency profiles.

9. Accredited programs must provide all of the physical, teaching, clinical and technical resources needed to teach all of the national competencies to the level expected of a new graduate.

10. Respondents frequently cited perceptions of the cost/benefit ratio as being a key determinant when deciding on whether or not to pursue accreditation. Programs may elect to become accredited or remain non-accredited their assessment of the cost versus benefit ratio.

11. As all of the requirements for accreditation are well known to the sonography community any program knows what exactly is required of accredited offerings. Non-accredited programs may feel that the only difference between them and the accredited offerings in the possession of a certificate from the CMA.

12. Depending on where a program is located, and the political situation at the time

the program is operating, the relevant provincial government departments responsible for post-secondary education may require programs to seek accreditation, or may actively discourage them from pursuing it.

Recommendations

The study's conclusions led to the following recommendations for future research:

Recommendations for Future Research.

The data that this exploratory study is based on was derived from interviews with three stakeholder groups -- the clinical instructors, senior administrators, and the program medical advisors of seven of Canada's eight formal training programs in diagnostic medical sonography. The focus of the study was to determine why four programs in sonography had voluntarily enrolled in the CMA's accreditation process. In-person interviews were carried out with all three stakeholder groups from the accredited programs, with telephone interviews being used to gather information from the administrators of three of the four non-accredited programs.

The potential exists for further research to be carried out in the following areas:

1. A study comparing the success of students from accredited programs with that of graduates from non-accredited programs. Employment and examination results as well as the personal opinions of representatives from the two groups could provide insights into the effect that accreditation on the quality and success oftraining programs in sonography.

2. Interdisciplinary understandings of accreditation. Do the stakeholders from the other professional groups accredited by the CMA have the same views of accreditation as those interviewed for this study? This study concluded that sonography program staff have consistent understandings of this, but it cannot be generalized to other groups without performing a further study.

3. The role of provincial government regulations and policies in the accreditation of postsecondary education programs for allied health care professionals. The influences exerted by government at the local and national levels were touched on by two of the respondents. As the revised contextual model illustrates, the role(s) of government are pervasive but largely undefined in the context of the accreditation of allied health discipline programs.

4. Costs issues related to accreditation. A detailed analysis of the direct and indirect costs of accreditation would be of interest to programs considering applying for accreditation, and would help accredited programs to ensure that the manpower and budgetary needs to adequately support the process. The respondents in this study often spoke of the costs of accreditation but were unable to give any dollar figures to support their comments.

5. The extent to which resources and personnel are made available to the accredited programs versus the non-accredited programs could clarify the degree to which these models are similar If accreditation does influence the way that programs operate it should be evident in the range and quality of support that is made available. A careful

comparison of the various resources available to the accredited and non-accredited programs could provide support for the views expressed by respondents in this study.

6. Entry-level competencies of graduates of accredited programs compared with those of graduates from non-accredited offerings. Researching these two groups could provide evidence to support or refute the views of some of this study's respondents. Differences in the amount of time needed for new graduates to assimilate into the routine of departments, and identifying the specific skills they are reported to have or lack would provide useful data.

7. National standards compared with local expectations. Are there significant differences in the way that sonography is practiced in various regions of Canada? A study could be carried out comparing the national competency profiles with local demands and needs in a variety of regions.

8. Do sonographers need different or lesser skills to work in a hospital as opposed to a private clinic? Are there important differences in the patient demographics, procedures and equipment that require sonographers to use different and distinct skills?

9. The value of being an accreditor. Research on the benefits that survey team members gain from the experience could provide insights that would be useful to accreditation bodies and to potential surveyors. Findings might also help to convince employers to allow their employees to participate on accreditation teams.

10. The relationship between competency and creativity. The data analysis of the

interviews for this study revealed that one respondent was concerned that the move by professions to identify specific competencies threatened creativity. For most of the allied health professions national competency profiles have only been available for the last two or three years. Research on perceptions of how creativity has been impacted by these profiles could identify unexpected relationships between the two.

11. The effect of a department participating in a training program in an allied health profession. Studying departments with similar demographics but with one group affiliated with a training program while the other is not could reveal whether there are differences in the ways that staff view their work and do their jobs.

