

A CRITICAL ANALYSIS OF CONTINUING EDUCATION  
FOR DENTAL HYGIENISTS IN BRITISH COLUMBIA

by

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## ABSTRACT

Dental hygienists in British Columbia are required under the Dentists' Act to obtain a specific number of continuing education credits every three years to renew their licenses. The College of Dental Surgeons of British Columbia developed a set of guidelines for mandatory continuing education and utilizes this document to defend decisions awarding or denying credits for specific courses. Mandatory continuing education is used by the College of Dental Surgeons of British Columbia to ensure the public that its members remain competent practitioners. This thesis examined the effectiveness of the mandatory continuing education system in British Columbia as a quality assurance system and sets out new parameters for continuing dental hygiene education.

An analytical study, based on a review of the literature and documentation from the College of Dental Surgeons of British Columbia, led to an overview of factors influencing continuing dental hygiene education in British Columbia. Several personal interviews and observations provided additional data for this study. The overview defined several terms frequently associated with continuing education. These include "continuing dental hygiene education", "competence", "quality assessment", "quality assurance" and the concept of "needs". The goals of continuing dental hygiene education, curriculum ideas, and factors involved in designing effective continuing education activities are also examined.

It is concluded from the analysis that the mandatory continuing education system in British Columbia does not assess quality dental care and cannot be considered a quality assurance system. The recommended new perspective emphasizes that continuing professional education contributes to public welfare by directly improving the professional, while quality assurance systems are aimed at benefitting the public directly.

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## **Chapter One**

### **Introduction**

In British Columbia, dentists and dental hygienists are required under the Dentists' Act to obtain a specific number of continuing education credits every three years to renew their licenses. While many courses are available, some receive credits towards licensure and others do not. The College of Dental Surgeons of British Columbia (hereafter called the College) is the statutory body created by the government of British Columbia to regulate the practice of dentistry in the province. As the regulatory body, the College developed a set of guidelines for mandatory continuing education and uses them to defend decisions awarding or denying credits for specific courses. Many appropriate topics that could be included in the professional development of dental hygienists have been denied credit because members of the governing body hold a limited view of dental hygiene practice. They emphasize clinical competence at the expense of developing professional competence in roles other than private practice. The public and the profession have a right to expect that dental professionals will be competent educators, researchers and public health officials as well as private practitioners. Besides the issue of course topics, the recognition of specific sponsors contributes to the problem. To illustrate this point, anything offered by certain sponsors will qualify for credits whereas, similar courses offered by other sponsors will be questioned and/or rejected as credit courses. This happens with courses dealing with

effective people skills. In one case, the sponsor is being accredited while in the other, the course is being rejected. With a limited number of dollars to spend on continuing education, dental hygienists generally register for courses meeting the College credit requirements. Program designers and coordinators attempt to stay within the parameters of the College's guidelines to insure that participants receive credits for attending.

As a result, the College greatly influences the type of educational experiences dental hygienists pursue in this province. This raises several questions. What is the purpose of the mandatory continuing education system in British Columbia? Does the mandatory continuing education system in British Columbia fulfill the expectations of the licensing body? On what basis are credits awarded? The possibilities include sponsorship, course topic, course content, educational methodology, increased competence, attendance, and semantics of the course title. Are the criteria used in decision making, the necessary criteria for meeting the objectives of mandatory continuing education? What is the educational value of the mandatory continuing education system in British Columbia?

To answer these questions, this study examines the effectiveness of the mandatory continuing education system in British Columbia as a quality assurance system and sets out new parameters for continuing dental hygiene education. I first examine the literature regarding these issues in continuing education. Documentation from the College also provides data to understand the contextual implications of mandatory continuing education. On a smaller scale, personal observations and

several personal interviews provide supplemental data regarding continuing education for dental hygienists in British Columbia.

The College uses mandatory continuing education to ensure the public that its members are competent practitioners. Dental hygienists recognize the importance of continuing education and select activities that they feel will address their individual needs for professional development. Problems arise when the College Continuing Education Committee disagrees with individuals about the value of participation in certain activities.

Chapter two explores the literature on the concepts of education and continuing education as a foundation for developing a definition for continuing dental hygiene education. Any discussion concerning continuing dental hygiene education necessitates a full understanding of what constitutes continuing dental hygiene education. This chapter concludes with a proposed definition for continuing dental hygiene education which is used throughout the remainder of the study.

Chapter three examines the goals of continuing education as stated in the literature from the health professions. Examining the goals of continuing education provides a basis for evaluating the effectiveness of continuing education activities. From the variety of expectations and goals cited in the literature on continuing education, several additional concepts surface which require further clarification. These include "competence", "quality assessment", and "quality assurance". Chapter three defines these terms and explains their relationships with continuing education. This discussion clarifies the role of continuing education in professional

competence and quality assurance systems, which has impact on the goals of continuing dental hygiene education.

Chapter three continues by reviewing the evolution of continuing dental hygiene education in British Columbia. This historical perspective provides an understanding of how the current mandatory continuing education system developed and identifies the goals described in the guidelines from the College. The stated goals for mandatory continuing education in British Columbia are analyzed and the strengths and weaknesses of the system are highlighted. This discussion provides answers to many of the questions posed in this study.

Chapter four examines curriculum ideas for continuing dental hygiene education and discusses the concept of "needs". The College Continuing Education Committee uses the criterion, "directly related to the practice of dentistry or dental hygiene" as part of the decision making process for questionable submissions. This chapter provides guidance for determining the appropriate content for continuing dental hygiene education.

Chapter five briefly examines the strengths and weaknesses of various continuing education sponsors, pedagogical principles, methodologies and evaluation important in effective continuing education activities. The awarding or denying of credits by the College occasionally depends on sponsorship and methodology. This discussion highlights the significance of effectiveness in continuing education activities and provides data to support new parameters for continuing dental hygiene education based on individual approaches to continuing education.

Chapter six summarizes the conclusions found in this study. In addition, new parameters for continuing dental hygiene education are proposed. This chapter begins by summarizing the answers to each of the questions posed in chapter one, followed by a description of the new parameters. The last section of this chapter makes specific recommendations to facilitate changes toward the realization of those new parameters, based on the information presented in each of the previous chapters.

## Chapter Two

### Clarifying Concepts

#### Education

The word "education" has a variety of different meanings. For example, it is often synonymous with the word "schooling" as in the phrase "Education in China" and refers to any process of instruction or training. It is also used to refer to child rearing practices such as toilet training, getting children to be clean and tidy, and to speak with a nice accent (Hirst & Peters, 1970, p. 25). The statement "Parents sometimes turn the education of their toddlers over to the Nanny" illustrates this older use of the word. "Education" was sometimes used to refer to one's life experiences such as "That was a real education". The concept of "education" is on a continuum. The older and undifferentiated concept refers to any process of bringing up or rearing in which the connection either with what is desirable or with knowledge is purely contingent. In some cases, the word may be used to refer to desirable states without any emphasis on knowledge while other cases emphasize knowledge without implying its desirability (Hirst & Peters, 1970). The more recent and more specific concept links such processes as instruction or training with the development of states of a person that involve knowledge and understanding in depth and breadth, and also suggests that they are desirable (Hirst & Peters, 1970). Philosophers of education have spent a great deal of time examining this concept and there is much literature available discussing this topic.



However, a brief review of the literature will highlight the concept of "education" in this more specific sense.

Education is concerned with worthwhile activities that broaden and deepen people's understanding of the world and increase their rationality (J.H. Chambers, 1983, p. 67). Education can not be defined as a specific list of activities or processes. Rather, it lays down criteria to which activities or processes must conform (Peters, 1966). To educate someone implies not only some sort of achievement, but also one that is worth-while. It also implies that the manner of doing this should not be morally objectionable. Conditioning, for example, may be ruled out.

R.S. Peters (1966) describes the educated person as being one who has a considerable body of knowledge together with understanding. Knowledge alone does not constitute an educated person. One might know all the names and numbers in the telephone book but this knowledge alone does not involve an understanding. The understanding of an educated person transforms how he sees things. This understanding is not narrowly specialized in an educated person. He has breadth of understanding and is capable of connecting up these different ways of interpreting his experience to achieve a cognitive perspective. The educated person is one who is capable of doing and knowing things for their own sake. He is capable of doing his work not as a chore for money, but because he cares about his work (Peters, 1972).

Education involves the initiation of others into worthwhile activities. The literature seems to suggest that most worthwhile activities involve the pursuit of truth and a concern about evidence and clarity (Peters, 1966, p.70-

73). This passion for truth appears to be one of the distinguishing features between education and training. All types of learning and training may take place and be useful to individuals as well as to a society, but do not confuse these issues with the concept of what it means to educate or be educated.

### Education vs Training

How does education differ from training? Education involves the all-round development of a person morally, intellectually and spiritually. In other words, education refers to a family of processes which have as their outcomes the development of mind (Hirst & Peters, 1970, p.24). Training emphasizes more limited and specific goals. It primarily involves activities that have instrumental value and sometimes lack cognitive perspective. Training always has an objective outside itself as in "training *to do* something"; "training *in* something"; "training *for* something". The distinction between educating people and training them is necessary because the concept of education emphasizes the development of the educated man and is no longer compatible with any narrowly conceived enterprise (Hirst & Peters, 1970, p. 25). A teacher might regard himself just as equipping people for vocations or as serving a national need for trained manpower, without much thought about the development of the individuals concerned, as individuals. Whether teachers are educating or training people depends mainly on the their intentions and how they conceive of what it is they are trying to bring about (Hirst & Peters, 1970, p. 28). Training often involves getting students to practice things for which no

explanations need to be given. Using the word "education" suggests a rather different dimension for the exercise than that of simply equipping people with necessary skills for a job. However, there is no reason why vocational training should not also be "educational" (Peters, 1966, p. 7). A pupil or student who uses his initiative and imagination can turn a training program into something of an educational one through working out his own connections, implications and combinations of ideas, while a pupil or student who refuses to do his own mental work on ideas can turn what is education for his classmates into largely valueless timeserving for himself (J. Chambers, 1983). Peters summarizes the criteria implicit in the concept of "education" with the following:

1. "education" implies the transmission of what is worth-while to those who become committed to it
2. "education" must involve knowledge and understanding and some kind of cognitive perspective which are not inert
3. "education" at least rules out some procedures of transmission on the ground that they lack wittingness and voluntariness on the part of the learner (Peters, 1966, p. 20).

### **Dental Hygiene Programs - Education or Training?**

Having made the distinction between education and training, what is happening in the dental hygiene schools of today. A large component of the curriculum involves training - usually in the area of psychomotor skill development. The application of knowledge and understanding is extremely important. However, Dental Hygiene itself has evolved over the

years and it is no longer simply defined by a list of specific tasks. Dental hygiene practice

"consists of prevention oriented educational, clinical and therapeutic services, as well as research activities, undertaken by a dental hygienist to promote optimal oral health and to contribute to the total health of the public. It involves the application of the dental hygienist's knowledge, judgement, and skills, acquired through both education and experience" (Working Group, 1988A, p.86).

The definition for dental hygienist is

"a licensed health professional who provides educational, preventive and therapeutic services. A dental hygienist functions as a clinician, educator, consultant, administrator or researcher. The choice of role will be determined by academic preparation, experience and established policies of the employer and/or licensing body. The roles are performed in a variety of services and settings to promote total health through the maintenance of optimal oral health" (Joint Committee, 1988, p. 1).

The dental hygiene curriculum includes a general background in the sciences: anatomy; physiology; microbiology; nutrition; and physics. Each subject eventually becomes focused on the instrumental application in dental hygiene, but this would be difficult to assimilate without an understanding of what each subject is about. The behavioral sciences, professionalism, and ethics are also important parts of the curriculum. Each of these subjects, in and of themselves, illuminate other areas of life

and contribute much to the quality of living. Although students are taught to relate the theoretical knowledge to a practical situation and apply instrumental value to their knowledge, this does not mean the knowledge by itself has no intrinsic value as well. The curriculum may not cover all the forms of knowledge, but in the areas mentioned above, the students must understand the nature of each form. Even the clinical skills require a knowledge and understanding of why and when specific therapeutic services are indicated.

There are also many educational activities included in the curriculum as well. Students who pursue these activities systematically develop conceptual schemes and forms of appraisal which transform everything else that they do. As Peters (1966, p. 86) states, "if people are properly educated, so that they want to go on when the pressures are off, the conceptual schemes and forms of appraisal into which they have been initiated in schools and universities continue to develop." This is exactly what dental hygiene schools hope to accomplish. Not simply producing trained technicians, but helping students to emerge as professionals who seek further development of their knowledge and understanding as *a way of life*. They will be concerned for what is true or false, appropriate or inappropriate, correct or incorrect.

"Education" is not a specific end point that one finally reaches, but it refers to a journey according to certain criteria of worthwhileness. So what do people mean when they talk about "continuing education"? Is not *continued* growth and development in knowledge and understanding of worth-while activities implicit in the word "education"?

## Continuing Education

The professions generally agree that education is a life-long obligation and many have expressed this belief in their professional code of practice (McGothlin, 1960, p. 21). For example, the Canadian Dental Hygienists' Association Code of Ethics states,

"Dental hygienists have the obligation to keep their skills freshened by continuing education throughout their professional life."

The term "continuing education" seems to emphasize the on-going nature of education and to refer to the idea of education beyond formal schooling. A UNESCO Report (Kline, 1975, p. 47) suggests a general definition of continuing education as a process whereby:

"persons no longer attend school on a regular or full time basis undertake sequential and organized activities with a conscious intention to bring about changes in information, knowledge, understanding or skill, appreciation and attitudes or for the purpose of identifying and solving personal or community problems."

In the health professions, "life-long learning" and "continuing education" are used interchangeably and the concept has been formally accepted as a central value (Kline, 1975, p. 9). Many definitions for continuing education are suggested throughout the literature in the health professions. For example, the following definition occurred in a nursing journal:

*"continuing education:* formalized learning experiences or sequences designed to enlarge the knowledge or skills of practitioners. As distinct from graduate education, continuing education courses tend to be more specific, of generally shorter duration and may result in certificates of completion or specialization, but not in formal degrees."(Rizzuto, 1982, p. 38)

A dental journal defined *dental continuing education* as:

"a generic term for a broad, loosely grouped collection of courses that include the use of journals and or tape cassettes, didactic lectures, self-assessment examinations, clinical and technical participation courses and numerous variations including local hospital staff conference and rounds. By definition, the target population is dentists, and auxiliaries who have completed their undergraduate and postgraduate and specialty trainings, and who, for the rest of their professional careers, will partake of 'continuing education'"(Gaynor, 1980, p. 240-241).

Continuing education is also "described as that occurring after basic preparation for practice is completed, and which have bearing on the delivery of services to the public. This education may be for credit or non-credit, formal or informal, planned or incidental, self or other directed (Stuart, 1975, p.5-17).

The American Dental Hygienists' Association defines *continuing dental hygiene education* as:

"the education of the individual beyond the basic preparation for the profession of Dental Hygiene. The primary goal is to promote optimal health service to the public by fostering continued professional competence. Continuing education includes educational activities that update, refresh and increase the knowledge and competency of the dental hygienist" (O'Brien, 1982, p. 22).

All of these definitions refer to activities following some basic schooling. While each of these five definitions becomes increasingly more specific in terms of subject matter, the first two definitions are very clearly emphasizing formalized, sequential learning experiences. The latter three definitions include a greater variety of methodologies for learning. This discrepancy warrants some attention.

Stuart (1975) makes reference to several descriptive categories of education: credit/non-credit; formal/informal; planned/incidental; and self or other directed. The credit/non-credit and self or other directed are self-explanatory. However, distinction between formal/informal and planned/incidental need further clarification.

Table 1 represents one possible interpretation of Stuart's (1975) descriptive categories. Learning activities can be either planned or incidental. When considering planned activities, two categories exist: formal, referring to conventional, structured, sponsored type programs; and informal, meaning group discussions, participation workshops, informal gathering after work to discuss professional issues, and similar activities. Formal/informal are descriptive terms regarding educational



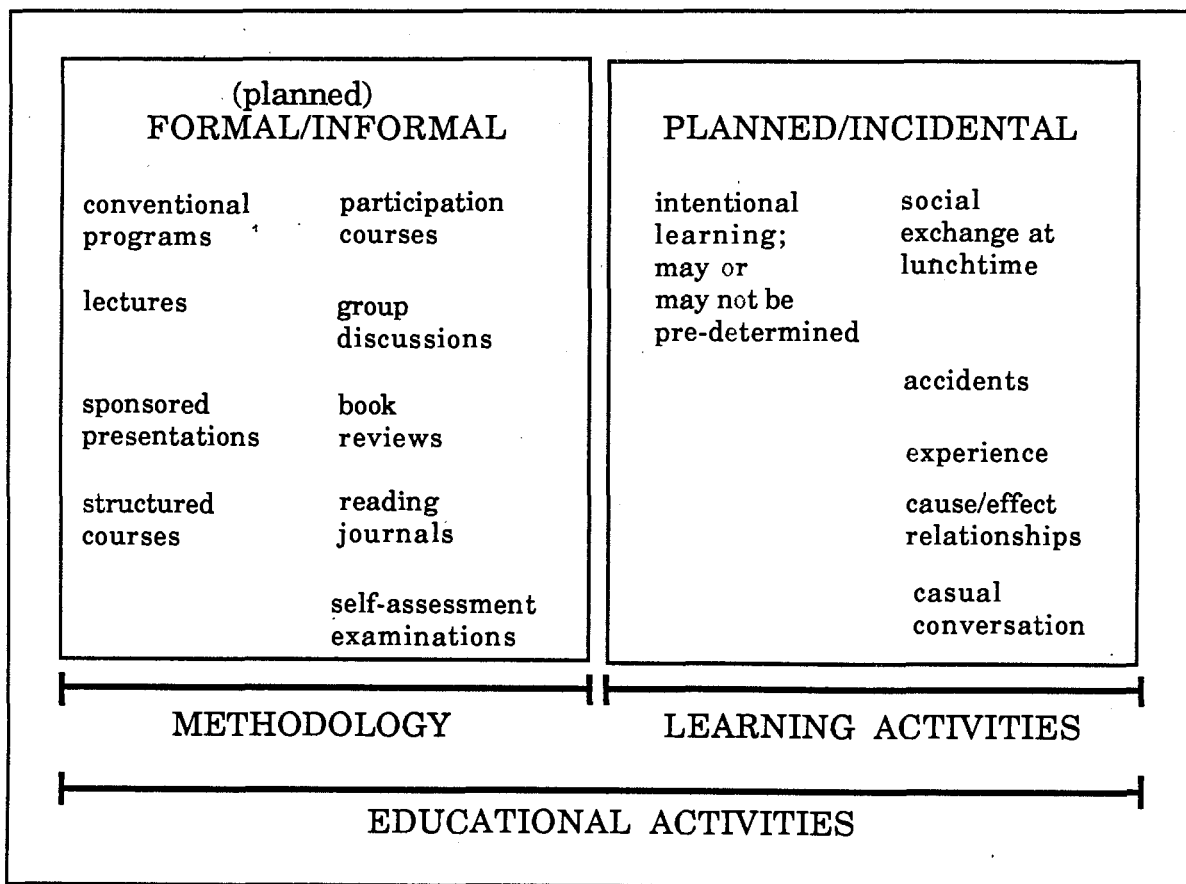


Table 1

methodologies while planned/incidental refers to all types of learning activities, some being intentional and some just happening. Formal educational activities are always intentional and planned, even though learning outcomes may be predetermined, as in the statement of objectives, or may not be predetermined, as in E. Eisner's (1979) expressive outcome activity. In either situation, planning is always involved. Activities where learning occurs incidentally or without intent are not usually considered as formal educational activities. However, informal educational activities do include incidental experiences.

These distinctions help to understand that a wide variety of activities could be considered as appropriate in continuing education. Stuart's (1975) definition of continuing education is significant because it highlights the diversity of options. However, further analysis of the statement regarding planned or incidental activities as educational suggests that while all educational activities involve learning, not all learning activities are educational. The necessary criterion for education is worthwhileness.