12. The effects of downsizing and cutbacks on training programs. In what ways have recent reductions in staffing and funding affected training programs in allied health care? Research could look at program quality, attrition rates, and staff and student satisfaction and do a retrospective comparison to assess these issues.

13. In September of 1994 the Canadian Government released its *Agreement on Internal Trade.* This legislation supports the portability of skills and licensure within Canada and specifies that any move by a profession to alter occupational standards must not limit portability of credentials (AIT, point 3, Chapter 7, Annex 708, Part II). A study exploring the potential changes in the credentialing of sonographers by the CSDMS and provincial colleges of medical radiation technologists would add to the body of literature in the regulation of the allied health professions in Canada.

Revised Conceptual Model

The original conceptual model of the accreditation process presented as Figure

2.1 on page 31, proved to be particularly helpful during the data analysis phase of this study. The linkages suggested between the government, professional associations, programs and employers were all supported by the data, and helped to organize and clarify issues that arose as themes emerged. The model suggested that many of these linkages are characterized by two-way exchanges of information and opinion. For example, the creation of the *CSDMS National Competency Profiles* (1998) was based on the data compiled from detailed questionnaires sent out to the entire CSDMS membership; while the CMA used questionnaires, a series of "open" meetings and personal correspondence with programs that were undergoing accreditation visits to gather the data and opinions it needed to revise the national accreditation process (CMA, 1991; July, 1996; March, 1997).

As I used the conceptual model and reflected on how themes emerged from the data analysis two components were conspicuously absent from the original model. First I failed to recognize that the employer may influence the curriculum taught by the training program, and, the curriculum can influence the employer. This contention is supported by comments from respondents such as OF who stated that: "...people are training the sonographers to meet the needs of their provinces," and SH who reported that: "If the accreditation team comes in and says that there's not enough equipment, ...it's great leverage." The second limitation of the model is that it did not explicitly identify that two contexts influence accreditation -- a local context, and a national one. This is particularly evident when comparing the roles played by the

professional bodies and the accreditation process -- primarily national -- with those of the programs and employers -- for the most part these are local.

In revising the conceptual model (presented as Figure 8.1 on page 147) I have added the following:

1. A new link between the employers and the curriculum.

2. A second box for government to represent the provincial level and its influence on programs. For the provincial government box I have used the term "policies" rather than "legislation."

3. A pair of ovals to represent the influence played by the national and local contexts. These overlap in the middle since the contexts may compete for control

4. As the programs can only operate if they have a wide variety of support and resources I have changed the box labeled "Programs" to "Institutional Programs" in order to emphasize the complex interactions between hospitals, clinics, colleges, and/or the other educational institutions that are needed to mount successful programs.

5. In order to highlight the central role played by the "Institutional Programs" in the accreditation process I have also doubled the frame around its box.

Based on the data that I collected, the new model would not have changed the outcomes of this study. However, if I were to start the process again based on the revised conceptual model, I would change some of the questions that I asked during the interviews, and would add a number of others. In such a scenario the data would also change, and, perhaps some of my conclusions would have to as well.