The UNESCO (Kline, 1975, p. 47) definition describes the goals for continuing education as the "conscious intention to bring about changes in information, knowledge, understanding or skill, appreciation and attitudes or for the purpose of identifying and solving personal or community problems." This is an important aspect of the definition as it becomes more specific to a particular field of study such as "continuing education in the health professions" or "continuing dental hygiene education". Thus, talk about continuing dental hygiene education refers to activities that bring about changes in information, knowledge, et cetera that have bearing on optimal health service to the public. Some definitions specify growth in knowledge and skills but the other components such as problem solving and attitudes are equally important in defining what counts as continuing education.

Incorporating selected aspects of the definitions already presented, a more comprehensive definition for continuing dental hygiene education is suggested as:

a variety of learning activities beyond basic professional preparation in which dental hygienists participate with the

intention to bring about changes in information, knowledge, understanding, skill, appreciation and attitudes or for the purpose of identifying and solving professional or community oral health problems. The primary goal is to promote optimal health service to the public by fostering continued professional competence.

### **Conclusions**

Prior to any discussion regarding continuing dental hygiene education, people must be clear about the meaning of that concept. To understand the meaning of continuing dental hygiene education, the word "education" must first be examined. Following this examination, an understanding of "dental hygienist" adds further clarification. Looking at the types of activities that dental hygienists participate in as students, helps to clarify the kinds of experiences one might expect to encounter beyond the pre-service program.

The clarification process in this chapter provides a foundation for the study of continuing dental hygiene education. People involved in decision making about what counts as continuing dental hygiene education must also understand the concept of continuing education, particularly as it relates to the dental hygiene profession. Decision makers require a complete understanding of what constitutes dental hygiene practice and the roles dental hygienists assume, in order to make appropriate decisions regarding the awarding or denying of credits for specific continuing dental hygiene education activities.

While the scope of continuing dental hygiene education is specific, it must conform to the criteria of education. The variety of learning options must continue to be recognized as well as the importance of including activities which bring about changes in appreciation and attitudes. If continuing dental hygiene education involved only the development of skills, it would become continuing dental hygiene training. As members of a profession, dental hygienists recognize the importance of continuing training but also value the emphasis on continuing education. Individuals and groups involved with continuing dental hygiene education must understand all of these concepts and realize that although some educational activities may be difficult to monitor in a mandatory continuing education system, all are valuable.

To facilitate the understanding of these concepts, clear definitions must be readily available for reference and discussion. This has not been the case in British Columbia. Just recently, the definition for dental hygienist was endorsed by the provincial dental hygiene professional association. The next steps should include the endorsement of a definition for continuing dental hygiene education on a provincial level and efforts to ensure that all people involved with decisions regarding continuing dental hygiene education share the same concept.

These concepts have not been discussed frequently enough for all to share the same idea. There are dentists who do not fully understand the scope of dental hygiene practice. There are individuals who see continuing dental hygiene education as merely participation in organized lectures. The professional association has a responsibility to broaden the conceptual

understanding of those involved with continuing dental hygiene education in British Columbia.

The definition for continuing dental hygiene education presented in chapter two continues throughout the rest of the paper. Having clarified this concept, the goals that people have for continuing dental hygiene education will be examined.

## Chapter Three

### Goals of Continuing Education

The Canadian Dental Hygienists' Association perceives continuing education as important to the improvement of patient care, to the enrichment of basic dental hygiene education, and to the acquisition of skills and knowledge required to maintain competence in dental hygiene practice (W. Young, 1989, p.81). Here, the purpose identifies that skills and knowledge are required to maintain competence - continuing education provides opportunities to facilitate the acquisition of those skills and knowledge.

Other professional groups emphasize the importance of continuing education by making similar statements and demands of their members. The purpose of continuing education within the nursing field is officially stated by the American Nurses' Association as "necessary for maintaining competence in nursing practice." (Rizzuto, 1982, p.36). Their rationale is based on the belief that each nurse assumes responsibility for the quality of his/her practice. For this reason, nurses are accountable for keeping up on new developments in knowledge and skill. Avoiding obsolescence is regarded as a prime responsibility of the health professional and continuing education is essential to avoid obsolescence (Forgay, 1981, p.90).

In the United Kingdom, those who have studied continuing education practices in pharmacy felt that "continuing education should be based in part at least on the competency based model because of its emphasis on

performance and relevance to practice." (Fielding, 1986, p.26). They suggested that continuing education should concentrate on weaker areas of performance and should develop materials based on a problem-oriented model.

All of these professional groups are suggesting that the goal of continuing education in the health professions is to maintain or improve the competence level of professionals in order to provide an acceptable standard of care to their patients. In dentistry, one author has defined the objective of continuing education in terms of short and long range objectives. The short range objective is to transmit new information, update or maintain skills or build a core of skills developed during the many years of dental education and clinical practice. The long range objective is to facilitate diffusion of all new knowledge and therapeutic modalities into clinical practice (Gaynor, 1980, p.243).

Kicklighter (1984, p. 170-172) summarizes the various identified purposes and goals for continuing education in the health care professions as found in the literature. The following list presents her findings:

1. Avoiding professional obsolescence
2. Keeping abreast of new developments
3. Repairing deficiencies
4. Maintaining or improving competence
5. Serving society
  - a. improving quality care
  - b. bringing about changes in health care institutions
  - c. improving delivery systems

- d. controlling costs
  - e. educating practitioners about the needs of society
6. Professional and self improvement
  7. Self-serving by way of social relations and relief from routine
  8. Assuring success of educational institutions by increasing emphasis on continuing education

This list indicates numerous goals for continuing education in the health professions. Is it possible for continuing education to fulfill all of these expectations? Are these reasonable goals for coordinators of continuing education to pursue?

Assuring success of educational institutions may be accomplished by securing registration fees whether or not people actually attend. In some instances, serving society by improving quality care may depend on additional resources not available to professionals. However, the success or failure of the other goals is totally dependent on the individual professional. Each goal may be possible with a commitment from the professional but it certainly cannot be guaranteed or even assessed in some cases. For example, it is difficult to attribute changes in clinical procedures to participation in some form of continuing education. It may very well be that changes occurred because staffing resources changed which had nothing to do with continuing education. This also touches briefly upon the issue of effectiveness which will be discussed later. The point is that many people try to identify specific goals for continuing education when really what is needed first is a clearer understanding of what continuing



education means. Only after that is it possible to set goals and objectives for specific activities which will ultimately fit back into the original definition.

Each of the goals listed by Kicklighter (1984) can be considered as relevant in promoting optimal health service. Therefore, the definition suggested for continuing dental hygiene education in chapter two can accommodate all of the goals identified in the literature. However, working with this list of goals outside the concept of continuing dental hygiene education could lead to something quite different. For example, a goal that focuses on repairing deficiencies without the conceptual understanding of continuing dental hygiene education may involve disciplinary actions that limit one's practice until corrective measures are taken. It then becomes an issue of competence and quality assurance as opposed to a goal of continuing dental hygiene education. The definition of continuing dental hygiene education includes as its primary goal to promote optimal health service by fostering continued professional competence, but does not include a guarantee that these goals will be achieved.

While the role of continuing education in each profession may be principally the provision of opportunities for members to keep up to date, there are individuals and groups that use continuing education as part of a mandatory scheme to ensure competence or as part of a disciplinary process. Often people are confused about the relationships that exist between continuing education, competence and quality assurance. This confusion creates problems.

In an effort of untangle the relationships between continuing education, competence and quality assurance, further conceptual

clarification is required regarding "competence" and "quality assurance". Following an examination of these words, their relationship to continuing education and to each other will be clarified.

### Competence

The word "competence" on its own is a relatively simple term. It is defined as "the ability to carry out a specific task or tasks according to predetermined standards of performance." (Rizzuto, 1982, p. 38). The difficulty for most professions is the identification of universally accepted standards of performance within the profession.

The American Dental Hygienists' Association created a task force to develop standards of practice for dental hygiene. They began by defining the terms "dental hygiene" and "standard". The following working definitions for each term were adopted: (Brownstone & Forgay, 1987, p. 25)

*Dental hygiene practice:* "consists of those preventive, educational and therapeutic services provided by the oral health profession known as the dental hygienist in order to provide health care to the public."

*Standard:* "serves as a basis of comparison and identifies the range of acceptable variation. It is recognized by common consent and is established by the profession."

The purpose of establishing standards for practice was to describe acceptable clinical dental hygiene practice. The development of practice standards was one aspect of the Competence Assurance Program planned by the American Dental Hygienists' Association. This program was

created in response to the desire of the Dental Hygiene profession to assume responsibility for the quality of care it provides (Brownstone & Forgay, 1987, p. 25).

In Canada, the Federal Government Working Group on the Practice of Dental Hygiene had similar goals and after much work published the *Clinical Practice Standards for Dental Hygienists in Canada* (Working Group, 1988B). Other professions such as nursing, pharmacy, occupational therapy, and physical therapy to name a few have also been working towards a quality assurance program with the initial development of practice standards.

### Quality Assurance

The assessment of competence is the highest form of evolution in the development of a profession. However, no profession has been successful in developing a comprehensive mechanism to assess continued competence (Fielding, 1986, p.25). Many professions are actively working to find ways of assessing and assuring quality care to their patients.

The Canadian Dental Hygienists' Association begins by adopting a definition for quality of care. The following definition is a modification of the medical equivalent set forth by Lee and Jones in 1933.

"Quality of dental care is the kind of dentistry practiced and taught by the recognized dental profession at a time or period of social, cultural and professional development in a community or population group."

This definition has withstood the test of time basically because it recognizes that acceptable quality is a function of social, cultural and professional environments and suggests that quality criteria are not stagnant but change with advances in technology (Pimlott, 1985, p.20).

Recognizing that quality care has various dimensions, the *Clinical Practice Standards for Dental Hygienists in Canada* (Working Group, 1988B) was developed using three major headings: *structure*, which includes the physical facilities, equipment, records and management practices; *process*, which defines what the dental hygienist does or the skill with which the care is provided; and finally the *outcome of care*, meaning the results from the care provided. (Working Group, 1988B, p.5)

Understanding these three dimensions of quality care is important to the understanding of any quality assurance program.

A review of the literature related to the concepts of "competence" and "quality assurance" indicates that there are no universally accepted definitions of terms (Brownstone & Forgay, 1987, p. 26). A closer look at how people talk about these terms in the literature helps to identify some similarities. The American Dental Association distinguishes between "quality assessment" and "quality assurance" (Brownstone & Forgay, 1987, p. 26). "Quality assessment" is the measurement phase of quality assurance and includes all of the steps leading up to and including data collection and analysis. These steps are 1) selecting a topic, 2) establishing criteria and standards, 3) making the assessment, and 4) deciding whether the quality is adequate. "Quality assurance" extends beyond measurement to include the carrying out of actions which will maintain or improve the

quality of care being delivered by providers of dental care. The additional steps taken in a quality assurance system include 5) developing a plan to correct deficiencies, 6) implementing the plan, 7) re-assessing the quality, and 8) deciding whether the quality is now adequate.

"Competence assurance" is defined by the American Dental Hygienists' Association as "the certainty with which practitioners can identify throughout their careers their ability to carry out the responsibility of their positions."(Brownstone & Forgay, 1987, p. 25). A competence assurance program is designed to first develop a self-assessment instrument for practitioners to use in establishing their clinical competence followed by the development of suggestions for an action plan of self-directed learning in those areas of identified weakness (Brownstone & Forgay, 1987, p. 25). The focus here seems to be on the individual addressing the issue of competence assurance on his/her own with little outside help.

The Canadian Dental Hygienists' Association views "competence assurance", which focuses on the dental hygienist's ability to perform the technical tasks skillfully, as one important aspect of quality assurance . Related to the *Clinical Practice Standards for Dental Hygienists in Canada*, (Working Group, 1988B) competence assurance programs deal with the *process* dimension of quality care (Pimlott, 1988, p.21).

The definition of "quality assurance" offered by the American Dental Association and the Canadian Council of Hospital Accreditation is "the assessment or measurement of, or judgement about, the quality of care and the implementation of any necessary changes to either maintain or improve the quality of care rendered."(Brownstone & Forgay, 1987, p. 25). Thus a

quality assurance system implies that the three dimensions of quality care are the focus of a continual evaluation program that not only identifies strengths and weaknesses but provides a means for improving the structure, process and outcomes in a positive manner which can ultimately improve the oral health status of patients.

Marcin and Forrest (1982) identified the rationale for developing a quality assurance model of dental hygiene. The purposes of the proposed quality assurance system includes: (Marcin & Forrest, 1982, p. 18)

1. demonstrate to the public a concern for oral health, for improving the delivery of services and for maintaining standards.
2. provide means to assess the current technical quality of services in order to improve them if necessary.
3. develop continuing education programs which are performance based to meet the specific needs of practitioners.
4. increase discussions and professional interaction leading to an increase in education and improved delivery systems.
5. document effects of this system on the oral hygiene care delivery and oral health status.
6. demonstrate to dental and other professional groups that a continual system of quality review can be designed and implemented.
7. enhance the development of the dental hygiene profession by demonstrating responsibility and accountability for actions.
8. develop new areas of research.

This list basically summarizes many of the reasons why professionals are pursuing the issue of quality assurance. Presently, the professions are in a

period of exploration, searching for methods to assess competence. Various strategies are under examination, such as the use of record audits, direct observations and clinical examinations of the patients before and after treatment. Methods of remediation are also being examined. Suggested sources of remediation include continuing education programs which are performance based, remediation by another professional participating in the quality assurance system, remediation by an employer or even self-study and additional individual practice (Marcin & Forrest, 1982, p. 30).

Another interesting development in the areas of competence assessment and quality assurance is happening in British Columbia. The College of Pharmacists of British Columbia conducts a Pharmacist Assessment Program (Fielding, 1986, p.26). This program was conceived, developed and administered primarily by pharmacist practitioners. Based on statements of competencies, there are three components to the process: the pharmacist assessment paper, the peer review and continuing education programs. The assessment paper or test is used to assess knowledge. It is mailed to the pharmacist, completed independently utilizing reference texts, and returned for scoring. For each competency, a score is assigned - acceptable, marginal or unacceptable. An unacceptable level is set for the entire paper. Specific continuing education programs are developed to address each competency. Therefore, if one receives a marginal rating in certain areas, it is recommended that continuing education programs in those areas be used to improve the practitioners knowledge. In the case of an unacceptable score in a competence, the practitioner is required to take specific continuing education for that area.

An unacceptable score for the entire paper requires the practitioner to undergo a peer review of simulated practice. From this point, the practitioner is either referred to specific continuing education programs or placed under supervised practice for a period of time. The pharmacists behind this program believe that a continued competence program should consist of four parts: 1.) identify strengths and weaknesses of the practitioners, 2.) correct weaknesses, 3.) documenting the remediation process, and 4.) appropriately disciplining those who fail to remediate weaknesses (Fielding, 1986, p.26). In British Columbia, failure to participate in the program or complete any of the requirements prescribed will result in non-renewal of license. This program is currently under extensive review.

The problem with all of these approaches is they make the professional very uneasy. Many of these methods have various shortcomings. The feeling of being "policed" threatens the autonomy and professionalism of practitioners, who are ultimately the ones responsible for the quality of care they provide. The greatest concern shared by those advocating the development of a quality assurance system is how to make quality assurance through peer review positive and attractive to others (Marcin & Forrest, 1982, p. 31).

In Canada, the dental hygiene profession is trying to emphasize and develop a system that uses self-assessment and possibly peer review with the hopes of providing a more nurturing environment for learning, motivation, and overall competence. Provided on a voluntary basis, this framework would provide periodic feedback in a non-threatening manner



and assist the individual in making an action plan for the areas needed. In this way, it is hoped that dental hygienists will experience a quality assurance system in a self-directed, supportive way that can result in important behavioral changes and professional growth (Feller & Forgay, 1989, p. 33-34).

The most serious and publicized problem in quality assurance is the small group of health professionals, who as individuals, consistently practice poor quality dental care. There are usually three types of people in this group: those with personal problems such as alcoholism, drug addiction or disabilities; those who perform unwarranted procedures and involve unethical practices; and those who ignore their maintenance of skills and knowledge (Gaynor, 1980, p. 249). Continuing education will not affect individuals in the first two groups. They have problems that must be dealt with by other means. The third group could benefit from continuing education, however as Gaynor(1980) mentions, this group represents only a small fraction of professionals, estimated at less than one percent. Licensing bodies have been worried that if they do not act to assure the competence of their members, governments will do so. Some have instituted mandatory continuing education as an attempt to facilitate competence. But the awarding of continuing education units based on clock hours of attendance bears no assurance that desired changes in competence or performance of participants have occurred. It has been suggested that program designers and licensing boards need to get serious about learning rather than just requiring participation.

## Establishing Relationships

During the 60's and 70's, a time of escalating technological developments, the health professions and the public held great expectations for the role of continuing education in maintaining professional competence and assuring quality care. Structured continuing education was a method for assimilating new knowledge and skills. Many professional licensing bodies responded to pressure for quality of care assurances to the public with mandatory continuing education for license renewal. Over the following 15 years, the idea of continuing education gained momentum as a means of preventing obsolescence of professional practice. At the same time, difficult questions about the productive use of new knowledge and skills were raised. Inherent assumptions of mandatory continuing education warranted re-evaluation. For example, one assumption advocates of mandatory continuing education make is that the knowledge gained in continuing education will be applied. Another assumption is that the specified amount of educational time required for relicensure is sufficient to prevent outdated or incompetent practice (Rizzuto, 1982, p. 38). The inability to convincingly link continuing education to improved patient care exposed the complexity of the process of continuing competence. In 1984, a conference on continuing competence assurance featured speaker after speaker stating that mandatory continuing education was not the answer to maintaining competence; nor was it a means to assess competence. Most of the speakers suggested that mandatory continuing education was very costly, difficult to administer and did not achieve its objectives (Fielding, 1986, p.25). Since then, mandatory

continuing education has lost momentum. States where mandatory continuing education was required, continued to operate under that system and fewer states have initiated mandatory continuing education. The debate continues, even though the ability of continuing education programs to function as a quality assurance method has not been clearly established (L. Young, Speidel, & Willie, 1982, p. 212).

In an effort to sort out the relationships that exist between "continuing education", "competence", and "quality assurance", the following series of diagrams may illustrate where each concept fits when looking at the overall picture. "Competence" simply means that a task is performed according to a pre-determined standard. (See Figure 1.) An individual may perform a task or series of tasks according to an identified standard and be considered "competent". This is an end product - something professionals are striving to attain or maintain. "Competence assessment" is the measurement of a practitioner's performance against the standard. (Figure 2)

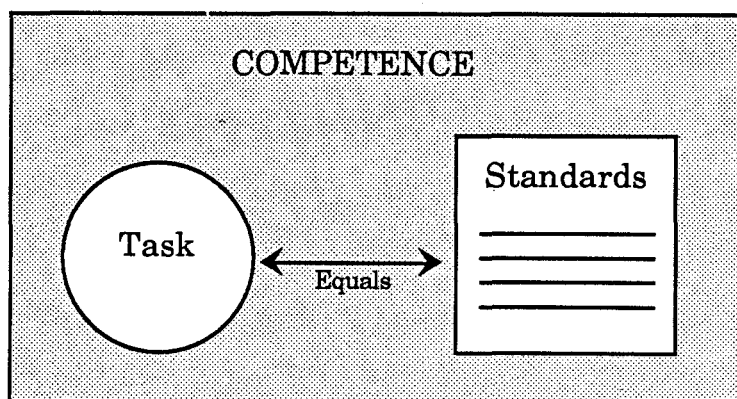


Figure 1

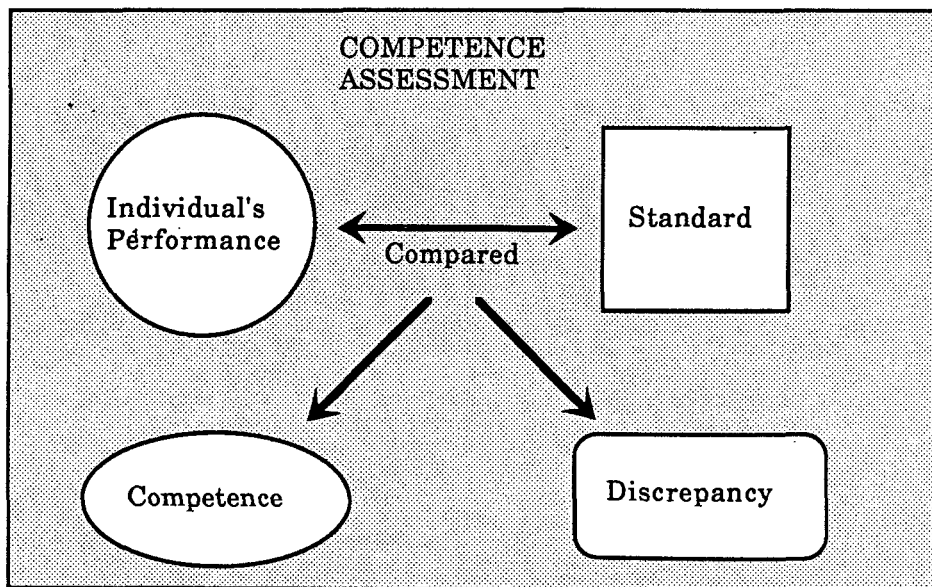


Figure 2

"Quality assurance" is a more complicated concept implying that competence can and will be achieved by following a model, a process, or a plan. Quality assurance is a system where the end product is quality care. There are various ways to approach a quality assurance system. Some are organized and administered by governments; some by professional groups; and some by individuals themselves. An important first step however, is to determine the desired end product - identify the standards that define quality care. Using the pre-determined standards, comparisons between individual performance and the standard will identify areas of competence and/or areas where discrepancies exist. This may be identified as the "quality assessment" phase or measurement phase of a quality assurance system.( Figure3).

Once the discrepancies have been identified, an individualized action plan to remediate the discrepancies is developed and implemented. The

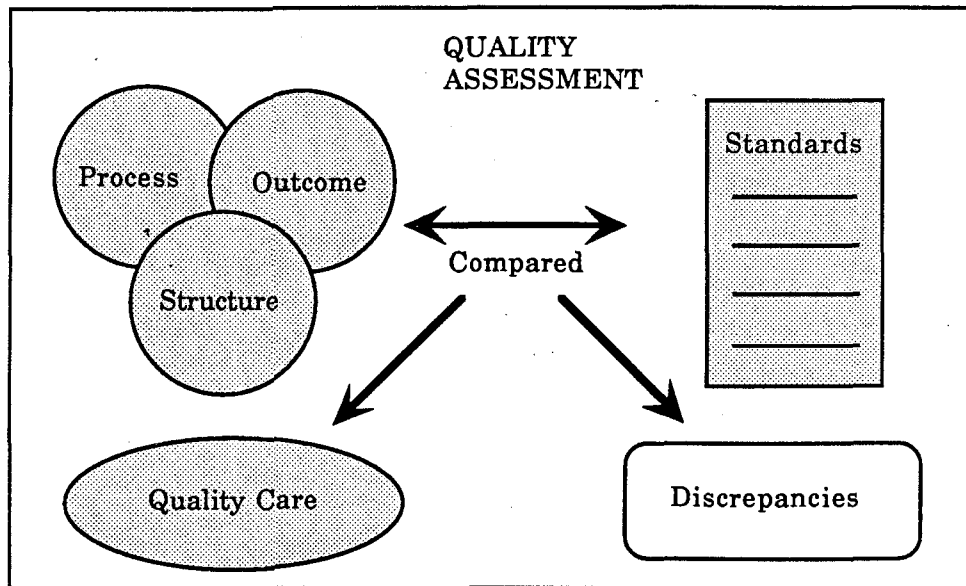


Figure 3

action plan acts as a catalyst to facilitate a change from a situation that falls short of the standards to a situation that meets the standards and may consist of various approaches. An action plan may involve; continuing education in the form of courses, help from colleagues, additional reading in professional journals; new equipment to enable improvement of patient care; procedural changes; or even simply implementation strategies for existing knowledge. Once the action plan has been carried out, a re-evaluation or re-assessment of the areas displaying initial discrepancies is conducted using the standards as the measurement tool. If the comparisons are the same, quality has been achieved. If discrepancies still exist, a new action plan is developed and the process continues until the task can be performed according to the pre-determined standard. Figure 4 illustrates this interpretation of a quality assurance model. Here, continuing education exists as one of several intervention strategies to

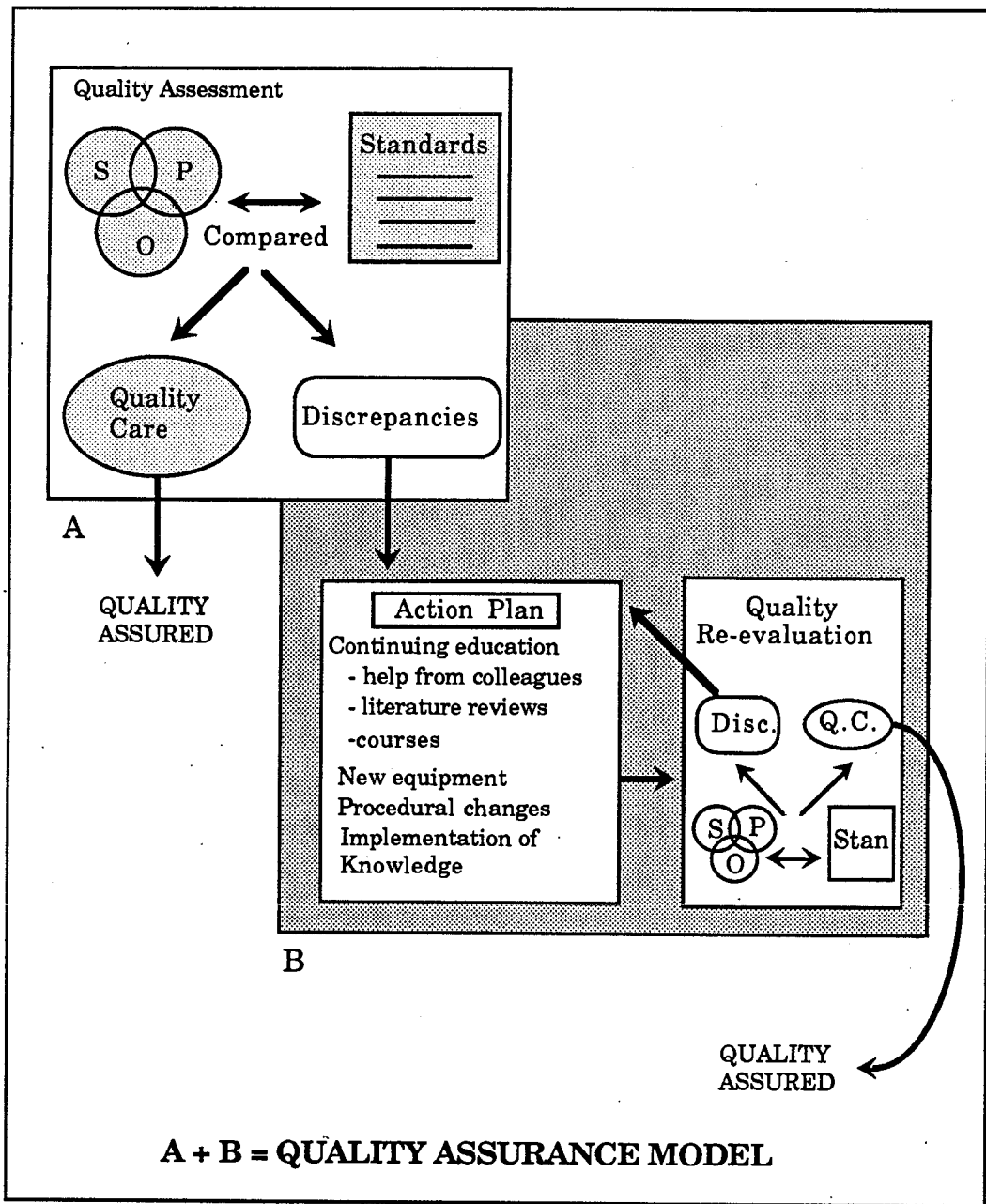


Figure 4

facilitate change. But only upon initial assessment and re-evaluation of deficiencies in an individual's performance can competence be confirmed. Continuing education on its own does not automatically infer competence.

In cases where discrepancies are not correctable after several attempts, it may be necessary to remove the individual from the profession by denying relicensure to protect the health and welfare of the public. These may be difficult choices. However, with clearly identified standards and various action plan approaches, the profession has a responsibility to deal with those members who are not meeting the standards of practice. This is how a quality assurance system protects the public.

### **Professionals and Society**

Explicit goals for continuing professional education help to guide the educator in making important value decisions as well as provide a framework for examining key assumptions regarding learners, providers, and the context and process. The goals that are selected for continuing education activities reflect a particular view of the place professions have in society. For example, the prevailing perception has been that professionals have an altruistic orientation. In the late 1960's, the public's perception of professionals began to shift from one of approval to one of disapproval. The failures of professionals became the center for debate. (Cervero, 1988, p.9) Currently there is diversity in viewpoints regarding professionals in society. Some people are entirely positive while others are totally negative. Most people find themselves in the middle ground.

When planning continuing education activities, the means as well as the ends of those activities must be considered and greatly influence choices. For example, the goals may be to teach the latest techniques for infection control in the office. Yet, choices concerning the ends of this

training are not always clear. Concerns about environmental issues in relation to infection control must be considered.

Cervero (1988, p. 23-26) describes the various viewpoints about the relationship between the professional and society by defining the three different perspectives. The first perspective is the functionalist viewpoint. Here, professionals are viewed as those having expertise to apply in solving problems that are relevant to central values of society. In this perspective, there is consensus about what is good for society. This viewpoint has the greatest number of adherents in continuing education today. The implications for education in this viewpoint are that programs have an instrumental function and are there to help professionals provide better service by increasing their knowledge, competence or performance.

In contrast, the second perspective is the conflict viewpoint, (Cervero, 1988, p. 26-29) which sees professionals as conflicting with other groups in society for power, status and money. The monopoly over special knowledge leads to social inequality. Professional competence is not the main issue for continuing educators operating from this viewpoint. They strive for educational intervention at the social-structural level, relying on such things as community activism in the class struggle between professionals and oppressed groups in society. They are trying to change the system through their educational activities.

The third perspective is the most recent and is referred to by Cervero (1988, p. 29-36) as the critical viewpoint. Due to conflicting values and choices made by professionals, this viewpoint stresses the need for professionals to be critically aware of the implications of their choices.



Continuing educators with this viewpoint argue for the abandonment of the idea that there is consensus about professional quality.

Cervero emphasizes the significance of the critical viewpoint because it recognizes the need to deal with both the means and the ends of the education process. An understanding of the ethical, political and technical dimension of continuing professional education is necessary.

The choice of goals for continuing education reflect a personal viewpoint of the professions within society. Being aware of the three viewpoints suggested by Cervero (1988) may help broaden the perspective of individuals presently familiar with only one point of view. Under the functionalist viewpoint, professionals may see their task as taking a problem and using their professional knowledge and expertise to solve that problem. Under the critical viewpoint, professionals recognize the role for ethical decisions and value choices in deciding what the problems are in the first place, deciding which ones should be addressed, and determining what are the best means for dealing with them. This critical viewpoint could be reflected in continuing dental hygiene education activities by addressing ethical dilemmas in professional practice. It may also involve discussions with members of the public regarding the care they receive. Activities that address ethical decision making in professional practice are valuable to practitioners and should be considered worthy for continuing dental hygiene education credit.

## Conclusions

The examination of the goals of continuing education provide a basis for evaluating the effectiveness of continuing education activities. From the variety of expectations and goals cited in the literature on continuing education, several additional concepts surface which require further clarification. For example, maintaining or improving "competence" has been identified as a goal of continuing education in the health care professions. Defining "competence" as a dental hygienist requires the identification of standards. As of 1988, dental hygienists in Canada have identified standards for clinical practice. Standards for dental hygiene roles other than clinical practice must also be developed to define competence in all areas of dental hygiene practice. Continuing dental hygiene education activities provide opportunities for dental hygienists to maintain or improve their profession competence.

This chapter helps to answer the question, does mandatory continuing dental hygiene education function as a quality assurance system? Because these are factors which affect quality care that cannot be addressed by continuing education activities alone, such as access to necessary resources, continuing dental hygiene education cannot function as a quality assurance system. It probably could function as a competence assurance system if all continuing dental hygiene education activities followed the systematic approach required for a quality assurance system. However, not all continuing dental hygiene education activities follow the entire process of a quality assurance system. This does not mean that the continuing education activities are not valuable or worthwhile. It only

means that quality care cannot be assured by participation in continuing education. Continuing education activities may be part of the action plan to achieve quality care within a quality assurance system but only if those activities are the necessary criteria for achieving the desired results. In other words, quality assurance programs can be educational but not all educational activities function as quality assurance systems.

The difference between continuing dental hygiene education activities and quality assurance systems must be understood fully by members of the profession and the licensing body. Each must be clear about what it is they are trying to accomplish and then seek the best means to obtain their goals.

In 1979, continuing education for dental hygienists in British Columbia became mandatory. The goals are described in a set of guidelines from the College of Dental Surgeons of British Columbia. Reviewing the history of continuing dental hygiene education in British Columbia is helpful in understanding how the current system evolved.

Much of the historical information was obtained by selected interviews. With limited resources, the data could not always be verified with written documentation. Considering these limitations, the next section will present the historical perspective on continuing dental hygiene education in British Columbia.

### **Continuing Education for Dental Hygienists in British Columbia**

Dental hygiene was formally recognized by the public through legislation drafted by the College of Dental Surgeons of British Columbia in 1951, when legislation was drawn up. The first examination for licensure

was given to a dental hygienist in 1952 who remained in British Columbia for only a short time (Working Group, 1988A, p.20). From 1953 to 1956, there were only three dental hygienists in British Columbia which made participation in continuing education activities easy to track. Although there were no courses specifically designed for dental hygienists in the province at that time, reports from knowledgeable sources indicate that each of the three dental hygienists did participate in continuing education activities, usually in conjunction with one of the component dental societies that sponsored afternoon speaker sessions. These speaker sessions were held once a month in Vancouver and an open door policy provided the opportunity for dental hygienists to attend.

As the years went by, other opportunities for the continuing education of dental hygienists increased but were still fairly limited to the few programs offered through the divisions of continuing education in American dental schools. The states of Washington and Oregon in particular, provided some of these opportunities. From 1968 to 1972, Madigan General, the United States Army hospital in Fort Lewis, annually sponsored a dental hygiene continuing education day in which many dental hygienists from British Columbia participated. This was arranged through contacts within the newly established Program of Dental Hygiene at the Faculty of Dentistry of the University of British Columbia in 1968.

The British Columbia Dental Hygienists' Association was organized in 1965. Continuing education was endorsed by the organization in the Code of Ethics similar to the that of the Canadian Dental Hygienists' Association. A major portion of all provincial and local meetings was, from

the beginning and still is today, devoted to continuing education activities. The British Columbia Dental Hygienists' Association assists access to continuing education for dental hygienists in the out lying areas of the province by subsidizing continuing education activities in their component societies. Study clubs and dental conventions have also played a role in providing additional options for continuing dental hygiene education.

The Faculty of Dentistry at the University of British Columbia recognized from its inception that the educational process must continue throughout the professional careers of their graduates by means of post-graduate study, continuing education and programs of self-study. When the Department of Public and Community Health was formed within the dental school, one of its responsibilities was to organize and provide continuing dental education programs for all members of the profession in British Columbia.

In 1969, the objectives for a Continuing Education Division were developed and programming for dentists began in 1970. Since the 1970/1971 academic year, formal courses specifically designed for dental hygienists have also been made available through the Division of Continuing Education at the University of British Columbia, with liaison provided by the British Columbia Dental Hygienists' Association.

From the beginning, statistics show that dental hygienists have actively sought out continuing education. In the first year, a total of sixteen dental hygienists registered at the University of British Columbia for the five continuing education programs. These courses were Finishing Restorations, Periodontics, Dental Radiography, Identification of Soft

Tissue Lesions, and Effective Instrument Utilization. In the 1971/1972 academic year, three of those courses were offered again, with the number of participants rising to 50. The following year, four new programs were developed and a total of 75 dental hygienists participated in those new programs. The annual percentages of dental hygienists participating in the University of British Columbia continuing education programs are indicated in Table 2 and show a steady increase. However, this does not take into account attendance at courses sponsored by others such as the component, provincial, national, and international dental or dental hygiene societies or dental hygiene conventions. From statistics available since the 1972/1973 academic year, it is difficult to determine the total number of dental hygienists registered in all University of British Columbia sponsored continuing education activities. As the numbers of dental hygienists in the province have increased, tracking the degree of participation in continuing education activities has become more difficult. However, a national study done in 1973 of practicing dental hygienists in Canada revealed that 69 per cent of them attended one or more continuing education activities in the previous year. (Kline, 1975, p. 19)

The need for compulsory continuing education began to dominate discussions in many professional groups during the 1970's. A 1972 attitude survey of dentists in British Columbia indicated that 95 per cent of those who answered the questionnaire were in agreement that continuing education courses are necessary for the practice of good dentistry. However, it also showed that 67 per cent of those that answered felt that

* Number of Dental Hygienists licensed in British Columbia	** Number of Dental Hygienists participating in University of B.C. continuing education programs	% of Registered Dental Hygienists participating in U.B.C. - CE programs
1970      130	(1970/1971)    16	12%
1971      154	(1971/1972)    50	32.5%
1972      183	(1972/1973)    75	40%

\* According to statistics from "The Practice of Dental Hygiene in Canada ", Part 1, 1988, page 31.  
\*\* Statistics from University of B.C. - Division of Continuing Education in Dentistry, Annual reports, based on academic year.

Table 2

continuing education should be compulsory for relicensure (The Bulletin, 1972, October).

In the early 70's, the dental profession began reviewing the existing mechanisms of assuring the quality of dentistry provided to the public. These initially involved entry board exams for dentists coming into the province and close liaison with the Faculty of Dentistry at the University of British Columbia. Eventually, accreditation procedures filled the role of monitoring the quality of education and training given to students. These measures addressed concerns regarding those entering the profession in this province. However, additional concerns related to the quality of

continuous practice lead the profession to seek a quality assurance mechanism. At that time, compulsory continuing education appeared to be one acceptable way of ensuring that all members of the dental profession update their professional knowledge, which would ultimately translate into providing quality dental care to their patients.

Guidelines for a mandatory continuing education program in British Columbia were considered and recommended by the College - Continuing Education Committee, a sub-committee of the Education Committee. The possible projected implementation date was set for January 1, 1973.

However, it was not until the March 1976 College - Council meeting that a program proposal was initially approved for dentists only. The original document included the following preamble and stated objectives of the continuing education program required for relicensure of dentists in British Columbia:

Preamble

The dental profession, as a self-governing body, is ultimately responsible for the quality of dentistry that is provided to the public. Continuous study is the fundamental and lifelong responsibility of the professional person, as is implicitly suggested in the term "practice of dentistry". The exponential rate of technological change through research, innovations in patterns of health care delivery, new clinical procedures and an increasing social awareness have accentuated the need for each member of the dental profession to remain abreast of professional developments. The College of Dental Surgeons of British



Columbia, in order to formalize its commitment to these principles, has instituted a continuing education program as a requirement for the relicensure of every dentist practicing in British Columbia.

#### Objective of the Program

1. To ensure that all dentists update their professional knowledge and training.
2. To encourage and ensure that all dental auxiliaries update their knowledge and training and that such a program be instituted as soon as possible.