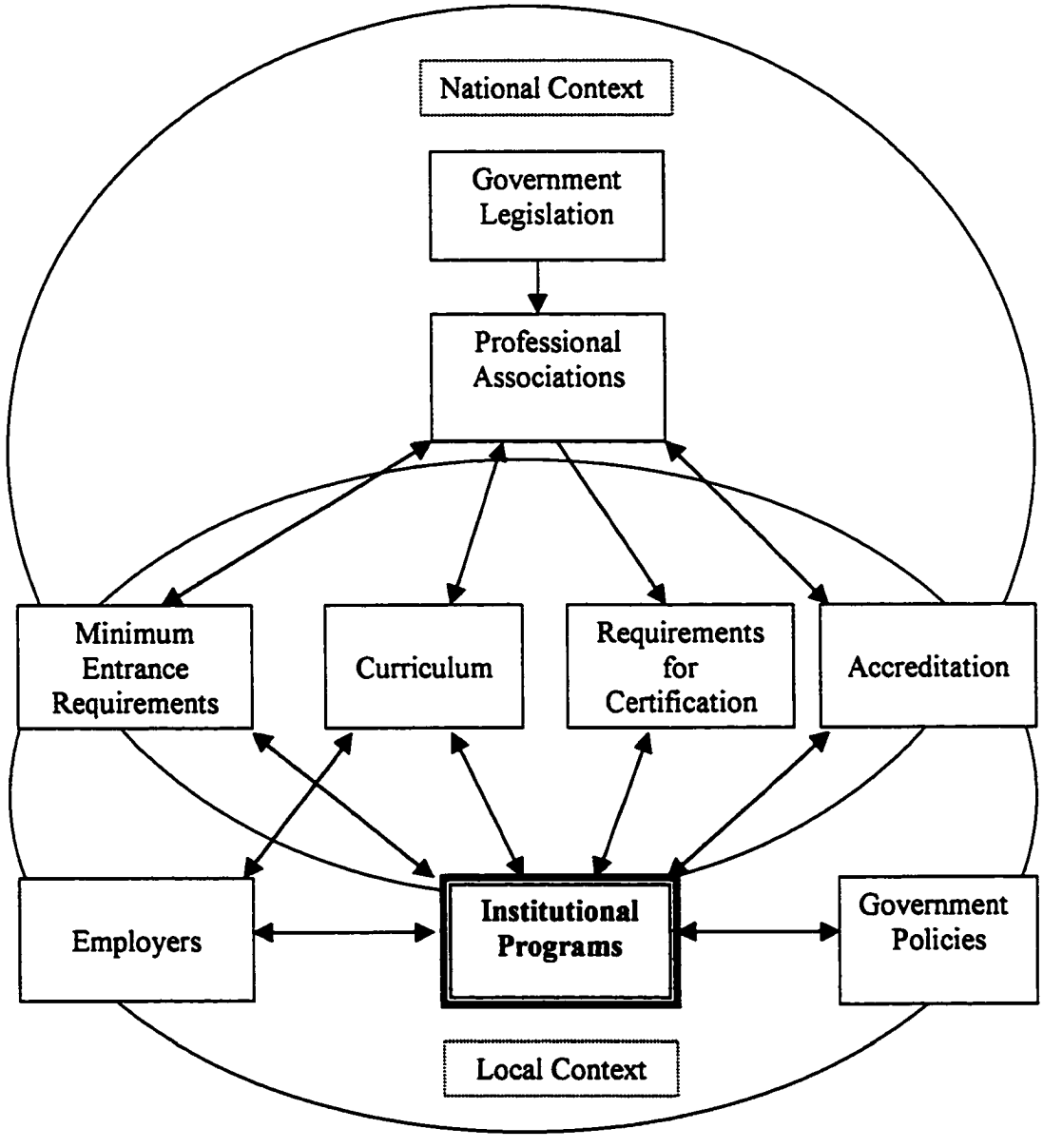

Figure 8.1. Revised conceptual model of the accreditation process

Personal Reflections

This study was undertaken because I believed that the accreditation process offered by the CMA was a complex relationship that involved the CCA, the professional associations, the employers and the local programs. I expected that my research would reveal that the stakeholder groups had different understandings of what of accreditation was, and that there would be very different views of the process put forth by individuals associated with the accredited programs when compared with those persons affiliated with the non-accredited offerings. Finally I suspected that the individuals I interviewed might wonder why I was investigating a field that I was not a practitioner of.

Now that the interviews are over, the transcripts typed and analyzed, and my thoughts and impressions have been put to paper I can see that many of the beliefs that I started out with were "off the mark." The relationship that I thought to be complex is far more intricate, and involves many more individuals and bodies than I had initially suspected. The accreditation process as it applies to Canada's eight sonography programs is also a "work in progress," rather than a set process incapable of change. Even during the 18 months that I spent preparing for, researching and completing this study I saw many changes occur in how the CMA assesses programs, in which programs were or were not involved in the process, and in how the various professional associations viewed access to professional credentials. The opportunity that exists to study of the views of the program staff at Mohawk College comparing their views before and after being accredited would be an interesting study.

To my surprise I found that the three stakeholder groups all described accreditation and the process in very similar, and consistent ways. This same result was found when speaking with individuals from the accredited programs and comparing their responses with those of those from the non-accredited programs. For me the most surprising outcome of the study was the willingness of the respondents to take part in it and to answer my questions willingly and with candor and even enthusiasm. Again, a study of what the Mohawk staff feel about being accredited could provide an interesting piece to the available work on accreditation.

In terms of the actual process of data gathering I was pleased to find that I did not feel that any of the respondents viewed me as an outsider, and in the majority of cases I felt that those being interviewed were trying their very best to provide me with complete, and comprehensive responses to my questions.

This study has taken me more time and effort than I had thought it would. However, it has taught me a great deal about myself, my colleagues and the importance of recognizing how intricate and widespread the interactions are that create the contexts in which we function. Without going through this process I feel that I would have missed an opportunity to gain a new perspective on my own world, a different set of lenses that will help me see things just a little bit clearer and, perhaps, a little more objectively.

Summary

This descriptive study set out to explore the reasons why four of Canada's

eight formal training programs in diagnostic medical sonography have voluntarily chosen to enroll in the accreditation process of the CMA. Using the data from interviews with 14 individuals from three stakeholder groups from seven of the eight sonography programs, and a review of a variety of program documents, I identified a total 33 emergent themes and issues related to the research questions that underpinned the study. This chapter presented the key findings of the study as they related to the study's four research questions, along with the conclusions that came out of the findings. Recommendations for future research, a revised conceptual model of the accreditation process, and personal reflections concluded the chapter.

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APPENDIX A

Glossary of Terms

Glossary

Throughout this thesis a number of terms are used in very specific ways. For the purposes of this study the author intended that the terms below should be understood to mean:

Accreditation Status. The outcome of an accreditation survey is the determination by the survey team of the extent to which a program has met established standards and expectations. A program may be granted full accreditation with no conditions, or it may be granted accreditation with the understanding that it supplies further documentation, or other proof of actions taken to address minor deficiencies. In some cases a program may be given conditional accreditation until the team has been convinced that it has satisfied a number of major concerns that the team identified; or it may be denied accreditation outright. As well as the "level" of accreditation granted, the duration of the accreditation may vary from months to years -- six years is the usual maximum duration given by the CCA. The combination of these factors constitutes the accreditation status.

ARDMS - *The American Registry of Diagnostic Medical Sonographers® (ARDMS®), incorporated in June of 1975, is an independent, nonprofit organization in operation to administer examinations and award credentials in the areas of diagnostic medical sonography, diagnostic cardiac sonography, vascular technology and ophthalmic biometry.* (ARDMS, 2000) This society although an American body, provides the examinations which Canadian graduates in medical sonography write to

obtain their professional credentials in medical sonography and its various subspecialities.

CAMRT. *The Canadian Association of Medical Radiation Technologists (CAMRT) is Canada's national certifying body for radiological technologists, radiation therapists, nuclear medicine technologists and magnetic resonance technologists. Founded in 1942 by a coalition of provincial associations, the Association today represents some 10,000 members.*(CAMRT, 2000).

CCA. *The Canadian Medical Association has coordinated the conjoint accreditation process since 1938 and continues to provide the administrative centre and secretariat. The accreditation process operates through the collaboration of 33 national professional organizations. (CMA, 2000)* The CCA or "Conjoint Commitees on Accreditation" are made up of representatives from these groups. CCA members are volunteers who collectively work towards maintaining a national accreditation process which is current, consistent and credible.

Certification Examinations. Professional bodies such as the CAMRT and ARDMS are not regulatory bodies but do control access to the process that graduates have to follow to become certified. Certification examinations are challenged upon the successful completion of an approved -- usually this means "accredited" -- program and, once passed, allow the graduate to use the appropriate professional designation -- RTR, RTNM and so on. For some designations or professional credentials the successful completion of more than one examination may be necessary -- for example

the RDMS credential requires the completion of three separate examinations before it is granted.

Clinical Instructor. Any one of the individuals responsible for preparing and presenting applied didactic material to program students. Clinical instructors act as the educational bridges between theory and practice and may spend time performing routine patient studies as well as teaching. As few clinical instructors have formal education in the area of teaching they may be viewed as mentors.

CMA. *The Canadian Medical Association (CMA) is the national voice of Canadian physicians. Founded in 1867, CMA's mission is to provide leadership for physicians and to promote the highest standard of health and health care for Canadians. ... The CMA is a voluntary professional organization representing the majority of Canada's physicians and comprising 12 provincial and territorial divisions and 42 affiliated medical organizations.* (CMA, 2000) The CMA is the body that ensures that accreditation is seen to operate at "arms length" from the programs while still maintaining a national perspective.