In 1976, the British Columbia Dental Hygienists' Association developed guidelines for mandatory continuing education for dental hygienists (The Bulletin 1976 p.7) which they submitted to the College - Continuing Education Committee to show their support for the principle of mandatory continuing education for dental hygienists in the province. Apparently, the College endorsed mandatory continuing education for all members of the dental profession at that time. However, with the University of British Columbia Continuing Education Division in place, implementation began first with the dentists in 1977, while attempts to secure funding for the auxiliary continuing education programs through the British Columbia, Ministry of Education were being sought. Funding through this organization was not obtained. The College - Council reconsidered the issue and in 1978 approved the implementation of a

continuing education requirement for relicensure for dental hygienists effective January 1, 1979. The requirements were the same for dental hygienists as for dentists with the difference being the total of credits necessary per three year cycle. Dentist needed 90 credit hours and dental hygienists needed 75 credit hours of approved continuing education. A copy of the current guidelines has been included in the appendix for further reference.

Following the new requirements for continuing education, a greater variety of courses became available and a further commitment to get continuing education to all areas of the province became an obvious need. The University of British Columbia took on a major role in meeting the needs for continuing education in the province, gradually growing and utilizing their facilities in Vancouver as well as developing liaisons with regional coordinators and eventually incorporating teleconferencing delivery systems. In 1988, Vancouver Community College began sponsoring continuing dental hygiene education programs in the Division of Continuing Education - Nursing and Health. Clinical participation is the main emphasis of programs offered at this institution.

A recent survey of the British Columbia Dental Hygienists' Association members indicated that providing relevant continuing education opportunities throughout the province is considered a priority for that association (British Columbia Dental Hygienists' Association Membership Needs Survey-1988). The British Columbia Dental Hygienists' Association - Continuing Education Committee is working to increase the opportunities in continuing education throughout this province mainly by

encouraging the formation of local study clubs. This methodology has been greatly used by the dentists and would offer very specific and practical education opportunities to British Columbia Dental Hygienists' Association members. The British Columbia Dental Hygienists' Association - Continuing Education Committee is also organizing a Speakers Bureau which is a cross reference file of continuing education speakers and course topics. This will help component societies in the planning of activities within their areas. While dental hygienists are encouraged to liaise with the dentist regional coordinators associated with University of British Columbia regarding courses they want in their areas, the British Columbia Dental Hygienists' Association - Continuing Education Committee tries to meet annually with the societies' continuing education coordinators to share information on activities happening throughout the province. The Canadian Dental Hygienists' Association has also offered support in addressing the continuing education needs of the British Columbia Dental Hygienists' Association members.

After the implementation of the mandatory system, the College - Continuing Education Committee was no longer a sub-committee, but became a standing College committee. The terms of reference include discussion of issues regarding continuing education to making recommendations for administrative adjustments in the system and reviewing submitted requests for continuing education credits in questionable cases. As of 1988, specific responsibilities are assigned to them through the Rules of the College in Article 17. The latter responsibility accounts for most of the committee's time and often involves discussions

regarding the appropriateness of a given course or activity based on the College - Guidelines for Mandatory Continuing Education. There are approximately seven members on this committee, representing both urban and rural areas of the province. They are appointed by the College - Council and are chosen to represent a balance of the general population being regulated, their only requirement being licensure in the province. While two dental hygienists currently are members of this committee, only one is a voting member. The other is a representative from the University of British Columbia - Division of Continuing Education. In September of 1990, an additional dental hygienist will be appointed for greater representation of this interest group.

This year, the committee will also be reviewing the current guidelines and may become involved in discussions related to some the fundamental principles underlying this mandatory system. The next section of this paper will discuss the mandatory continuing education system for dental professionals in British Columbia and present some of the issues that may be addressed by the College - Continuing Education Committee.

### **The Mandatory Continuing Education System in British Columbia**

The preamble to the Guidelines for Mandatory Continuing Education in British Columbia outlines reasons for adopting this system of licence renewal. The first reason is that "the dental profession is ultimately responsible for the quality of dentistry that is provided to the public". Mandatory continuing education demonstrates a commitment to providing

quality care to the public. However, as was discussed earlier, continuing education alone does not assure that quality care will be delivered to the public.

In the early 70's when these ideas were being discussed, the profession had great expectations of continuing education activities. It was felt that advances in preventive dentistry were not being fully utilized by all members of the profession, particularly a large percentage of older practitioners. Other mechanisms were discussed to deal with a reluctance to up-date archaic practices. At that time, mandatory continuing education seemed to be the best way to deal with the situation. For the individual, it was expected to maintain and enhance professional competence. For the profession, mandatory continuing education was seen as a mechanism for self-regulation that would protect the profession from government intervention as well as enhance the image of the profession in the eyes of the public. It was further expected to ensure quality dental care to the public.

Today's society is much more knowledgeable and sophisticated when it comes to expectations of the dental profession. Information is much more accessible today with improved communication systems that prevent isolation, an increased number of journals available and continuing education activities that are sponsored more frequently. These changes in modern society have also changed the role of the professions by society demanding accountability. While mandatory continuing education was able to address the concerns of the 70's, is it still the best way to deal with the issues of today?

Further research into the issue of quality assurance has revealed that trying to guarantee quality care to the public requires first an assessment of existing practices against an agreed upon set of norms plus actions to correct practices that are below the minimal acceptable standard. It is possible for continuing education activities to assist a person in meeting and maintaining the standards, but taken out of the context of a quality assurance model, continuing education activities cannot function as quality assurance systems independently.

Today in British Columbia, mandatory continuing education is viewed not as *the* quality assurance program but as a part of the quality assurance system. Other components include accreditation systems for pre-doctoral and pre-graduate programs, initial licensing procedures, continuing licensure requirements (continuing education), complaint systems to receive and investigate complaints using peer review and disciplinary action if necessary, and a "profiling system" based on statistical evaluation and comparison of services rendered based on claims billed to insurance companies.

The question then becomes, does the sum of the isolated parts equal a complete quality assurance model? The emphasis of quality assurance systems is a measurement of outcomes. In British Columbia, mandatory continuing education measures the number of credit hours taken by individual practitioners. However, the current system does not measure the outcomes of educational activities and therefore cannot verify competence gained through participation.

Another question under consideration is, should mandatory testing be included in continuing education activities? Other groups have also asked this question. Some of the difficulties with this idea are that such a system is very expensive to implement, that testing is limited to the kind of factual knowledge which can be measured in a testing format, large "gains" between pre-test and post-test scores can be faked by intentionally scoring low on the pre-test, and that passing a test of knowledge may not change the way the individual practices. More information on this subject can be found in the work of D.W. Chambers, Hamilton, McCormick and Swedeman (1976) and Swan (1979). If the profession is truly interested in assuring the quality of dentistry to the public, development of a quality assurance system as described earlier is necessary.

A second reason for endorsing mandatory continuing education suggests that "continuous study is a fundamental and lifelong responsibility of the professional person." There is no disagreement in this area. All of the professional organizations in dentistry advocate this ideal and have special sections in their codes of ethics that support this statement. The preamble goes on to list additional issues that accentuate the need to remain abreast of professional development. Based on these principles, objectives of the program are defined.

The current document (Appendix B) differs slightly from the original quoted earlier. The following excerpt from the College - Guideline for Mandatory Continuing Education identifies the current objectives:

## Objectives

The College's objectives are to:

- a) encourage registrants to maintain their professional knowledge; and
- b) try to ensure that an adequate number of continuing education opportunities are available, with an emphasis on making these opportunities accessible and relevant to local needs.

Based on the preamble and what has been discussed in this paper about continuing education, the first objective is a very appropriate and worthwhile goal. The emphasis is on *encouraging* registrants to maintain their professional knowledge and says nothing about trying to guarantee competence. This obviously clarifies any confusion with a "quality assurance" system. The commitment to continuing education is desirable and certainly policies that encourages registrants to maintain their professional knowledge is an asset to the profession.

The second objective, focusing on ensuring that an adequate number of continuing education opportunities are available, is also a worthwhile goal. While the Registrar is actively pursuing this objective on behalf of the College, the College - Continuing Education Committee is more involved with passing judgement on particular cases than attending to the availability of courses.

One item is noticeably missing from the Guidelines for Mandatory Continuing Education - a working definition of continuing education for the dental profession. A clearly stated, written definition would provide an additional reference for the Continuing Education Committee to use when



making decisions about which cases will receive credits and which ones will be disallowed. Of the five page document, three pages are devoted to describing various ways one may obtain credits and the specific number of credits allotted to each activity. From this list, one develops a sense of what counts as continuing education to the College. The listed categories for credit include courses or their educational equivalents, conventions, study clubs, presentations, publications, self-study and advanced study.

When questionable cases are brought to the Continuing Education Committee, discussions usually begin by establishing whether or not the activity in question is "directly related to the practice of dentistry or dental hygiene." Often the discussion stops there when actually the guidelines go on to say "or to the professional responsibility or ethical obligations of the participant." The recent publication of the *Clinical Practice Standards for Dental Hygienists in Canada* will be helpful in supporting activities based on the standards. The cases which are not so clear involve many public health or community activities. For example, representing dentistry and discussing the role of the dental profession in a multidisciplinary approach to child abuse was not a program viewed equally by all members of the Continuing Education Committee as eligible for continuing education credit.

As dental hygienists increase in assuming other professional responsibilities within dentistry, such as researcher, educator and administrator, the need for courses addressing these professional responsibilities and obligations will become more apparent. Dentistry as a whole needs to recognize the significance of these positions in the total scope

of providing quality care to the public. Professional knowledge is not limited to the skills required in a general practice. And it is the objective of the mandatory program to encourage registrants to maintain their professional knowledge, with an emphasis on making the opportunities for continuing education relevant to their professional needs.

From time to time, the Continuing Education Committee receives a request for prior approval of specific courses. Many programs available to practitioners are of considerable cost to the individual and require significant time away from practice. The practitioner is looking for assurance that his/her time and money will count towards the requirements for relicensure. Few people appreciate wasting their resources on inappropriate courses and they look to the Continuing Education Committee for this information. However, it is the policy of the Continuing Education Committee not to pre-approve any course for credit hours. Only after the practitioner has completed the course and submitted the documentation, will a decision be made.

On the other hand, the College - Guidelines for Mandatory Continuing Education lists a series of sponsors that have their presentations automatically approved for continuing education credit hours although the paragraph beneath this list indicates that the Council of the College reserves the right to approve or disapprove credits for courses or equivalents that it considers to be of questionable content relative to the practice of dentistry. In the current system, submissions made by the sponsors listed are automatically credited to the individuals and never appear for review by the committee. If the standards are laid out for the

criteria of acceptance and some courses are in fact "pre-approved", why not accommodate the individuals who take the time to confirm the status of any given course in the eyes of the committee by forwarding a decision to them? One of the arguments used to prevent pre-approval of courses is that the committee is not providing an accrediting service, although it may also be argued that in fact it is functioning as an accrediting agency simply by granting credits for some courses and not for others. These decisions are based on something and maybe that something is the College's criteria for accreditation. One thing the committee does not want to do is evaluate the correctness of content. The only thing that really matters to the group is that the activity must be related to the practice of dentistry or dental hygiene. This is another reason why this particular mandatory continuing education system cannot function as a quality assurance mechanism. The Continuing Education Committee should review its policy on the issue of accreditation of courses and explain to the registrants the rationale for its decision. In this way, practitioners will see that the College is interested in supporting and encouraging them to be actively involved in continuing education.

To summarize the current situation for continuing education in British Columbia, the strengths and weaknesses are identified. On the positive side, mandatory continuing education causes professionals to stop and evaluate the extent of their own continuing education activities. It also makes them stop to consider the types of activities they were involved in throughout their cycle. For example, were the activities directly related to their work as a member of the dental profession? In today's busy world,

setting aside time for continuing education activities is difficult and even those with good intentions could easily put off participation in continuing education until a more convenient time, which never quite appears. A second strength in the current system concerns the small percentage of professionals who might not ordinarily attend courses on their own. For these people, the exposure to quality programming may spark an interest that was not there before and the possibility of learning something new is always there. Thirdly, a mandatory continuing education system creates the public impression of assured competence and shows an attempt by the profession to monitor itself. It is also perceived by professionals as being important to their professional competence and status (Forgay, 1981). A fourth strength for dental hygienists in British Columbia is the *Clinical Practice Standards for Dental Hygienists in Canada*. This document can be used to guide and direct continuing education activities. And finally, mandatory continuing education generates a flow of participants which allows for some planning on the part of providers, such as a comprehensive curriculum plan or the opportunity to experiment with new ideas.

— A primary weakness in the system is that remote practitioners may not have equal access to the necessary opportunities. The regional coordinators have attempted to address this issue. However, it still remains that costs to the distance learner are more to maintain their credit hours than those in urban centers.

A second weakness stems from the lack of research done to investigate the links between continuing education and competence as well as determining what actually constitutes competence in dentistry.

Initially, the University of British Columbia was put under tremendous pressure by the College with the implementation of mandatory continuing education, to meet the needs of all dentists and hygienists in the province. The demand for programming did not allow for preparatory research. As the Division of Continuing Education in the Health Sciences develops, this kind of research is being done. However, because there is no data available regarding the effectiveness of continuing education in this province prior to mandatory continuing education, proving that the mandatory system has made a significant difference in the competence of professionals would be difficult.

A third weakness involves the proximity to pre-service dental hygiene programs. While the university based programs are essential, close liaison with dental hygiene programs provide resources such as topics ideas, instructors and equipment valuable in providing quality educational experiences. Vancouver Community College has made a start . However, further development for integration of the two programs could complement both. Utilizing the clinical facilities and faculty resources during the summer could provide excellent re-entry and upgrading opportunities. These types of programs can often provide employment opportunities for dental hygiene students as clinical assistants, giving them a chance for collegial interaction. This collaboration was present at University of British Columbia when the Dental Hygiene Program was on campus. New efforts must be made to provide these experiences in the colleges now offering Dental Hygiene Programs.

A fourth weakness may exist in that philosophically, a mandatory continuing education system takes responsibility away from the learner. Rather than learners developing a systematic plan for their own professional development, they rely on providers to offer appropriate courses. Little thought may go into the comprehensive nature of their selections based on availability. This gives the illusion that the providers are responsible for systematic professional development when really it is the learner's responsibility to develop an individualized plan.

A fifth message that professionals infer from the current system is that only activities recognized by the College for credit are worth anything at all. When in fact, education in general is a valuable thing for professionals to pursue. The more educated professionals are, the greater resources they can provide to society. The present system encourages only the development of professional expertise and this could be viewed as weakness.

### **Conclusions**

The historical perspective on continuing dental hygiene education in British Columbia identifies that dental hygienists have always been interested in continuing education. Even when programs were scarce and no requirements existed, dental hygienists found ways to address their professional development needs. This section provides information on what continuing education for dental hygienists was like in the early years, how the current mandatory continuing education system developed in British Columbia, and summarizes the present state of affairs. This information was not easily accessible for review. The information presented here

should be a valuable contribution to the work of others interested in this area.

*What is the purpose of the mandatory continuing education system in British Columbia? And does the mandatory continuing education system in British Columbia fulfill the expectations of the licensing body?* Analysis of the mandatory continuing education system in British Columbia provides answers to many of the questions posed in chapter one and reveals that the initial intention of the system was to enhance professional competence and protect the public. The preamble states that the profession is responsible for the quality of dentistry provided to the public, and to show its commitment to these principles, the College has instituted continuing education requirements.

This preamble suggests that because practitioners fulfill the mandatory requirement, they will provide quality dental care to the public. Traditionally, this process has been viewed as a quality assurance system. As the concept of quality assurance becomes clear, it can be seen that this mandatory continuing education system does not directly deal with issues of quality care. It does not identify the factors involved in providing quality care. For example, the structure, process, or outcomes of patient care are not identified. There is no progression from assessment, to action, to re-assessment of factors against a standard. While continuing education activities are mandated, the licensing body can only hope that those activities selected are the necessary criteria to produce quality care providers. The British Columbia system measures registration but does not evaluate content with regard to an acceptable standard of care. The College

cannot be sure that 75 hours of credit will produce quality care providers. There is no monitoring of individuals to ensure a balanced curriculum over the years. Practitioners could theoretically collect all of their credit hours in one subject area. And there are no steps taken to determine the impact of continuing education on actual practice behaviors.

While the mandatory continuing education system fails as a quality assurance system, it has for the most part been successful in meeting the College's stated objectives: encourage registrants to maintain their professional knowledge and try to ensure that an adequate number of continuing education opportunities are available, with an emphasis on making these opportunities accessible and relevant to local needs. Keeping these objectives in mind are important to the success of the system and decision makers should not try to use the system for any other purpose. If on the other hand, the College expects mandatory continuing education to function as a quality assurance system, then its expectation have not been fulfilled. If the expectations are that 100 percent of dental hygienists register for a minimum of 75 credits within a three year cycle, then the expectations are realized and these statistics demonstrate a significant degree of control over the profession to government officials as well as the public.

*On what basis are credits awarded?* A list of continuing education sponsors whose courses or equivalents are automatically approved for continuing education credit hours appears in the College guidelines. For example, all courses sponsored by the University of British Columbia-Division of Continuing Dental Education are approved without question.



Included in this list of sponsors are all federal, provincial, and local government departments of health or public health. However, submissions from these sponsors are examined carefully to verify the direct relationship to dentistry or dental hygiene. Many are denied credits because the Continuing Education Committee fails to see the relationship between courses taken by public health dental hygienists and the practice of dentistry or dental hygiene. This fosters great frustration for members of the profession seeking professional expertise to provide accessible dental care to the public in ways other than private practice.

Course content is evaluated primarily for determination of topic rather than factual information. Educational methodology is considered when the use of video tapes is involved. Independent use of videotapes requires a post-testing mechanism. The viewing of tapes within a study club or component society group is considered acceptable without a post-testing mechanism.

Increased competence is measured in only two programs: Local Anesthesia and the Orthodontic Module. Both are licensing courses which require successful completion of written and clinical examinations.

Attendance is based on the honor system. If participants leave early, it is their responsibility to submit an application for the appropriate number of credits. Large institutions usually submit a list of registrants who have checked in on the day of the course. It is up to the individual to correct the information if they decide to leave early.

The course title can be influential in decisions regarding credits. Using the word "dental" in the title usually implies a dentally related focus. However, this must also be reflected in the course outline.

*Are the criteria used in decision making the necessary criteria for meeting the objectives of mandatory continuing education?* Most of the time they are, but sometimes they are not. Remembering that the objectives are to encourage registrants to maintain their professional knowledge and try to ensure that an adequate number of continuing education opportunities are available, with an emphasis on making these opportunities accessible and relevant to local needs, the necessary criteria must address these objectives. When submissions that professionals deem valuable to their professional development are rejected, they are frustrated. With regard to professional knowledge, courses in financial planning are not considered appropriate. However, because the system automatically approves courses by certain sponsors, courses such as this are counted for credit. Provided by a non-recognized sponsor, a course on financial planning would not be allowed by members of the present committee. When professionals observe discrepancies such as this, the credibility of the system is questioned.

The second objective stated by the College guidelines concerns ensuring that an adequate number of continuing education opportunities are available with emphasis on accessibility and relevance to local needs. A recent discussion indicated that the Continuing Education Committee would not pre-approve a sponsoring institution that develops correspondence courses for the initial training of dental auxiliaries. If submissions are received they will be dealt with individually. However,

according to the guidelines, it would appear to meet the criteria in that these courses are dentally related and are of sufficient content to award credits to the course writers. Correspondence programming could be a valuable option for people in areas outside the lower mainland, particularly people who may want a refresher type program prior to re-entry after a period of not practicing.

*What is the educational value of the mandatory continuing education system in British Columbia?* Certainly many of the activities that dental hygienists participate in are educational. However, the guidelines for mandatory continuing education do not consider the educational value of activities in anyway other than on a very general basis. For example, study clubs and conventions are deemed to have educational value. Presentations to specifically identified audiences and publications are also considered educational experiences. These are examples of situational circumstances that receive credit approval. Yet, to be considered an educational experience, the worthwhileness of that activity must be argued for. The College Continuing Education Committee does engage in these types of debates and often requests are made for more information about the course from the applicant. These individuals should be encouraged to make a case for defending their position.

Little effort is devoted to maximizing the educational value of various opportunities. There is limited recognition by way of receiving continuing education credit for professionals pursuing expertise in educational methodologies for the purpose of organizing more effective education programs to members of the profession. This is something that people

must pursue on their own. If regulating bodies would recognize the significant contributions that educational expertise can offer the profession, maybe more emphasis would be placed on acquiring the background necessary to develop quality continuing education activities and conducting research that measures the effectiveness of those activities.

## Chapter Four

### Curriculum Ideas for Continuing Dental Hygiene Education

Program designers and coordinators spend a great deal of time and effort in trying to determine the learning needs of their target group. Needs assessment activities have been given a significant place in planning for continuing education activities. Wynne Young (1989, p.81) writes, "The assessment of learner needs is an integral first step in planning continuing education activities." The Canadian Dental Association, Teaching Conference on Continuing Education recommended in 1988 that research into the determination of the real needs of the learner be an urgent priority.

Other groups are investigating ways to determine learning needs. The Canadian Dental Hygienists' Association is exploring the use of self-assessment activities based on the *Clinical Practice Standards for Dental Hygienists in Canada*. It is hoped that results of these activities will help guide individuals in discovering areas for personal and professional growth.

One article addressing needs assessment began with this sentence,

"A common assumption is that a formal needs assessment is necessary for the development of a successful continuing education program."(Headricks, 1983, p.13).

Headricks (1983) suggests the rationale for this statement includes the belief that one cannot know the learning interests and needs of the people without a systematically planned formal design for detecting them. Considering

the ideas presented here, two questions come to mind. First, what is meant by the term "needs"? And secondly, what does this author mean by a "successful" continuing education program? It may very well be that the author is referring to good course attendance, documented changes in individuals' behavior as a result of the course, addressing specific professional problems, or even the financial outcome. These issues concerning success will be discussed later when considering the effectiveness of continuing education activities. However, the next section will be devoted to answering the question, "What are needs?"

### Needs

The word "need" is not a technical word that is used by specialists. It is a common word that people use quite frequently. At first, one might be inclined to view a "need" as the absence of a state of affairs. A need may or may not be something lacking. However the absence of a state of affairs does not create a need unless this absence ought not to exist. For example, "Sally does not have food". Food is required for Sally to survive. In this situation Sally needs food to survive and the lack of something does constitute a need. At the same time, "Joe does not have cancer." Cancer can be a lethal state of affairs and is undesirable to have if one intends to live a long and healthy life. Joe intends to live a long and healthy life. Therefore he does not need cancer. Here the lack of something does not constitute a need. On the other hand, a person may already have something and it could still be classified as a need. For example, she has love from her family and she needs it. To say that people need something

does not necessarily mean that they lack it, although for the most part people talk about needs that they feel are not being met. To properly say of someone that he needs something, the subject must be deficient in or lack whatever is being prescribed. In other words, the use of "need" presupposes a deficiency, without which it is a mistake to say a need exists.

Educators occasionally define a "need" as a condition of deprivation or lack". The statements "John needs this book" and "John does not have the book" appear to say the same thing but they do not. One could agree that John lacks the book and yet disagree that he really needs it. It may be true that X lacks Y but this does not imply that X needs Y and further questions can be asked in order to determine it's necessity. Given the statement X requires Y, it is then meaningless to ask if X needs Y because these two statements mean the same thing.

The tendency to assimilate "need" and "lack" seems to occur because there are some objectives so commonly accepted in a society that the mere realization that someone is deficient in them prompts people to immediately prescribe for alleviation of the condition. An example might be that some children lack receiving a lunch. Society immediately would like to provide school lunches to alleviate this condition. But this does not mean that ALL lacks are important. Nor does it mean that it is the deficiency alone which implies the need.

Tyler (1971) also defines a "need" as the difference between the present condition of the individual learner or learner group and a social norm that can be identified. The gap between where these learners are in relation to the social norm constitutes a need. While this definition may be

a good place to start, it is not as complete as it could be. Looking closer at other explanations of this concept should help to make it clear that speaking of "needs" only in these terms is not enough.

Dearden (1972) sets out to explicate three specific criteria that one has in mind when referring to the concept of "need". The first one being that there should be some kind of norms established. These might be of various types, for instance a social norm, such as having a certain standard of living. A norm might also refer to the proper function of a thing such as a piece of equipment, an organization, an institution, an organism, or a trade. Rules may exist that specify a norm, for example owners of dogs need a license for them. Norms can also involve a standard of appropriateness. An example of this type is that one needs a hammer to pound a nail. The definition from Tyler appears to identify only one type of norm; a social norm. The second criterion one has in mind is the fact that the norm has not been achieved or could fail to be maintained. For example, a person will need at least X amount of money to achieve the accepted standard of living. He may not receive this now but will need to if he is to achieve that certain standard. However, people need air to live. They already have the air but they need to continue to have the air if they plan to continue to live. This is an area for which Tyler's definition is not sufficient. He does not allow for the concept of "need" to include something that is required to maintain an established norm. The third criterion that Dearden speaks of is that which is said to be needed must in fact be the relevant condition for achieving what the norm prescribes. The example he uses for this criterion is that if a person is in poor health, then the



remedy being offered as what he really needs must be the relevant condition of achieving "good health". When Tyler talks about the "gap between where the learners are in relation to the social norm" he really says nothing to identify that any specific need is in fact relevant to the achievement of that norm. The object or activity or state of affairs that is referred to as a need must be necessary to the objective, in the sense that its presence contributes to the achievement of the objective, while its absence renders the objective unattainable.

Reflecting on Dearden's first criterion for the concept of "need", more can be said about the norms that are identified. Komisar says that one of the criteria for calling something a need is that it be related to some further state of affairs or norms. This state of affairs is referred to as the objective. Needs claims necessarily imply reference to some objective. A need is something that is necessary to some desired end or objective agreed to be desirable. What a person needs is geared to what is determined as a desirable end-state of affairs. For example, "he needs drills to develop skills". The objective may be to maintain an existing state of affairs. An example of this would be that a person needs air if he is to continue to survive. Or the objective may be the avoidance of some possible future state of affairs. "He needs recognition lest emotional frustration results" illustrates this particular use.

In summary, needs are only needs if they relate to some specified objective or desired state of affairs. As Komisar puts it "For by virtue of our language, that which is not needed for anything is not needed".

Identifying what a person needs is not only a matter of determining or knowing the desired end state of affairs. It is also a matter of knowing what is in fact necessary to meet those objectives. Another way to look at the relationship between needs and objectives is that needs are all really requirements for something else. They may be considered as prerequisites. P.S. Wilson (1971) discusses the notion of needs as prerequisites with a beautiful example to show how prior value judgements about the desired goals are important. Knowing the facts or merely describing a situation could never be enough to make a decision about which need to pursue. Wilson describes a situation in which flowers are wilting in the hot sun on the lawn. Do these flowers need water or weed killer? The selection of needs is based on the prior value judgement of the end state of affairs. One might like daisies in the lawn while another sees them as "spoiling the grass".

Agreement about needs depends upon agreement in views, values and objectives. One person may feel that a child's behavior indicates a need for love and care while another person viewing the same child may see that child as needing a good hard talking to. These examples show that the concept of a need logically implies some norm, objective or value. When preparing a needs statement, one must ask "What is important?" "Needs" have no existence in abstraction from the valuation of goals. The notion of "need" is unintelligible apart from judgements of value. Agreement about need depends upon agreement about values.

Komisar (1961) states that "Every curriculum is a needs-curriculum". He says this because he feels it would be quite odd to find a

curriculum that is said to be unrelated to the students' basic needs. When it comes to basic needs, it is usually not hard to find agreement. Maslow has identified five classes of human needs. The first being physiological, the second is the need for safety, third he lists social needs, fourth is a need for self-esteem and finally he identifies the need for self-actualization. These needs are valuable as prerequisites for getting people into an appropriate physiological and psychological state from which teachers can then start to teach and educate them (J. Chambers, 1983, p. 65). However, it is not clear that these needs have much to do with education and therefore they are of little use for curriculum purposes. Once beyond the basic human needs, reaching agreement as to what is considered a desirable end-state is a more challenging endeavor.

Dental hygienists in Canada are challenging themselves by demonstrating their commitment to providing quality care. They have agreed that professional competence is a desirable end-state and they have established professional norms that define competence. These are found in the *Clinical Practice Standards for Dental Hygienists in Canada*. Practitioner involvement in the processes of development and endorsement of the final criteria and standards was a unique feature of the project and lends credibility to the agreement among dental hygienists regarding these standards. This addresses Dearden's first criterion for the concept of "need". Being that it is possible not to practice according to the identified standard and being that failure to maintain identified norms is possible, the clinical practice standards may be regarded as "needs" when talking about a competent dental hygienist. This addresses Dearden's second criterion.

Finally, practicing according to the clinical practice standards for dental hygienists is a relevant condition to being considered a competent dental hygienist. Therefore, a dental hygienist needs to perform according to the practice standards to be considered competent. Continuing dental hygiene education activities may or may not be considered a relevant condition for providing quality patient care. As said before, continuing education activities may provide the clinician with the knowledge base for competent practice and yet some physical resources may be unavailable to actually allow competent practice to take place. Continuing education is not the relevant condition to address a problem of resources and in this case, can not be considered a need.

If continuing education is viewed as a variety of learning processes, it can be stated that continuing education is needed to keep up to date with professional knowledge, skills, attitudes et cetera.. Without continuing education in some form, established norms could not be maintained for any extended period of time because these norms are modified over time particularly as new technology develops. However, continuing education is not sufficient to assure competent practice. As with Dearden's example, people need air to live. But air alone is not sufficient to live. Continuing education activities provide opportunities for learning which help to foster professional competence.

Understanding that the primary goal of continuing education is to promote optimal health care to the public by fostering continued professional competence, and given that the practice standards define competence, it then stands that continuing education activities "need" to be

focused on the practice standards to foster competence. The key word here is *foster* competence and not guarantee it. The individual still assumes the responsibility to practice competently. Continuing education activities provide the opportunities for learning. And what is necessary to meet the objectives? A variety of learning activities to facilitate competence as described by the standards.

### Needs, Wants, and Interests

Sometimes people confuse needs with wants. The assimilation of these two words is incorrect, for needs and wants are not the same thing. To describe a person as wanting a particular thing is to say something about his state of mind. A man may want a drink. To say that a person is in need of a particular thing is to claim that he will not reach an agreed norm or standard until he gets it. For example, if the man does not get a drink he will not measure up to an accepted standard.

Wants can become needs when there is agreement that something further should be reached or met, or when there is agreement on the intrinsic value in a particular needs claim (J. Chambers, 1983, p.69). It is possible however, that a person can be in need of something and not necessarily be aware that he is in need. He may realize that he is in need or he may not be aware of it. It is in this respect that the concept of need is very different from actually wanting something (Dearden, 1972, p. 52). To want something is always to be aware of that want. Because needs are things which individuals may or may not be aware of, the individual himself is not necessarily the best judge of his own needs. Experts may not

even be the best judges of an individual's needs because there are many value judgements to consider as well. For example, whether or not a woman needs an abortion is not a question to be determined by medical knowledge alone (Barrow, & Milburn, 1986, p. 163).

Although needs and wants are not the same thing, there are times when they do coincide. It is possible to have a child who needs to learn to read, who wants to learn to read and who enjoys the method the teacher uses. In this case there is motivation, but not because the need as such is motivational (J. Chambers, 1983, p. 69).

So far, the discussion has centered around the concept of needs in what Komisar refers to as the "prescriptive sense". The clinical practice standards are prescriptive needs statements and are mostly written in very general terms. Individuals reading the booklet must know more than is written in the standard. Consider the following examples:

**2. The employment situation provides facilities, equipment, and supplies which allow the dental hygienist to:**

2.2 meet radiation and other safety standards. (Working Group, 1988B, p. 7).

**14. The dental hygienist maintains her/his equipment and instrument in working condition by:**

14.5 ensuring that unsafe and inappropriate dental hygiene instruments are discarded and replaced (Working Group, 1988B, p. 10-11).

The first example does not indicate what the current radiation safety standards are and in the second example, the specific criteria for

identifying an unsafe or inappropriate instrument are not stated. Some form of continuing education activity will be necessary to determine or confirm the more specific standard alluded to in the booklet. Other items in the booklet are more specific, such as infection control techniques, 13.1-9. In self-assessment, individuals can quickly compare themselves to a standard such as the one referring to radiation safety from the clinical practice standards booklet and evaluate themselves as competent, but they will only be as accurate as their *understanding* of the acceptable standard. They may think they are performing competently when in fact they are not. Utilizing the standards in conjunction with continuing education activities and peer review may be helpful once dental hygienists learn to work with the standards document.

Just as needs and wants are often assimilated, needs and interests are regularly coupled together and treated as synonyms. The lack of precision in people's concept of needs is repeated in their concept of interest. There is ambiguity in the word "interest" alone that requires clarification. "Interest" can be used in two different senses. One being to speak of what interests a person and the other to say that it is in one's interest. These two senses offer great opportunities for sliding back and forth from one sense to the other and by doing so curriculum recommendations can often be such that they appear to satisfy everyone. The interpretation is left up to the individual concerned. As Dearden points out, "those who insist that the teacher knows best can take it that the teacher has to settle what students need or what is in their interest perhaps by reflection upon the nature of the subject. Whereas, those who insist on starting from the learner take it that

what the teacher has to do is to enquire what learners feel that they need or feel interested in" (Dearden, 1972, p. 56).

Curricula that are based on the interests of students generally make two assumptions. The first being that what interests the students tends to be worthwhile and the second being that the criterion for worth in an activity is that people have an interest in it (Barrow, 1984, p. 127). The first assumption would require that we all agree on what is worthwhile, which of course is something that has not been agreed upon in dentistry as a whole. However, dental hygienists show agreement with the *Clinical Practice Standards for Dental Hygienists in Canada*, although as the characteristics of quality care changes, so will the standards of practice. For example, it is not necessarily agreed by both dentists and dental hygienists that dental hygienists should study instrument design or motivational strategies. These may be worthwhile to some people but not to others. The second assumption would support a curriculum of determining color schemes that promote a successful image and financial planning because the learners have an interest in these activities. This is obviously an absurd statement. And neither assumption seems valid.

By stating curriculum proposals in terms of interests as just mentioned the real problem of the curriculum may be slurred over. The difficulty is really located in the selection of desirable educational norms which then create the needs. It therefore appears that there is no argument for and nothing to be gained from talking about basing the curriculum on interests. Even when ambiguity of the word "interest" is



resolved, the idea of establishing a curriculum based on this criterion, on either interpretation of the word, seems unhelpful.

Research seems to indicate that people learn best when they are interested in what they are doing. Using a felt interest can be a most positive and educationally fertile way of going about schooling (J. Chambers, 1983, p. 72). It does seem reasonable to suggest that interests could play a part in determining how to sequence material or when to encourage particular activities. It is clearly advantageous to motivate when one can by taking advantage of student's present interests or by seeking to cultivate new interests. However, interests should not be taken as either the necessary or sufficient condition of introducing material. Much of education consists of bringing people into new awareness and understanding. It is difficult to depend on utilizing a person's interest in something, particularly in cases where that person has never been exposed to the subject in order to acquire an interest. Although interest must not be allowed to determine content, and although it can not directly serve as a principle for sequencing material, it is clearly advantageous to motivate by taking advantage of student's present interests or by seeking to cultivate new interests (Barrow, 1984, p. 127).

Dental hygienists often select continuing education activities based on interests and wants. For example, a recent continuing education course on the care and maintenance of dental implants, a new aspect in dentistry, was attended by dental hygienists who had previous exposure to implant patients and were interested in the topic. This is great. However, those unfamiliar with dental implants need to attend to understand the

appropriate procedures to follow for such cases, prior to these patients arriving in their practices. The advanced knowledge is necessary to provide competent care when the situation does eventually arise. The care of implants is not specifically stated in the practice standards but comes into account in section 18.3, performing dental hygiene procedures appropriate for the patient's needs. It could be that the practitioners who choose not to attend are not aware of the significance in understanding the different treatment modalities required for implant cases or the prevalence with which these type of patients will be filtering into general practices.

One of the problems is that wants are always motivational and always known to the individual. Needs only sometimes motivational and only sometimes known to the individual. The greatest challenge that planners of continuing education activities have is to attract the professionals to activities that will help them maintain their professional knowledge and expand their existing perspective.

### Needs Assessments

There are those in education who advocate the use of "needs assessments" as tools to determine the curriculum. One such person is Roger Kaufman who co-authored the book *Needs Assessments Concept and Application*. In this book the authors describe a needs assessment as a formal process which determines the gaps between current outputs or outcomes and required or desired outputs or outcomes; they place these gaps in priority order; and select the most important for resolution (Kaufman & English, 1979, p.8). They also make the following claims: "We

suggest that it is the inappropriate or incorrect selection of needs which is at the root of much educational failure. We strongly suggest that the use of appropriate needs assessment tools, techniques and strategies can greatly improve educational success".<sup>34</sup>

Robin Barrow (1984) takes a close look at David Pratt's book *Curriculum Design and Development* (1980). Barrow uses this book as an example of how some people believe that curriculum design should be treated as an applied science. By working through the arguments that Barrow uses with the work of David Pratt, a better understanding can be achieved of others who support the scientific approach to curriculum design. Pratt has identified a series of steps through which curriculum design should proceed. The following is an excerpt from Barrow's book *Giving Teaching back to Teachers*.

"According to Pratt, the steps through which curriculum design should proceed are first, assess the needs of children; second, consider the restraints of time, money, personnel, etc. that have to be faced; third, having devised the curriculum content by reference to needs, set out one's plan in an appealing way, specifying aims, objectives and criteria of performance. In addition, the curriculum plan should include a statement of entrance requirements for the course and details relating to instructional procedures; the latter should allow for differences of aptitude in pupils and make explicit reference to good materials that are readily available. Finally, Pratt advises that, if one wishes to see one's curriculum implemented, one will need to be

diplomatic and tactful in one's dealings with various people"  
(Barrow, 1984, p. 41).

Barrow considers several reasons why Pratt's needs-based curriculum is vulnerable. To start with, asking people's opinions is a poor way of establishing the truth. Secondly, in order to establish what people need, one has to establish what really matters and as was stated earlier it is something that requires close argument rather than empirical inquiry. For dental hygiene, the development of the practice standards are a step closer to establishing this kind of agreement. A third area of vulnerability is that even though an agreement is reached as to what the need is, there is nothing in this to lead to an agreement on what to do about it. If a norm is not met, it is not clear whether the dental hygienist needs continuing education, counselling or a vacation. And finally, it may be agreed that a specific need exists but this is not the same as saying it is an educational need. The dental practice does not own a lead apron. The relevant condition necessary here is the purchase of a lead apron which is not an educational need.

Assessing needs in a scientific way may be of some limited benefit to curriculum planners, however this is not the appropriate place to start. Needs assessments usually provide information about what people think they need and not necessarily information about what people do need.

There are many other non-content factors that affect the degree of participation and satisfaction with sponsored continuing education activities. These include tuition, speaker's reputation, geographic location, facilities, dates, times and course length to name a few. Understanding the

preferences of the target group as they relate to these factors will be an asset in attracting participants and this type of data may be best obtained from an assessment or survey tool.

### Conclusion

In light of this discussion, it is hard to totally accept the following statement, "the assessment of perceived needs, that is those needs identified by potential learners themselves, is critical to the success of adult professionals' continuing education as the adult is in a strong position to judge her own continuing education needs" (W. Young, 1989, p.81). Their expressed needs should be seriously considered. However, often needs assessment surveys are unhelpful because identified topics are too broad or general to help zero in on the specific concerns of individuals. Looking for ways to overcome these limitations may provide more useful information. Most surveys show that dental hygienists are interested in topics related to the practice of dental hygiene and seem to be less interested in activities based on procedures generally delegated to dental assistants or reserved for dentists. Therefore, the curriculum for continuing dental hygiene education is determined by what it means to be a competent dental hygienist, and the *Clinical Practice Standards for Dental Hygienists in Canada* booklet is a safe guide.