CSDMS. *The Canadian Society of Diagnostic Medical Sonographers (CSDMS) founded in 1981, is a society dedicated to the enhancement of patient care by promoting the science of Diagnostic Medical Ultrasound. The society has established standards of education and training and promotes continuing education for its members. The Society has adopted as its certifying examinations, the American Registry of Diagnostic Medical Sonographers (ARDMS) examinations.* (CSDMS, 2000)

Medical Advisor. A practicing physician qualified in the discipline taught by a program. This individual is identified as being the program's primary representative from the medical practitioners and is expected to take an active part in program design, providing input, advice and support when appropriate.

National Competency Profiles. A comprehensive description of the various skills, clinical competencies and behaviors expected of a new graduate in a specified discipline. These profiles are based on detailed national surveys that the professional societies periodically send out to their membership. The surveys are used to assess what a generic, entry-level technologist is expected to know and do, and provide useful data to validate the content of national examinations.

On-site visit. Accreditation surveys need to gather and assess data in order to make a recommendation on a program's accreditation status. Along with the documentation supplied with the self-evaluation, teams consider the personal input they obtain by interviewing program stakeholders during the two or three days that team generally spend visiting a program's facilities and staff. These visits also provide the team with an opportunity to evaluate the physical facilities and equipment available to the program. They also provide the team members with insights into the quality of the personal interactions among the program staff and students, and the views of individual stakeholders which might not be apparent from reading through the documentation supplied to the surveyors.

Peer Review. An in-depth assessment of the quality of a program in a specific discipline carried out by individuals who have trained and worked in the same

discipline. The reviewers must be deemed to possess knowledge and expertise that is current and credible, and should be intimately familiar with training programs in the discipline being assessed. Programs require the support of a variety of stakeholder groups in order to function and so peer reviews need to have representatives from each of the major groups -- clinical instructors, physicians, and administrators.

Program Administrator. This individual may be a manager or senior educator within the institution that offers the program. In many of the smaller programs and institutions the administrator was one of the clinical instructors. The role of this individual is to represent the views of the employer, and assure that the program's funding is in place and adequate.

Secretariat. A representative from the CMA's Ottawa office. This person is one of the three staff members who traditionally accompany survey teams on their on-site visits. Unlike the volunteers who constitute the rest of the survey team, the secretariat is a paid employee of the accreditation agency.

Self-Evaluation. Most accreditation processes rely heavily on the preparatory work done by programs prior to the survey team visits. The self-evaluation, or self-assessment, is usually based on a standardized set of documents in which the program clearly identifies how each of the required program standards and is being met by the program. These documents also require the program to provide evidence that it has introspectively assessed its own quality, identified areas of deficiency or concern, and proactively gone about addressing these. A month or more before the scheduled site visit copies of the completed self-evaluation must be provided to the survey team

members for their review. Frequently the team will conduct a conference call with key program stakeholders after receiving these documents; this allows the team to request clarification or further documentation before the visit occurs.

Survey Team. A group of peer evaluators sent to the program by the accrediting agency to review the facilities, interview program staff and students, and make a recommendation on the accreditation status of a program. Teams generally have a representative from each of the major stakeholder groups -- physician, instructor, and administrator -- and a staff member from the accrediting agency. Teams typically have a mix of new and seasoned accreditors, and have one member designated as the team chair (the chair is an experienced member but not the agency representative).

APPENDIX B

Interview Guide for the Program Medical Advisor

Interview Guide for the Program Medical Advisor

1. *How do each of the stakeholder groups describe accreditation?*

How would you describe accreditation?

Prompts - How do you think administration would describe it?

What about the clinical instructor?

How would you describe the actual accreditation process?

If you could change the process what would you change and why?

Has your view changed over the years, and if so how?

2. *What value is placed by the stakeholder groups on the program being accredited?*

How do feel about your sonography program's being accredited?

Prompts - In what ways do you feel accreditation benefits the program?

Who receives these benefits?

Could these benefits be achieved without accreditation, and if so how?

What would happen if your program withdrew from the process?

What would your reaction be if the program withdrew from the process?

How do you feel the students view accreditation?