Achieving and maintaining competence through continuing education activities requires acknowledgement of three differing professional groups: those who are new graduates; those who have been practicing continuously for many years; and those who want to re-enter the

work force after a period of not practicing. Each group will have their own special concerns. New graduates may focus on situational problems for continuing education while those who have been practicing continuously for a number of years may be focusing on avoiding obsolescence. The re-entry group will focus on re-training to up-date their skills with new information as well as practicing skills that will prepare them to once again deliver competent oral health care services. However, all groups will base their continuing education activities on the established standards for competent practice.

This discussion of "needs" brings to light some of the difficulties encountered when trying to establish the "real needs of the learners". Making continuing education opportunities accessible and relevant to local needs was identified as one of the College's objectives for continuing education. As the licensing body for dental hygienists in British Columbia tries to determine what activities are appropriate for continuing education credit, they should consider the needs and wants of these professional and recognized the importance of differing values. When credits are denied for activities that individuals consider valuable to their professional careers, it is the right and obligation of those individuals to voice their arguments. Discussions such as these are useful in understanding the variety of conflicting values present within the profession.

This chapter also emphasizes that the selection of desirable norms creates the needs. And the character of the prescribed goals sets the necessary criteria for evaluating the ends.

From this discussion of needs, new parameters for continuing dental hygiene education can be set that guide and direct the continuing education activities for dental hygienists in the province. It impresses upon the profession the importance of developing standards for dental hygiene roles other than clinical practice. These standards could then support the fact that dental hygienists require activities such as community development programs, statistical analysis or educational methodologies and research in dental hygiene.

The organizers, planners and educators of continuing dental hygiene education activities should work together in addressing the challenge of attracting professionals to participate in activities that will help professionals maintain their knowledge and expand their existing perspectives. Using the wants and perceived needs of professionals could provide an environment for exploring and learning about other existing needs that were previously unknown to the individuals.

## Chapter Five

### Designing Effective Programs

#### Institutional Context

Continuing professional educators usually work in the context of institutional settings although they may vary in size, complexity, and purpose. Cervero (1988, p.75) points out that the institutional context is a major determinant of continuing educators' understanding of effective practice. These organizations shape what the continuing professional educators do and how they do it.

Four major providers of continuing education are identified by Cervero. Each type of provider features strengths and weaknesses in effective programming. A brief overview will aid in the understanding of why some programs are more or less effective than others.

Educational organizations such as universities, colleges and professional schools offer many continuing education activities to members of their profession although their primary function is in preparatory education. This primary function accounts for many of the strengths found in programs from these providers. Universities and professional schools are the primary source of knowledge for most professions. They have had experience in lengthy instruction. Usually, a large resident staff can be relied upon to facilitate the activities and the physical facilities such as meeting rooms, housing, food services, and equipment are abundant. The university, college and professional school sponsors enjoy the perception of



being the most credible of sponsors. However, because continuing education is not the primary function, they often lack a funding base. Professors are usually quite busy with their own obligations and view continuing education as ancillary to other responsibilities. Practical application is difficult in these institutions because of a focus on theory. They generally lack marketing expertise and are deeply rooted in traditional approaches to the field of knowledge. Although the primary function of the university and professional school is not continuing education, British Columbia is fortunate to have a university with a Division of Continuing Dental Education staffed full time. In addition, one of the community colleges has instituted a continuing dental hygiene education component in their Continuing Education Division with part time staffing.

Quasi-educational organizations are a second type or provider. These include professional associations, study groups, journal clubs and similar groups. Their purpose is usually to advance the interests of their members. The strengths in these organizations are the wide array of talents among the members as well as direct access to the professionals seeking continuing education. These groups are usually familiar with their own educational needs. They can usually rely on cost effective strategies while enjoying a non-profit status. Weaknesses of organizations such as professional associations include the organizational placement of continuing education functions in committees, competition for internal resources, a lack of continuity in planning due to changes of directing boards, a lack of marketing expertise, and a lack of physical facilities.

Presently in British Columbia, there are two active dental hygiene study clubs in addition to continuing education activities sponsored by the British Columbia Dental Hygienists' Association and component societies.

Employing agencies are non-educational organizations that may use continuing education to improve their primary service or product. In British Columbia, the Ministry of Health exemplifies this type of institutional context. For these agencies, the organizational needs come first and continuing education is viewed as a secondary function. The strengths of these organizations is that they have direct assess to specific inadequacies of personnel and collective service. They are able to determine the needs for education based on current performance. Solving problems with an interprofessional approach is another advantage of such an organization. And with on-site programming, convenient scheduling can be arranged to minimize the loss of work time. Maintaining the focus of employees during continuing education activities is often a weakness of these organizations. Programming costs are usually higher when courses are given on-site and instructor salaries generally cost more than for programs offered in the colleges or professional organizations. For the most part, these institutions do not have an educational director. Relying on their own resources, they sometimes have a limited vision of how to solve problems.

Independent providers are usually one of two orientations. Purveyors of professional supplies may use continuing education to market their products while others are in the business of selling continuing education as their primary function. The ability to respond quickly to learners' needs is

considered a strength of these providers. They usually provide good instruction, and are free from faculty involvement or committee approval. They are able to amortize the costs by offering the same course to different audiences. Independents enjoy the flexibility of experimenting with new formats and methods of instruction. However, they lack the automatic image of quality as enjoyed by the colleges and universities. They must work hard to develop a sense of credibility among professionals. Independents usually lack physical facilities and are very vulnerable to swings in the economy. The various dental supply companies are examples of purveyors in dentistry that provide continuing education opportunities. The entrepreneurs of continuing education in British Columbia to date mostly deal with practice management seminars. Few address the other areas of dental hygiene practice.

Continuing professional educators are not independent agents serving their audiences in ways that only they believe are appropriate. Their choices are shaped by the parent institution as it tries to survive and prosper. Continuing professional educators must constantly be sensitive to how their effort relates to basic organizational goals.

Choosing appropriate instructional methodologies and using sound pedagogical principles are also important issues concerning the effectiveness of continuing education activities. In order to better understand these issues, it is important to construct a profile of the adult learner.

## Adults as Learners

Cervero (1988, p. 54) talks about how continuing educators choose a model of the learner based on value judgements about the ends they wish to achieve. He writes:

"Basing the model of the learner on the critical viewpoint implies that the primary goal of continuing education should be to improve professional artistry or the professionals' ability to operate in the indeterminate zones of practice."(p. 54)

Basing the model of the learner on the functionalist viewpoint emphasizes the importance of acquiring as much technical knowledge as possible to apply to the problems of professional practice. He also points out that the choice of which model of the learner to use should be situation specific and while the critical viewpoint is not appropriate in all situation, he believes it should be the dominant model underlying educational practice when the goal is to improve the professionals' expertise. Basing the model of the learner on the critical viewpoint means that professionals construct an understanding of current situations in practice by referring to an already existing repertoire of practical knowledge obtained through experience. This reflection on prior experience assists professionals to discover new understandings.

In Cervero's view, continuing professional education should foster two forms of knowing. The first must be procedural knowledge or principles of practice. This "practical knowledge is generally understood as a repertoire of examples, scenarios or rules of thumb that have been

developed primarily through prior experiences." (Cervero, 1988, p.54)

However, many professionals are not explicitly aware of the knowledge in their repertoires and helping them to understand this knowledge provides an important foundation. Reflecting on past situations helps professional construct new understandings of current situations. This is the second form of knowing and is referred to as reflection-in-action.

To foster both kinds of knowledge in continuing professional education, Cervero advocates several educational strategies suggested by various other authors as well. The first is that what the learners do is much more important in determining what is learned than what the teacher does. These "forms of knowing can be learned but not taught."(Cervero, 1988, p. 56) For this reason, the key is to utilize experientially based methods. These include case studies, coaching, simulations and role playing. A second strategy is to consider the levels of expertise of the learners. The more experienced professionals have greater repertoire to draw from making them easier to facilitate than new graduates with limited practical knowledge. For the novice, the best strategy is to promote the development of clinical knowledge by making the situation as explicit as possible and include a clinical component to the activity. (Cervero, 1988, p.49) At the other end of the continuum, the experts benefit most from sharing their experiences, case studies and opportunities to research clinical problems. A third strategy is to help the learners acquire this knowledge in the context of their daily practices. Encouraging professionals to be researchers of their own practice will help professional

identify more explicitly their own practical knowledge which then broadens their repertoire for dealing with new, unique situations.

Working with this approach to learners does have several risks. Cervero (1988, p 56) points out the danger of glorifying professionals' practical knowledge simply because it is the knowledge that they use on a daily basis. It is imperative to remember that practical knowledge must be justified on the basis of public criteria rather than private criteria. While recognizing the practical forms of knowledge, educators must not dismiss technical knowledge. The key for continuing professional educators is to integrate technical knowledge into professionals' repertoires of practical knowledge.

In British Columbia, continuing dental hygiene education has traditionally used the functionalist viewpoint as the basis for thinking of the learner. This perspective sees professional activity as "instrumental problem solving made rigorous by the application of scientific theory and technique."(Schon, 1984, p.21)) Understanding professional practice as being fixed and unambiguous, continuing education is used to help professionals provide higher quality service to clients by improving their knowledge, competence or performance. (Cervero, 1988, p.25)

More recently, new products and techniques are becoming so rapidly available that keeping current is a constant challenge. Even the most diligent professional has difficulty staying on top of all the scientific advances. It is becoming more apparent that professional practice is not always fixed and unambiguous. Practitioners are beginning to recognize the need for dealing with the indeterminate zones of practice. Many value

judgements involving the patients, complicate basic procedural knowledge. Dental Hygiene pre-service education is reflecting these difficulties by teaching students to consider the variety of scientific approaches and the importance of ethical considerations to care, based on what is appropriate for the specific individual case.

The acknowledgement of differing values and judgements required in professional practice leads to a broader perspective of continuing education. Dental hygiene faculty members operate under the critical viewpoint when teaching in continuing education activities. However, many dental hygienists in the audiences are still expecting a purely functionalist approach. The missing link is helping dental hygienists to explicitly understand their own practical knowledge and demonstrating how they can use this knowledge to help them solve the unexpected and unique situation of the present.

Critics of existing continuing education programs say that methods, techniques and philosophies of traditional learning approaches are used inappropriately for teaching adults. Four characteristics of these programs are identified as ineffective for adult learners: (Gaynor, 1980, p. 243)

1. The educational purpose is viewed as the transmittal of information.
2. The programs reflect technical presentations by subject matter experts.
3. The programs are primarily of a lecture or panel discussion format.

4. Active formalized clientele involvement in the program or in the need determination is limited.

Those who study the art and science of helping adults learn (andragogy) suggest a problem-oriented emphasis in continuing education programs as opposed to the usual subject-oriented approach. This suggestion is based on several assumptions about adult learners (Gaynor, 1980, p. 248). The following is a list of those assumptions:

1. As a person matures, his/her self concept moves from one of being a dependent personality toward one of being a self-directed human being.
2. As a person matures, he/she accumulates a growing reservoir of experience that becomes an increasing resource for learning.
3. As a person matures, his/her readiness to learn becomes oriented more to developmental tasks and social roles.
4. As a person matures, his/her time perspective changes from one of postponed application of knowledge to immediacy of application; accordingly his orientation shifts from one of subject centeredness to one of problem centeredness.

Thus learning is largely the consequence of experience coping with the stress of one's environment.

### **Models of Teaching**

As we have seen throughout this paper, continuing professional educators must be cognizant of the means as well as the ends of any educational activity. Understanding the learners and establishing the



goals to be achieved, the educator can make choices regarding the model of teaching. Having expertise in a variety of teaching models is important for matching desired outcomes with appropriate educational strategies. Far too often, educators rely on one or two models that are comfortable for them to accomplish all of their goals.

Joyce and Weil (1986) discuss a variety of models that help learners acquire information, ideas, skills, values, ways of thinking and means of expressing themselves. These models of teaching have been grouped into four families that share orientations toward human beings and how they learn. Joyce and Weil explain each model in detail and provide an excellent reference for those interested in developing their own repertoire. However, due to the limited nature of this project, only a brief description of the families and the titles of specific models will be used.

The first family of models is called the information-processing family. This family emphasizes ways to enhance the human beings' innate drive to make sense of the world by acquiring and organizing data, sensing problems, and generating solutions to those problems (Joyce & Weil, 1986, p.5). Examples of these include thinking inductively, learning from presentations, memorization, developing intellect, inquiry training and conceptual attainment. The second family is called the personal family and these models seek to encourage "productive independence so that people become increasingly self aware and responsible for their own destinies" (Joyce & Weil, 1986, p.7). Examples of these models include non-directive, synectics, classroom meetings and increasing awareness. The third family is called the social family. These models are constructed to take advantage

of the collective energy generated when people work together. Examples of these models are group investigation, role playing, jurisprudential inquiry, and laboratory training of interpersonal skills. The fourth family is the behavioral systems family. The common theoretical base for these models is known as behavior modification. They concentrate on observable behavior and clearly defined tasks. Examples of these models include mastery learning, direct instruction, self-control/feedback, simulations, and assertive training.

The models presented here are representations of distinct approaches to teaching. However, they are not meant to be mutually exclusive. Educators need to draw from a varied repertoire of models to accomplish varied educational goals. These models have been highlighted to stress the variety of options available to every educator. Mastering any of these models requires hard work and much practice but the benefit of a wider repertoire is being able to address a variety of goals.

Houle (1980) also describes various ways to design learning experiences. Besides the traditional methods of lectures, discussion groups, reading, and conventions, technological developments including videotape and teleconferencing have added many options in delivery systems. He also identifies new theories that are usually founded on a single fundamental principle. These include constant self-monitoring of practice, self-directed study, modularization, mentorship, intensive study for a lengthy period, concentrated impact programs, life pattern analysis, simulator techniques and experiential learning.

The point of mentioning all of these approaches to educational activities is that many options are available, different approaches are indicated to achieve specific goals, learners are motivated by involvement and variety, and different people respond well to differing learning environments. All of this points to a belief that continuing professional education must consist of a variety of experiences rather than patterned after one or two models that appear to work well. The other pitfall is applying a model simply because it is a tradition. While there is an important place for traditional approaches, to depend solely on those strategies limits the greater potential found in discovering new methodologies.

Dental hygienists in British Columbia have had opportunities to participate in study clubs, clinical courses, lectures, panel discussions, society meeting, and traditional conventions. Other formats may have been available too, however, these are the primary methods used in continuing dental hygiene education. The College also recognizes publications and presentations given by individual dental hygienists, however, only a smaller percentage of people obtain their credits in these areas. By far, the method used most is lecture.

Several studies of dental hygienists in North America have revealed conflicting data about preferred learning methods. Body (1987, p.227) reports that 56.6 percent of those responding to a questionnaire referred clinical instruction/participation while 49.7 percent answered informal lecture/discussion, 26.2 percent formal lecture and 9.0 percent self instruction/correspondence. Wynne Young (1989, p. 82) reports that

Saskatchewan dental hygienists preferred the lecture method overall (48.2 percent of all responses). Recognizing that continuing dental hygiene education has followed a very traditional and functionalist viewpoint in its approach, these results may indicate that further exposure to other educational strategies would benefit members of the profession by broadening their learning repertoires. This exposure to other learning environments could engage dental hygienists in learning activities that are personally enjoyable and effective.

Cervero makes several comprehensive statements about what constitutes effective practice in continuing professional education. He believes that continuing professional educators utilize the interrelationships of three frameworks - ethical basis of practice, contextual basis of practice and epistemological basis of practice. He describes the interrelationships in the following:

"Effective practice in continuing professional education means making the best judgement in a specific context and for a specified ethical framework. These judgements, which are made as a result of knowing in action and reflecting in action, are evaluated as best against what is possible in the specific circumstances in which they occur and what is desirable within a particular ethical framework" (Cervero, 1988, p.158).

### **Evaluating Effectiveness**

An integrated component of program design is evaluation. This component is often dealt with separately possibly because there are so many

ways to approach the issue. However, it is a very necessary aspect of the entire process. Because this project is a general overview of continuing education, the evaluation process will only briefly be discussed. This is in no way intended to down play the significance of evaluation in continuing education.

Four levels of criteria for evaluating the effectiveness of continuing education programs are identified in progressive order (Kress, 1979, p. 451). The first level of criteria is perception/opinion data, otherwise known as a happiness scale. This is usually in the form of a short questionnaire or rating scale and often has very little to do with course effectiveness. The second level of criteria is knowledge gain/attitude change data. This type of data is collected from pre-testing and post-testing the participants. The accuracy of this data is questionable because it is possible to purposefully score low on the pre-test in order to show greater achievement on the post-test. Also, this type of data focuses on knowledge recall and has little to do with any impact on clinical practice. The third level of criteria is clinical process data. This data is usually obtained through chart audits or observation. This method is a bit more reliable although there is evidence that people perform better when they know they are being evaluated than when they are unaware of an evaluation. Finally, the fourth level of criteria is patient impact data which is based on the effects of patient care and is usually assessed by an evaluator other than the clinician. Each succeeding level produces more valid information but is more expensive and difficult to achieve.

Studies showing effectiveness of continuing education usually indicate a need for further study. They show evidence of change, but the long term stability of that change is often difficult to assess. A review of the literature throughout the health professions shows that nearly three fourths (N=103) of studies reported some degree of education effectiveness as a result of continuing education (Nona, Kenny & Johnson, 1988, p. 112). In many cases, the programs were designed for specific behavioral outcomes. Others involved extensive, intensive or prolonged continuing education experiences as opposed to the one day lecture method usually offered.

A typical finding on the effectiveness of continuing education programs is that practitioners make modifications in what was actually taught, to fit their own needs or constraints of practice. They may improve their knowledge level but in many cases, no change in patient care activities is produced (L. Young, et all, 1982, p. 214). And even in cases where changes in patient care activities were produced, these changes were not always consistent with the intended outcomes of the course. One study correlating quality of care with participation in continuing education revealed that for physicians in North Carolina, the quality of medical care was highly related to the physician 's reading habits but not to participation in continuing education programs (Rizzuto, 1982, p. 41).

Researchers have been reluctant to generalize about the effectiveness of continuing education on performance due to the influence of numerous variables that also affect performance. There are studies that do show a positive impact as a result of particular programs. Yet others have been

unable to prove the effectiveness of continuing education. One researcher noted the failures of continuing medical education and blamed them on a "lack of sound education principles in the medical education process" (Gaynor, 1980, p. 248). A project which analyzed eight studies of programs that produced changes in performance by physicians, identified five elements found to be common in all of the studies (Phillips, 1987, p. 59).

These are:

1. Specified Audience. Each of the physicians in the learning process were clearly defined and had expressed a desire to learn something.
2. Identified Learning Need. Each physician could identify a learning need, a gap between present and optimal performance. In each case emphasis was on patient need, and small groups were involved.
3. Clear Goals and Objectives. It was clear to all involved what was to be learned.
4. Relevant Learning Methods. Emphasis on Participation, Clinical Setting. Methods of learning were primarily participative, involving small group discussions and/or clinical procedures. Learning occurred in the participant's own hospital or clinic or simulated clinic setting.
5. Systematic Effort to Evaluate. Assessment of the value of the learning experiences was decided when the programs were developed, based on clear definitions of learning needs. A variety of techniques were used.

This analysis shows the importance of an understanding in educational principles when assessing, planning, implementing, and evaluating continuing education programs. Knowing the subject content alone is not enough to make a program effective.

The Canadian Dental Hygienists' Association is working very hard on innovative approaches to continuing education and professional development. Pilot projects are being sponsored across Canada to teach dental hygienists how to utilize the practice standards to direct their own professional development. Just as dental hygienists are individualizing care to their patients, dental hygienists are being encouraged to generate individualized plans for their own professional development.

Utilizing the clinical practice standards, the Canadian Dental Hygienists' Association is working towards the development of a self assessment program. The purpose of such programs is to give the practitioner an "accurate assessment of his or her current state of the knowledge of the profession." (Houle, 1980, p.258) The self assessment examination is an instrument that combines evaluation with education at every point. At the time the examination is taken, references are usually permitted. Follow-up on errors provides a detailed analysis of why correct answers are correct. Examination feedback usually gives advice regarding general areas of weakness which then helps practitioners plan subsequent educational activities.