How do you feel the public views accreditation?

How do you feel about accreditation being optional for sonography programs?

How would you feel if a sonographer who trained at a program that was not accredited applied for a position with your department?

Would you explain your reasons for feeling this way?

How do feel applicants who apply to the program view its being accredited?

Has this changed the nature of applicant, and if so how?

Have you participated on an accreditation team, and if so how would you describe the experience?

If you haven't would you consider being on one and what would you hope to learn from the experience?

3. *What impact does accreditation have on the way that a program operates?*

How does being associated with an accredited program affect your position?

Prompts - In what ways have your duties been affected?

What direct costs have been incurred through accreditation?

What indirect costs have been incurred through accreditation?

If asked to justify these costs how would you do it?

What relationship, if any, exists between accreditation and the

standards of your program?

What relationship, if any, exists between accreditation and the level of competence demonstrated by your graduates?

What relationship, if any, exists between accreditation and the level of competence demonstrated by your staff?

Have you been actively involved in preparing an accreditation application? If so would you describe how you felt about it?

If you feel that accreditation has any disadvantages what would they be?

APPENDIX C

Interview Guide for the Chief Instructor

Interview Guide for the Chief Instructor

1. *How do each of the stakeholder groups describe accreditation?*

How would you describe accreditation?

Prompts - How do you think administration would describe it?

What about the program medical advisor?

How would you describe the actual accreditation process?

If you could change the process what would you change and why?

Has your view changed over the years, and if so how?

2. *What value is placed by the stakeholder groups on the program being accredited?*

How do feel about your sonography program's being accredited?

Prompts - In what ways do you feel accreditation benefits the program?

Who receives these benefits?

Could these benefits be achieved without accreditation, and if so how?

What would happen if your program withdrew from the process?

What would your reaction be if the program withdrew from the process?

How do you feel the students view accreditation?

How do you feel the public views accreditation?

How do you feel about accreditation being optional for sonography programs?

How would you feel if a sonographer who trained at a program that was not accredited applied for a position with your department?

Would you explain your reasons for feeling this way?

How do feel applicants who apply to the program view its being accredited?

Has this changed the nature of applicant, and if so how?

Have you participated on an accreditation team, and if so how would you describe the experience?

If you haven't would you consider being on one and what would you hope to learn from the experience?

3. *What impact does accreditation have on the way that a program operates?*

How does being associated with an accredited program affect your position?

Prompts - In what ways have your duties been affected?

What direct costs have been incurred through accreditation?

What indirect costs have been incurred through accreditation?

If asked to justify these costs how would you do it?

What relationship, if any, exists between accreditation and the standards of your program?

What relationship, if any, exists between accreditation and the level of competence demonstrated by your graduates?

What relationship, if any, exists between accreditation and the level of competence demonstrated by your staff?

Does accreditation affect what you teach and if so how?

Does accreditation affect what resources you use for teaching and if so how?

Have you been actively involved in preparing an accreditation application? If so would you describe how you felt about it?

Would you describe how much time it took you to prepare for the last accreditaion survey? Was this typical in terms of effort?

If you feel that accreditation has any disadvantages what would they be?

APPENDIX D

Interview Guide for Administration

Interview Guide for Administration

1. *How do each of the stakeholder groups describe accreditation?*

How would you describe accreditation?

Prompts - How do you think the program medical advisor would describe it?

What about the clinical instructor?

How would you describe the actual accreditation process?

If you could change the process what would you change and why?

Has your view changed over the years, and if so how?

2. *What value is placed by the stakeholder groups on the program being accredited?*

How do feel about your sonography program's being accredited?

Prompts - In what ways do you feel accreditation benefits the program?

Who receives these benefits?

Could these benefits be achieved without accreditation, and if so how?

What would happen if your program withdrew from the process?

What would your reaction be if the program

withdrew from the process?

How do you feel the students view accreditation?

How do you feel the public views accreditation?

How do you feel about accreditation being optional for sonography programs?

How would you feel if a sonographer who trained at a program that was not accredited applied for a position with your institution?

Would you explain your reasons for feeling this way?

How do feel applicants who apply to the program view its being accredited?

Have you participated on an accreditation team, and if so how would you describe the experience?

If you haven't would you consider being on one and what would you hope to learn from the experience?