Houle (1980, p. 260) identifies several limiting factors to consider in developing this type of instrument. As with any written assessment tool, the cost of development can be very high. Another limitation to consider is



that these types of examinations tend to test knowledge and understanding but not skill or the complex interaction of factors that must be used in dealing with specific cases. A third factor is that because participation in these programs is intended to be voluntary, they may only be taken by the innovators, pacesetters, and the upper part of the middle majority. While there are limitations to this type of program, it can be a valuable learning tool.

### Conclusion

Dental hygienists in British Columbia have access to continuing dental hygiene education activities from each of the major providers described by Cervero (1988). The variety of providers is helpful in making activities accessible to members of the profession throughout the province. As the number of providers increases, collaborative efforts in programming become increasingly more significant. Working together to provide a balanced curriculum that addresses specific learner needs on a local basis could facilitate a continuing dental hygiene education system that offers members of the profession, relevant and quality programs. The sharing of resources and capitalizing on the strengths of the various sponsors could provide a valuable continuing dental hygiene education network.

This discussion on adult learners indicates that appropriate educational strategies emphasize experientially based programming. Those involved in developing new parameters for continuing dental hygiene education should set aside the ineffective traditional approach to learning

and seek educational strategies that are appropriate for the specific group of participants.

Chapter five also points out that effective continuing dental hygiene education activities require more of a facilitator than expertise in any given content. Educators that have a varied repertoire of teaching strategies as well as expertise in content are required. Ignoring the development of educational expertise within the profession will only limit the possible progress of the dental hygiene profession.

In defining new parameters for continuing dental hygiene education in British Columbia, conscious efforts to evaluate and document the effectiveness of activities must begin immediately if advances in educational effectiveness are expected. As new types of programs and activities are planned, so must their evaluation systems be planned. This constant research should be used to direct the future for relevant, sequential and effective continuing dental hygiene education in British Columbia.

## Chapter Six

### Summary, Conclusions and Recommendations

The purpose of this study was to examine the effectiveness of the mandatory continuing education system in British Columbia and respond to a series of questions about the system. In addition, new parameters for continuing dental hygiene education are proposed. This chapter begins by summarizing the answers to each of the questions posed in chapter one, followed by a description of the new parameters. The last section of this chapter makes specific recommendations to facilitate changes toward the realization of those new parameters, based on the information presented in each of the previous chapters.

#### Questions from Chapter One

Answers to the questions posed in the study are fully developed in the conclusions to chapter three. The following briefly summarizes the answers to those questions.

*What is the purpose of the mandatory continuing education system in British Columbia?*

The College's objectives are to "encourage registrants to maintain their professional knowledge; and try to ensure that an adequate number of continuing education opportunities are available, with an emphasis on making these opportunities accessible and relevant to local needs" (College,

1988). However the College refers to the system as a significant part of their quality assurance system. It is believed that the mandatory continuing education system combines with the other quality assurance activities mentioned earlier to ensure that the public receives quality dental care.

*Does the mandatory continuing education system in British Columbia fulfill the expectations of the College?*

The mandatory continuing education system used in the dental profession in British Columbia does not function as a quality assurance system according to the definition of quality assurance models presented in this study. The word "quality assurance" has been used loosely to mean a variety of thing to a variety of people. The definition used in this study came from a review of the literature. If the College intends to implement a quality assurance system as defined in this study, other measures will need to be taken. However, the present mandatory continuing education system does address the College's objectives as stated in the guidelines.

*On what basis are credits awarded?*

A variety of factors are considered when evaluating specific cases. Decisions are very much affected by the perceptions of the individuals on the College Continuing Education Committee. Some sponsors are automatically approved and once they have achieved that status, courses sponsored by them are no longer questioned. Other sponsors appear on the automatically approved list and are routinely scanned to verify related content. Other inequities occur throughout the system. For example, the

honor system and professional judgement are relied upon in some areas of credit reporting but not in others. The Committee may wish to carefully examine the criteria used in evaluating submissions referring closely to the stated objectives of the College.

*Are the criteria used in decision making the necessary criteria for meeting the objectives of mandatory continuing education?*

As mentioned above and again in chapter three, there are times when the criterion used is sponsorship. When two courses have the same content, the difference being sponsorship and location, denying credits for one and awarding credits for the other does not appear to support the objective "to maintain professional knowledge." Either the courses are appropriate "to maintain professional knowledge" or they are not.

*What is the educational value of the mandatory continuing education system in British Columbia?*

Many courses are available and the system fosters an environment that looks for a variety of options. The College Continuing Education Committee discussions are forums to argue the educational value of selected courses. Some members are more open minded with regards to what counts as an educational experience while others emphasis the instrument value of activities.

Overall, the mandatory continuing education system in British Columbia has been generally well accepted by members of the profession and for the most part, practitioners participate fully and conscientiously to

maintain their level of professional knowledge. Only a small percentage of practitioners complain about the requirements and most feel that the requirements are minimal in contrast to their level of participation.

This study indicates that the system is not effective as a quality assurance system. Professionals engaged in quality continuing dental hygiene education are likely to improve as professionals and ultimately provide better care to the public. However, because there are no measurement phases or action plans to deal with the maintenance of specific standards, quality care cannot be guaranteed with the system. The strengths of the system are that professionals must take the time to seek out and plan for their own professional development on a regular basis.

#### **New Parameters for Continuing Dental Hygiene Education**

Dental hygienists can be instrumental in setting out new parameters for continuing dental hygiene education. In defining continuing dental hygiene education, it is recognized that a variety of education activities are possible. Frequent discussions about activities that are considered educational may help individuals realize that worthwhileness is an important criterion. Their participation in discussions determining the value of their activities will facilitate a broader perspective by other members of the dental profession. The definition of dental hygienist as adopted by the British Columbia Dental Hygienists' Association, will contribute much in the way of understanding among members of the dental profession. Dental hygienists can take a pro-active approach in developing a clearer understanding of continuing dental hygiene education by

ensuring that all of those involved with continuing education for dental hygienists share the same definitions.

Part of the new parameters for continuing dental hygiene education should be that dental hygienists understand the role of continuing education in a quality assurance system. Rather than participating in continuing education activities just because they are available on any given day, dental hygienists could develop a self-directed quality assurance plan that utilizes continuing education activities. The clinical practice standards are available to help practitioners evaluate their own practice. From this, individuals can then seek education activities that will help them develop in specific areas. As standards develop for the other roles of dental hygiene practice, dental hygienists will be able to evaluate themselves in these areas.

Dental hygienists in British Columbia could benefit by having more of their members involved in advanced education and training in educational methodologies. The development of quality continuing dental hygiene education activities and continued research on the effectiveness of those activities will help the dental hygienists in their professionalization process.

As a group regulated by the College, dental hygienists can capitalize on the strengths of the mandatory continuing education system. The College's objectives are to "encourage the maintenance of professional knowledge and ensure an adequate number of continuing education opportunities which are accessible and relevant to local needs" (College, 1988). Dental hygienists can be instrumental in determining their local

needs as well as encouraging each other and sharing their resources to make continuing dental hygiene education more accessible.

In determining appropriate content for continuing dental hygiene education, those concerned will be able to look to established standards for dental hygiene practice. Continued discussion of the established norms will be necessary to up-date and argue for the most recent definition of quality care. Dental hygiene schools are often on the leading edge of the profession and can also be a resource for determining appropriate curriculum.

Addressing the expressed needs of practitioners will be important but at the same time, educators must facilitate the discovery of other existing needs not previously identified by the practitioner. Needs assessment tools could be helpful if they could determine the learners needs in very specific terms. This might best be accomplished in small groups or through self-assessment programs rather than large generalized surveys.

The new parameters of continuing dental hygiene education should focus on practitioners and their efforts to provide quality care. Experientially based programming could be the key to helping practitioners deal with the indeterminate zones of professional practice. The new approach to continuing dental hygiene education will be dental hygienists researching their own practice using problem-oriented methodologies rather than subject oriented courses, to develop individualized plans for professional development. By evaluating and documenting the effectiveness of these strategies, dental hygienists can help each other move in a direction that benefits both the profession and ultimately, the public.



## Recommendations

An overview of factors influencing continuing dental hygiene education in British Columbia has been presented in an effort to guide further development and research. This chapter will make recommendations based on information presented, to those interest groups concerned about the growth and development of continuing dental hygiene education in the province of British Columbia. The primary recommendations are identified by an (\*) preceding the number.

### Clarifying concepts

Words such as "continuing dental hygiene education", "competence", "quality assessment", and "quality assurance", which are frequently used in journal articles and discussions in the dental hygiene profession, must be understood by all members and not just the leaders of the profession. Although the Canadian Dental Hygienists' Association has defined these words and published definitions for these words in previous works, they need to be reiterated frequently until these concepts are as familiar as any other basic concept in dental hygiene.

**\* 1. The British Columbia Dental Hygienists' Association must lobby for the recognition and adoption of the definition of "dental hygienist" as defined by the Joint Committee on the Future of Dental Hygiene in British Columbia by the College.**

There are members of the licensing body that view dental hygiene practice in very limited terms. This narrow perspective influences decisions regarding what continuing education activities are appropriate for dental hygienists. The definition is as follows:

A dental hygienist is a licensed health professional who provides educational, preventive and therapeutic services. A dental hygienists functions as a clinician, educator, consultant, administrator or researcher. The choice of role will be determined by academic preparation, experience and established policies of the employer and/or licensing body. These roles are performed in a variety of services and setting to promote total health through the maintenance of optimal oral health.

**\* 2. The British Columbia Dental Hygienists' Association should adopt working definitions for "continuing dental hygiene education", "competence", "quality assessment" and "quality assurance", and include these definitions in their Policies and Procedures Manual under Common Terms and Definitions.**

The following definitions are proposed:

*Continuing dental hygiene education* - a variety of learning activities beyond basic professional preparation in which dental hygienists participate with the intention to bring about changes in information, knowledge, understanding, skill, appreciation and attitudes or for the purpose of identifying and solving professional or community oral health problems. The primary goal is to promote optimal health service to the public by fostering continued professional competence.

*Competence* - the ability to carry out a specific task or tasks according to predetermined standards of performance.

*Quality assessment* - the measurement of quality of care against defined criteria and standards and involves: 1) selecting a topic, 2) establishing criteria and standards, 3) making the assessment, and 4) deciding whether the quality is adequate.

*Quality assurance* - the measurement of the quality of care against defined criteria and standards (quality assessment), and the implementation of any changes to either maintain or improve the quality of care. The additional steps taken in a quality assurance system include 5) developing a plan to correct deficiencies, 6) implementing the plan, 7) re-assessing the quality, and 8) deciding whether the quality is now adequate.

**3. Any written material using the words above should provide the definition intended by the author.**

This may seem tedious and unnecessary. However, there are those who only think of continuing dental hygiene education activities in terms of sponsored programs. This limited interpretation should be expanded to include the informal activities also considered as continuing education. Confusion regarding the other terms also happens easily and every attempt to clarify meanings is important. Conceptual diagrams may be useful in defining the relationships between the terms discussed in this paper.

It is also the responsibility of the profession to ensure that program sponsors, educators, licensing bodies and individual members of the profession have an accurate understanding of these terms. When these various groups share the same definitions, they can work together in a satisfying and productive way.

**\* 4. The British Columbia Dental Hygienists' Association should present these definitions to the College for use in decision making related to these issues and dental hygienists in the province.**

Continuing dental education has not been formally defined by the College and they may welcome the input from the The British Columbia Dental Hygienists' Association in establishing meaningful terminology for the profession. The proposed definitions may be modified by the College to apply to all dental professionals.

Dental hygiene professional schools can facilitate the understanding of continuing dental hygiene education to their students and seek to develop professionals who continue their quest for knowledge and understanding.

**5. Teach the concept of continuing dental hygiene education to students in the dental hygiene programs and have them experience such activities with their faculty and other members of the dental hygiene profession.**

This integration into the pre-service curriculum would facilitate a greater understanding and commitment to continuing learning that is expected of the dental hygienist and the dental hygiene profession. The interaction between students and professionals could help initiate students into the profession as well as foster a sense of pride in the practitioners. Students are often strong in theory while practitioners are strong in practice.

Together, they could share experiences that would compliment one another. Graduating with an understanding of the role and significance of continuing dental hygiene education activities in their professional lives, dental hygienists may continue to seek out these activities wherever they

may be practicing, even in areas where continuing education is not a requirement for re-licensure.

**6. The British Columbia Dental Hygienists' Association should be instrumental in sponsoring continuing education activities that could encourage this kind of experience for students, faculty and other members of the profession.**

Dental hygiene pre-service programs must also acknowledge a significant role in understanding the concepts of "quality assessment" and "quality assurance".

**7. Dental hygiene programs should continue to integrate peer review, self-evaluation, and chart audits in the curriculum as a way of initiating students into a variety of approaches to quality assurance systems.**

By teaching students to become familiar with quality assurance models, greater acceptance of these activities in their professional lives should make them feel more comfortable about participating in these systems.

**8. The British Columbia Dental Hygienists' Association should sponsor workshops for dental hygiene educators that address the role of dental hygiene programs in continuing dental hygiene education and professional development.**

These workshops would be an excellent opportunity for dental hygiene educators and association members to discuss the development of professionals that will continue to practice competently throughout their careers in dental hygiene. Problem solving workshops of this type should qualify for continuing education credits and be seen as an asset to the dental profession.

### Goals of continuing education

The goals of continuing dental hygiene education as stated by the Canadian Dental Hygienists' Association is "to improve health care for patients by improving and increasing the ability of the dental hygienist to deliver the highest possible quality of dental hygiene care".(CDHA,1979, p.12).

**\* 9. The British Columbia Dental Hygienists' Association should make distinct position statements regarding continuing dental hygiene education, quality assurance, and the relationship that exists between these two concepts.**

There have been changes in the understanding of how continuing education relates to assuring competence since the British Columbia Dental Hygienists' Association's initial position regarding the use of mandatory continuing education. Formal statements that show a separation between continuing education and quality assurance will aid in further advancement of both. Continuing education activities provide the opportunity for the acquisition of new skills and knowledge and the maintenance of professional competence. Quality assurance is the actual measurement of competence and the implementation of any changes to either maintain or improve the quality of care. Quality assurance systems can utilize continuing education to implement changes in professional behavior, however, outside the context of a quality assurance system, continuing education activities on their own cannot be considered quality assurance programs. It might be said that a quality assurance system, as described in this paper, can be considered a continuing education activity,

because participating in an assessment of professional competence could be educational in that it helps individuals discover their own areas of strength and weakness. The corrective phase may be educational in the development of new skills or knowledge. And the re-assessment could be educational in that it confirms that individuals have indeed achieved competence and understanding. The problem is that not all continuing education activities can be considered quality assurance models because the elements of assessment, corrective action, and re-assessment are not always a part of continuing education activities. In fact, very few programs offered today do any type of assessment. The distinction between continuing education and quality assurance is necessary for continued development in both areas.

Once the British Columbia Dental Hygienists' Association has established their position on the distinction between continuing education and quality assurance, further statements can be developed regarding their position on mandating continuing education for re-licensure.

**10. The British Columbia Dental Hygienists' Association should review its position on mandatory continuing education utilizing the information available on continuing education and the assurance of professional competence.**

Mandating dental hygienists to register for a specific number of credit hours in continuing education does not ensure professional competence. However, it does force individuals to consider their efforts in obtaining the minimum requirement. This incentive may well be worth the investment in mandating continuing education because it forces people to arrange time for their professional development. The majority of dental hygienists take

continuing education seriously and many surpass the minimum requirement. Concern usually lies with those individuals who would not participate if it were not mandated and for these people, there is always a way to beat the system.

The identification of clinical practice standards has been a significant step towards the development of quality assurance programs and should be very helpful in developing continuing education activities.

**\* 11. The British Columbia Dental Hygienists' Association should formally present the College - Continuing Education Committee with copies of the *Clinical Practice Standards for Dental Hygienists in Canada* to use as a reference in cases concerning dental hygienists.**

A cover letter should emphasize that these standards were developed with the clinical practitioner in mind and other documents related to the other functions of dental hygienists, such as educator, researcher or community health officer, will be forthcoming. Until these additional documents are available, the British Columbia Dental Hygienists' Association would be happy to address the continuing education concerns of the Committee regarding these additional roles. Having done this, the British Columbia Dental Hygienists' Association together with the Canadian Dental Hygienists' Association should work toward the development of standards for dental hygiene roles not covered in the *Clinical Practice Standards*. These include consultant, educator, administrator, researcher, and community health official.

Professional discussions and activities often center around how the dental hygienists contribute to the oral health status of the public. The



British Columbia Dental Hygienists' Association Membership Needs Survey indicated a desire among respondents to promote the professional image of dental hygiene to the public. In order to address this issue, the professional should consider the various perspectives presented by Cervero (1988) regarding the professions in society. Many professionals still hold the functionalist viewpoint. Recognizing the importance of the critical viewpoint may help dental hygienists address public concerns regarding their interrelationship.

**12. The British Columbia Dental Hygienists' Association should develop a public survey to identify public concerns regarding dental hygiene care and services.**

During activities such as dental health month and dental hygiene week when dental hygienists have an opportunity to talk with the public, they need to discuss the concerns of the public related to dental hygiene care and the dental hygiene profession. This data will provide information from which dental hygienists can plan ways to address the public concerns while increasing their own profile at the same time. Continuing education activities could incorporate the concerns of the public and facilitate the development of workable solutions. Continuing education credits would be appropriate for courses addressing the public concerns about dental hygiene care because these programs would help address the expressed needs of the public and provide opportunities to discuss ethical dilemmas in professional practice.

The College -Continuing Education Committee is in a position to make recommendations to the College Council and may wish to re-examine the purpose of mandatory continuing education.

**\* 13. The College -Continuing Education Committee should adopt a working definition of continuing education in dentistry.**

They may choose to develop a definition based on their own research of the literature or adapt existing definitions to meet their needs. This paper and/or the work of the British Columbia Dental Hygienists' Association could be of assistance to this committee.

**\* 14. The objectives stated in the College Guidelines for Mandatory Continuing Education should be used as the foundation for the work of the Continuing Education Committee.**

The emphasis is on encouraging professionals to maintain their professional knowledge and ensuring that there are an adequate number of opportunities available. The Committee must realize the limitations of the mandatory continuing education system and consider these when making acceptance and rejection decisions.

**15. The College may consider initiating a Quality Assurance Committee to investigate ways of dealing with assuring quality care to the public.**

There is much more literature available on this issue now than there was when mandatory continuing education was introduced in British Columbia. Many models exist and are being researched. Identifying a model that could include all the necessary parts of a quality assurance system is worth investigating by the licensing body.

## Curriculum ideas

The perceived needs of the learners are important to address in continuing education. However, more specific information is required to be helpful in planning worthwhile activities. Some professionals may be unaware that their knowledge base is falling behind in certain areas. Continuing education activities must help the individual practitioner identify their own specific requirements.

**\* 16. The British Columbia Dental Hygienists' Association should work together with the Canadian Dental Hygienists' Association to sponsor continuing dental hygiene education activities based on the *Clinical Practice Standards for Dental Hygienists in Canada*. Carefully designed evaluation tools should be used to document the effectiveness of these programs.**

In these activities, dental hygienists need to learn how to utilize the practice standards in their own professional development. These types of activities are worthy of continuing education credits because they are developing personal strategies for determining and maintaining professional competence in dental hygiene. The collection of data from the evaluation tools could provide valuable evidence to support or modify the programs.

**17. Self-assessment and needs assessment surveys should be designed to identify the specific needs of the learner as well as non-content factors that affect participation in continuing dental hygiene education.**

The Canadian Dental Hygienists' Association is working towards a self-assessment tool that will identify areas requiring further development.

Compiling the results from this type of assessment would provide valuable information to program designers.

**18. Continuing dental hygiene educators should utilize the expressed needs and interests of the learners to plan educational activities that will attract dental hygienists.**

As the learners' perceived needs are being addressed, educators must also help the learners to discover other important areas necessary in providing quality care.

**\* 19. Members of specific groups such as dental hygiene educators and community health dental hygienists should be actively working toward defining standards of practice in their respective professional role in conjunction with the British Columbia Dental Hygienists' Association and the Canadian Dental Hygienists' Association.**

This will be an important step towards the recognition of dental hygiene functions beyond clinical practice. The public expects and deserves to have professionals that are competent no matter which role they assume.

Specific examples are the need for the community health dental hygienists to be able to successfully apply for grants to fund worthwhile and needed community projects. Dental hygienists are hired for these positions because they are dental professionals that understand the significance of community projects in the improvement of the public's oral health.

Statistical analysis is critical to an epidemiological study to identify where disease is most prevalent. Professionals that understand the disease process are necessary for these positions and not simply someone who knows statistics. Teachers that have no teaching skills are not contributing

to the improved oral health status of the public. Teaching skills are necessary to educate the public regarding sound preventive techniques that will help them avoid oral health problems. Qualified teachers are needed in the profession and training in educational methodologies should be considered an important aspect of professional competence, worthy of professional development that counts toward re-licensure where mandatory continuing education exists. This is not to say that these professionals do not also need clinical activities to stay competent. The point here is that developing all of the skills and knowledge necessary to perform competently as a professional dental hygienist should be equally recognized by the College for continuing education credit.

No matter which role dental hygienists assume, each has specific areas where growth is needed. Today, continuing education activities happen in a rather random way. People take whatever is offered, whenever it is offered, without thinking about a planned and systematic approach to their professional development.

**\* 20. The British Columbia Dental Hygienists' Association should encourage its members to plan individualized sequential activities that will enhance their professional development and competence.**

This includes activities from a variety of subject areas as opposed to all activities in any one area. Both the clinical practice standards and the dental hygiene pre-service curriculum can provide guidance to appropriate subject areas. Resource people need to be available to assist members in planning their individualized approaches to professional development.

### Designing effective programs

The British Columbia Dental Hygienists' Association Membership Needs Survey(1988) indicated that respondents felt the organization should become more active in continuing education and play a major role in this area. It was ranked the highest among seven other possible roles.

**21. The British Columbia Dental Hygienists' Association should be recognized as a major sponsor of continuing education programs for dental hygienists and be more active in this capacity, particularly by ensuring continuing dental hygiene education activities reach those members in remote areas.**

Component societies have taken the responsibility of offering activities on a local basis with funding periodically from the British Columbia Dental Hygienists' Association. Annually, a British Columbia Dental Hygienists' Association-Continuing Education Grant is awarded to one component society for sponsoring a continuing education program. The British Columbia Dental Hygienists' Association - Continuing Education Committee could act as a better resource, providing specific courses and/or linking component societies with other existing courses and facilitators. The British Columbia Dental Hygienists' Association speakers bureau is intended to provide cross referencing of course topics and instructors. Members are encouraged to utilize this resource.

**22. The British Columbia Dental Hygienists' Association can function independently as a sponsor of programs and/or work in cooperation with other sponsoring agencies such as dental associations, associations of other**

**health professionals, community health agencies, faculties of dentistry and programs of dental hygiene.**

This role for a constituent association of Canadian Dental Hygienists' Association is stated in the Canadian Dental Hygienists' Association Guidelines on Continuing Education, approved by the Canadian Dental Hygienists' Association Board of Directors at the 1978 Annual Meeting. The Canadian Dental Hygienists' Association also states that individuals or groups organized primarily for profit should be discouraged from acting as sponsors. While sponsors that make high profits from continuing education should be discouraged, valuable programming from other independent sponsors should not be ignored. All professionals profit financially from the services they provide and private sponsors are no different. However, unless the financial statements of each sponsoring organization are reviewed, profit margins will be difficult to assess. Volunteer work in continuing education is a necessary and important contribution to the profession. But for an activity such as continuing education, that holds a significant place in the profession, volunteers should not be expected to support the entire system.

**\* 23. The British Columbia Dental Hygienists' Association should sponsor workshops for component society continuing education coordinators, on the assessment, planning, implementation and evaluation of continuing dental hygiene education activities in their respective areas.**

This would facilitate the better utilization of existing resources and ideas regarding continuing dental hygiene education.

**\* 24. The British Columbia Dental Hygienists' Association should sponsor workshops for educators of continuing dental hygiene education with emphasis on educational methodologies.**

Developing the teaching skills of its members, the British Columbia Dental Hygienists' Association would contribute additional personnel to the limited resources currently available with expertise in educational methodologies.

Study clubs have been under-utilized by dental hygienists in recent years. While information as to why this is the case is not available, it may be due to the lack of facilitators or the uncertainty involved in the initial organization. The British Columbia Dental Hygienists' Association has recently developed a simplified organizational package to facilitate the development of more clubs.

**\* 25. The British Columbia Dental Hygienists' Association should encourage the use of study clubs and assist in the organization of such clubs throughout the province.**

The British Columbia Dental Hygienists' Association or the Greater Vancouver Dental Hygiene Society could approach the provincial periodontists' society to co-sponsor a study club for dental hygienists. This approach spreads the responsibilities among a variety of mentors so that no one person is asked to bare the entire load. The key to this co-sponsored club would be the development of a sequential curriculum. Other specific study clubs should be organized to systemically review the clinical practice standards by first evaluating individual performance for each criterion and planning strategies to meet the standards.



**\* 26. On-site continuing education activities in offices where two or more clinicians practice could provide excellent opportunities for self-assessment, peer review, consultation and a problem oriented approach to professional competence.**

The dental team could also be included in this type of program. The licensing body sometimes has concerns about in-office programs because they want to avoid awarding credits for staff meetings. However, this strategy is deserving of credit because it is more closely related to the individuals' practice and has a better chance of actually improving practice behaviors than attending an all day lecture at an institution.

**27. As a professional group, dental hygienists should work towards the development of self-assessment tools that provide specific, individualized information about the status of professional competence.**

Specific continuing education activities can then be planned to address areas of weakness. Canadian Dental Hygienists' Association is working towards this end although it will probably be several years before this type of assessment tool is available. In the meantime, dental hygienists could begin a reflective study and collection of data on their individualized approaches to continuing dental hygiene education.

**28. Individual case studies on the continuing dental hygiene education of randomly selected dental hygienists, willing to participate, from specific geographical areas in British Columbia would provide valuable data on current individual approaches to continuing education.**

Limited data is available that follows the professional development of dental hygienists. It would be interesting to see how individuals address their own

continuing education activities. Why are specific activities selected? Is it based on availability? Did someone else sponsor them in the activity? Did they rely on a particular educational methodology more often than others? This type of study would provide more specific information about the individuals' approach to continuing education and may show geographical differences, due to availability of courses and not necessarily due to perceived need.

**29. Dental hygienists should seek activities utilizing interactive methodologies rather than passive methodologies.**

Research in the field of knowledge acquisition suggests that what learners hear or view passively usually goes into short term memory and is frequently forgotten. Only when learners use the information in some interactive process such as re-telling, teaching others or trying to apply the information, does it move to the long term memory and only after frequent use does the information become resident in the working memory where it can be retrieved quickly. (J. Eisner, 1988)

**30. The British Columbia Dental Hygienists' Association - Continuing Education Committee could initiate the organization of a special committee to assist in balancing continuing dental hygiene education programs in the province.**

All local and provincial sponsors of continuing dental hygiene education could plan the year's activities in an effort to provide a balanced curriculum and avoid conflicting dates or topics.

**\* 31. The British Columbia Dental Hygienists' Association should appoint a continuing education director/consultant to provide guidance in developing individualized continuing dental hygiene education and coordinating available resources.**

A person knowledgeable in all aspects of continuing education could coordinate professional development activities on a provincial basis and assist program sponsors in providing quality, effective educational opportunities for dental hygienists in British Columbia.

## APPENDIX

APPENDIX A

**RULES OF THE COLLEGE OF DENTAL SURGEONS  
OF BRITISH COLUMBIA  
UNDER THE DENTISTS ACT**

## ARTICLE 17 - MANDATORY CONTINUING EDUCATION

**17.01 Preamble.** The dental profession, as a self-governing body, is ultimately responsible for the quality of dentistry that is provided to the public. Continuous study is the fundamental and lifelong responsibility of the professional person, as is implicitly suggested in the term "practice of dentistry". The exponential rate of technological change through research, innovations in patterns of health care delivery, new clinical procedures, and an increasing social awareness have accentuated the need for each registrant to remain abreast of professional development. The college, in order to formalize its commitment to these principles, has established continuing education requirements for the re-licensure of certain bodies licensed registrants to complement the necessary professional reading and consultations related to every day practice.

**17.02 Objectives.** The college's objectives are to:

- (a) encourage registrants to maintain their professional knowledge; and
- (b) try to ensure that an adequate number of continuing education opportunities are available, with an emphasis on making these opportunities accessible and relevant to local needs.

**17.03 Credit requirements.** Registered members are required to obtain a minimum of 90 credit hours of continuing education during three-year cycles. Registered dental hygienists are required to obtain a minimum of 75 credit hours of continuing education during three-year cycles.

**17.04 Courses.** Courses or their educational equivalents must have significant intellectual or practical content, directly related to the practice of dentistry or dental hygiene, as the case may be, or to the professional responsibility or ethical obligations of the participant. For licensed specialists at least 50% of the requirement of 90 hours during each three-year cycle must be acquired through programmes pertaining to the specialty in which the specialist is certified.

**17.05 Compliance with continuing education requirements.** Subject to an order of council, registrants must comply with all requirements concerning continuing education imposed by the continuing education committee pursuant to Article 17.06.

**17.06 Continuing education committee.** Council will appoint from time to time a continuing education committee and a chairman thereof, both to hold office at council's pleasure. The continuing education committee will, from time to time,

- (a) determine when each three-year cycles begin;
- (b) determine the maximum number of hours in each 24 hour period which may be credited toward continuing education;
- (c) determine how each registrant will report to the college on, and verify the number of continuing education hours engaged in, by that registrant;
- (d) approve continuing education courses, or their equivalents, and their sponsors;
- (e) determine the maximum number of credit hours that may be claimed in respect of any particular continuing education course or equivalent;
- (f) impose such other requirements concerning continuing education as it considers reasonable and necessary;
- (g) review and make recommendations to council concerning guidelines for continuing education requirements;
- (h) approve or disapprove continuing education courses, submitted for eligibility, that do not readily fit into an existing area of the then current requirements for continuing education;
- (i) determine credit valuations of those courses which do not readily fit into an existing area of the then current requirements for continuing education;
- (j) guide the office administration relating to continuing education requirements;
- (k) encourage the appropriate sponsoring agencies to offer a sufficient number and variety of continuing education courses to enable registrants to meet college requirements;
- (l) encourage registrants to meet continuing education requirements;
- (m) co-operate with dental auxiliary organizations with regard to continuing education requirements for auxiliaries licensed by the college; and
- (n) investigate and review registrants who fail to meet their requirements and report thereon to council.

**17.07 Examinations.** As an alternative to obtaining continuing education credits, registrants may obtain their required credit hours, for each three-year cycle, by successfully completing the then current licensing examination of the college for members, specialists, or dental hygienists, as the case may be. Such examination may be taken at any regular examination time during the three year cycle but no later than the last regular examination of the third year of the cycle.

## APPENDIX B

COLLEGE OF DENTAL SURGEONS OF BRITISH COLUMBIA

### GUIDELINES FOR MANDATORY CONTINUING EDUCATION

#### PREAMBLE

The dental profession, as a self-governing body, is ultimately responsible for the quality of dentistry that is provided to the public. Continuous study is the fundamental and lifelong responsibility of the professional person, as is implicitly suggested in the term "practice of dentistry". The exponential rate of technological change through research, innovations in patterns of health care delivery, new clinical procedures, and an increasing social awareness have accentuated the need for each registrant to remain abreast of professional development. The College, in order to formalize its commitment to these principles, has established continuing education requirements for the re-licensure of certain bodies licensed registrants to complement the necessary professional reading and consultations related to every day practice.

#### OBJECTIVES

The College's objectives are to:

- (a) encourage registrants to maintain their professional knowledge;  
and
- (b) try to ensure that an adequate number of continuing education opportunities are available, with an emphasis on making these opportunities accessible and relevant to local needs.

#### CREDIT REQUIREMENTS (Article 17.03)

Registered members are required to obtain a minimum of 90 credit hours of continuing education during three-year cycles. Registered dental hygienists are required to obtain a minimum of 75 credit hours of continuing education during three-year cycles.

Three-year cycles commence January 1 of the calendar year following the year of registration.

CREDITS OBTAINED PRIOR TO THE BEGINNING OF A THREE-YEAR CYCLE DO NOT COUNT TOWARD THE NECESSARY CREDITS FOR THAT CYCLE.

For licensed specialists at least 50% of the requirement of 90 hours must be acquired through programs pertaining to the specialty in which the dentist is licensed. Up to 50% of the requirements of 90 hours may be acquired outside the particular specialty.

#### EXAMINATIONS (Article 17.07)

As an alternative to obtaining continuing education credits, registrants may obtain their required credit hours, for each three-year cycle, by successfully completing the then current licensing examination of the College for members, specialists, or dental hygienists, as the case may be. Such examination may be taken at any regular examination time during the three-year cycle but no later than the last regular examination of the third year of the cycle.



## REPORTING OF CREDIT HOURS

It is the registrant's responsibility to ensure that hours of continuing education are reported either individually on the College approved forms or through the sponsoring agency's group list when provided (e.g. dental societies, study clubs, universities). In both categories a signature certifying attendance must appear on the reporting form. Records for each licensed registrant will be maintained on the basis of information reported to the College by means of individual report forms and certified attendance lists supplied by approved sponsors of continuing education programs. An annual record of each person's accumulated credits will be supplied to the person, by the College, at least once in every calendar year.

1 day.....7 hours maximum

1/2 day.....4 hours maximum

Evening.....3 hours maximum

ACTUAL HOURS SHOULD BE REPORTED.

In the event that continuing education programs continue into the evening hours, a maximum of 10 hours credit per twenty-four hour period may be claimed.

CREDIT HOURS IN EXCESS OF THOSE REQUIRED IN A THREE-YEAR CYCLE CANNOT BE CARRIED FORWARD TO A SUBSEQUENT THREE-YEAR CYCLE.

## CATEGORIES AND CREDIT HOURS

### 1. COURSES

It is understood that courses or their educational equivalents shall have significant intellectual or practical content, directly related to the practice of dentistry or dental hygiene or to the professional responsibility or ethical obligations of the participant.

The following sponsors of a continuing education course, or equivalent, shall have their presentations automatically approved for continuing education credit hours.

- a) All accredited dental schools, universities and colleges.
- b) Provincial, state and national dental/dental hygiene associations and component societies of the College of Dental Surgeons of British Columbia.
- c) Study clubs which have received approval from the College of Dental Surgeons of British Columbia or from a component society of the College or the British Columbia Dental Hygiene Association (B.C.D.H.A.)

- d) All Federal government health agencies, including the military service, and all Provincial or local government departments of health or public health.
- e) All hospitals accredited by the Canadian Council of Hospital Accreditation.
- f) National dental specialty organizations recognized by the Canadian Dental Association or the American Dental Association.
- g) Other than a dentally related organization (e.g. a proprietary organization) if the course or equivalent is specifically dentally oriented and presented to a dental audience.

ALL OF THE ABOVE RECEIVE HOUR-FOR-HOUR CREDIT.

The Council of the College of Dental Surgeons of British Columbia reserves the right to approve or disapprove credits for courses, or equivalents, that it considers to be of questionable content relative to the practice of dentistry.

## 2. CONVENTIONS

- a) Multiday convention type meetings such as provincial, state or national dental/dental hygiene conventions or their equivalent.

5 CREDIT HOURS ONLY PER CONVENTION

OR

- b) Conventions with a significant scientific educational content may be accepted for hour-for-hour credit provided that proof of attendance at each lecture session is obtained and submitted (using the College approved form) together with the convention content brochure.

## 3. STUDY CLUBS

- a) Attendance at study clubs (see Section 1). Study clubs must maintain attendance records for members and supply these on the approved group reporting form, semi-annually in each calendar year.

HOUR-FOR-HOUR CREDIT

- b) Acting as mentor of a study club (see Section 1) with information submitted to the College on group reporting form or individual reporting form.

HOUR-FOR-HOUR CREDIT

In addition, each mentor of a study club may claim fifteen credit hours for new program organization and/or significant course change, with information submitted to the College on an individual reporting form.

4. FACULTY

- a) Full-time Faculty members at the University of British Columbia Faculty of Dentistry and other recognized teaching institutions.

10 CREDIT HOURS PER TERM (MAXIMUM 20 CREDITS PER YEAR)

- b) Part-time Faculty members at University of British Columbia Faculty of Dentistry and other recognized teaching institutions, a minimum of half-day per week, or giving one-hour lecture per week.

5 CREDIT HOURS PER TERM (MAXIMUM 10 CREDITS PER YEAR)

5. PRESENTATIONS

For each hour of lectures given outside regular duties (not including lectures given to graduate and post-graduate students who are normally under the dentist's/dental hygienist's supervision), to a study group, health group or formal auxiliary education program, approved by the College of Dental Surgeons of British Columbia.

HOUR-FOR-HOUR CREDIT

In addition, credit is allowed for preparation time for such lectures or courses, but only once per calendar year for the same or similar course or lecture. For example, a one-day lecture qualifies for seven hours of credit each time it is presented, and an additional seven hours of credit for preparation time is allowed once per calendar year.

6. PUBLICATIONS

- a) Articles - for each dentally related article written and published in dental literature recognized by the College.

15 CREDIT HOURS

- b) Books or Chapters in Books - continuing education credits will be granted on an individual consideration basis.

7. SELF STUDY

Self study with a test of the educational content of the program successfully completed and examination passed. Total hours will be based upon a determination by the sponsor of the reasonable amount of time necessary to cover the material and to take the examination not upon the basis of individual time taken to study and review the material.

HOUR-FOR-HOUR CREDIT,  
TO A MAXIMUM OF 60% OF TOTAL 3 YEAR CREDITS

8. ADVANCED STUDY

- a) Full-time study - graduate study, internships, residencies, dentists/dental hygienists engaged in acceptable full-time programs will fulfill their continuing education requirements for the period of their full-time program, and a new three-year cycle will commence on January 1 of the year following successful completion of the program.
- b) Part-time study - successfully completing a dentally related course offered by a recognized educational institution. Persons so engaged must provide proof to the College of Dental Surgeons of British Columbia, from the educational institution of successful completion.

20 CREDIT HOURS PER THREE UNIT COURSE, OR EQUIVALENT

Questions pertaining to continuing education requirements may be directed to the office of the Registrar.

Approved: March 1978

Revised: September 1984

July 1988

## APPENDIX C

### REPORT ON MANDATORY CONTINUING EDUCATION

#### 1988 CDA TEACHING CONFERENCE (MONTREAL)

Dr. James Gillespie, of the Royal College of Dental Surgeons of Ontario, led a workshop which examined the topic of Mandatory Continuing Education. In an introductory presentation, Dr. Gillespie observed that Mandatory Continuing Education is in effect in the four western provinces at the present time and is presently under consideration in the province of Ontario.

A discussion ensued in which various aspects of mandatory Continuing Education were addressed. These included, the effectiveness of Mandatory Continuing Education (both on an individual course level and in general), the accessibility of Mandatory Continuing Education to dentists in various regions of the country (particularly those remote from urban areas), and the requirement to individually tailor Mandatory Continuing Education programs to the needs of individual dentists.

After considerable discussion, the working group arrived at a list of eleven recommendations which were reported at the final plenary session of the teaching conference:

1. That there be a clear separation between Mandatory Continuing Education and Quality Assurance.
2. That the (4) provinces in the West (who have experience with Mandatory Continuing Education) assess what the effect has been of existing programs and report their findings to the Conference participants.
3. That a liaison be established between the existing Mandatory Education provinces and the other Conference participants.
4. The establishment of a Continuing Education section in the ACFD (Association of Canadian Faculties of Dentistry).
5. The licensing organizations should accept the responsibility for verifying individual efforts towards the maintenance of ongoing comparison.
6. Efforts need to be made to assist the dentists, (the consumers of Continuing Education courses) to determine their own personal (Continuing Education) needs.

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