3. *What impact does accreditation have on the way that a program operates?*

How does being associated with an accredited program affect your position?

Prompts - In what ways have your duties been affected?

What direct costs have been incurred through accreditation?

What indirect costs have been incurred through accreditation?

If asked to justify these costs how would you do it?

What relationship, if any, do you feel exists between accreditation and the standards of programs?

What relationship, if any, do you feel exists between accreditation and the level of competence demonstrated by graduates?

What relationship, if any, do you feel exists between accreditation and the level of competence demonstrated by staff?

If you feel that accreditation has any disadvantages what would they be?

APPENDIX E

Correspondence Related to the Study

Date

Addressee

Re: *Voluntary Participation in Accreditation by Diagnostic Ultrasound Programs in Canada*

Dear **:
As I indicated during our telephone conversation of_____ I am working towards my doctorate in the Department of Educational Policy Studies of the University of Alberta and am particularly interested in researching the above.

My research will require me to carry out a series of one-on-one interviews with representatives from each of three specific stakeholder groups from the four diagnostic ultrasound programs presently accredited by the Conjoint Committees on Accreditation of the Canadian Medical Association. The personnel who I am hoping to meet with will include – the program medical advisor, the chief instructor or program coordinator, and a member of administration who sits on the program advisory committee.

My research proposal has been approved by the ethics committee of the University of Alberta, and I am now asking for your permission to conduct three, 30 – 60 minute interviews with personnel from your program. The information gathered from these sessions will form a significant part of the data necessary to draw conclusions, insights and recommendations for future research. As there are only four accredited programs in Canada at present it is very important that all of these are included in my study in order to ensure that my findings do not reflect local views or conditions.

I am planning to be available to conduct the interviews on June 17th, and between June 21st and June 27th, 1999 in Newfoundland; and June 28th and July 20th, 1999 in Nova Scotia. In order to ensure that these sessions do not interfere in any way with your program's routine I will be more than happy to meet with the interview participants at their individual convenience within the timeframe indicated.

Should you be willing to allow me to conduct the interviews needed for my study I will ensure that I provide you with copies of my research results. There will, of course, be no costs to you or your program and you may use the findings as you see fit.

Thank you for speaking with me concerning this matter. I look forward to hearing back from you at your earliest convenience and hope that you will be able to allow me the opportunity to interview these key players from your program.

Should you require any further information, clarification or supporting documentation from me please contact me as below.

Yours truly,

Glen Heggie

(780) ******** office
(780) ******** fax
(780) ******** home
gheggie@cha.ab.ca Email

CONSENT TO PARTICIPATE IN RESEARCH

Voluntary Participation in Accreditation by Diagnostic Ultrasound Programs in Canada

Dear ** ,

Thank you for offering to participate in my research study. This short letter is intended to provide you with the background information needed for me to obtain written informed consent from you to act as a participant in this research.

The intent of this study is to attempt to identify why four of Canada's nine programs in diagnostic ultrasound have chosen to voluntarily participate in the accreditation process of the Canadian Medical Association.

In order to gather the data necessary for my study, I will be carrying out a series of interviews with key personnel from each of the accredited programs. You will be asked to take part in a one-on-one confidential interview lasting for 30 – 60 minutes. I will be audio-taping these sessions and will transcribe the tapes myself following the interview. Once typed, I will provide you with a copy of the transcribed material so that you can check the written version for accuracy. The tapes will be destroyed as soon as I have successfully completed all of the requirements for my doctoral program.

Throughout the process I will ensure that your name and identity are kept confidential and that you will not be personally associated with the research findings.

I am required to inform you that you have the right to refuse to participate in the study, and that you may withdraw from participating at any time without fear of reprisal or consequences from myself, your program or employer.

This study poses no known or predictable risks or discomfort to its participants.

Should you require any further information, or clarification please contact me at your earliest convenience.

By signing below you acknowledge that you have voluntarily agreed to participate in this research study, and that you have been made aware of the intent, scope and design of the study. A copy of this letter will be provided to you for your own records.

My sincere thanks for participating in this study.

Yours truly,

Glen Heggie

(780) ******** office
(780) ******** fax
(780) ******** home
gheggie@cha.ab.ca Email

_____Participant's Name

_____ Date