

AN ANALYSIS OF COMPETENCIES  
TAUGHT IN THE CHIPPEWA VALLEY TECHNICAL COLLEGE  
DENTAL ASSISTING DEGREE PROGRAM

By:

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ABSTRACT

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A Comparison Study Defining the Competencies of the Chippewa Valley Technical  
 (Title)

College (CVTC) Dental Assisting Program Versus the Needs of Industry.

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The purpose of this study is to validate the curriculum of the Dental Assisting Program at Chippewa Valley Technical College (CVTC). This is achieved by comparing the Chippewa Valley Technical College program competencies with the core competencies found in a study conducted by the Dental Assisting National Board (DANB) and the American Dental Assisting Association (ADAA). This study identifies whether the competencies of Chippewa Valley Technical College's Dental Assisting program meet the needs of industry.

The Dental Assisting National Board and the American Dental Association collaborated on a study that looked at the possibility of a nationwide standard. Through this process, core competencies required for Dental Assistant were identified at entry level, Dental Assistant level, certified and registered Dental Assistant level and the expanded function dental assistant level. The Chippewa Valley Technical College Dental Assisting program prepares graduates at the Dental Assisting level of this dispersion.

The competencies were classified into categories; Dental Medical Terminology/Anatomy, Dental Chairside Procedures, Dental Materials/ Lab Procedures, Dental Assisting Radiography and Dental Theory/ General Office Procedures. Dental Assistants must attain skills in all of these areas to be successful, as well as hone one's communication and collaboration techniques. Educational requirements for dental assistants vary from state to state; furthermore, there is no set standard for nationwide continuity.

Information obtained from this study may be reviewed by the Director of the Dental Assisting program at Chippewa Valley Technical College and appropriate adjustments may be made to the curriculum that would better align the program with the demands of industry.

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## CHAPTER 1

### INTRODUCTION

#### Background

Dentistry has a long history that dates back to 3000 B.C. when the earliest known Egyptian dentist was in practice. HesiRe was known as “the greatest of the physicians who treat the teeth” (Torres, Ehrich, Bird & Dietz, 1995, p.1). In 1885, Dr. Edmund Kells hired the first dental assistant. The function of the “Lady Assistant” was to accompany female patients that were not with their husbands or maiden aunts. By 1900, Dr. Kells was working with a chair-side assistant and a secretarial assistant. The dental assistant has evolved into a professional career that focuses on the care and treatment of patients (Torres et al., 1995).

The responsibilities of a dental assistant today vary and competencies fall into categories such as; Dental Medical Terminology/Anatomy, Dental Chair-side Procedures, Dental Materials/ Lab Procedures, Dental Assisting Radiography, and Dental Theory/General Office Procedures. Dental assistants must attain skills in all of these areas to be successful, as well as effectively demonstrate communication and collaboration techniques. It is a career that is built on merit, which is achieved through education and experience (Torres et al., 1995).

To ensure accreditation and evaluation of educational programs the Commission on Dental Accreditation of the American Dental Association supports programs in the study of dentistry. The Commission also supports dental assistants, dental hygienists, and dental laboratory technicians (American Dental Association, 1995-2003).

The Dental Assistant levels of education are spread such that entry level is the lowest, dental assistant, certified dental assistant and last the expanded functions level. The level of education required to work varies from state to state. This experience level may be measured in three ways, years of experience, educational achievement, and national certification and state registration. Every state has its own Dental Practice Act that identifies the requirements of that state. Furthermore, to be a Dental Assistant in a particular state one must meet individual requirements (Certified Press, 2003). Due to the increasing need for qualified dental assistants in the State of Wisconsin, it is imperative that the Chippewa Valley Technical College dental assisting program meets the needs of the industry. Wisconsin institutions that offer programs for dental assistants are not required to meet a state competency standard.

In 1995, the Chippewa Valley Technical College dental assistant program was developed by means of a DACUM. A DACUM is the process of developing a curriculum that is usually executed during a two-day workshop. This method of occupation analysis requires 5-12 participants whom are working in the job presently, educators and people that work in the industry as a whole. This process requires a facilitator that will guide the DACUM participants in development of quality and precise task statements for a particular job (Norton, 1998). The DACUM participants at Chippewa Valley Technical College consisted of Certified Dental Assistants, a Certified and Registered Dental Assistant, and a facilitator.

The Chippewa Valley Technical College DACUM process resulted in general competencies that were broken down into categories including: knowledge skills and abilities, tools and equipment, as well as attitudes and future trends that would

prepare students for work. The competencies developed during this DACUM process were implemented in 1995 when the Chippewa Valley Technical College dental assisting program launched.

Upon graduation from the Chippewa Valley Technical College program, Dental Assistants must have two years of experience to qualify for the National Certification Examination given by the Dental Assisting National Board.

The industry competency needs were identified through a survey performed by the Dental Assisting National Board and The American Dental Assisting Association that developed a ranking for the core competencies from entry-level dental assisting to expanded function dental assisting. The Dental Assisting National Board and the American Dental Assisting Association's Ad Hoc Committee developed this study in hopes of implementing nation-wide continuity of the tasks and knowledge of all Dental Assistant levels (Certified Press, 2002).

The purpose of the study being done by the Ad Hoc committee is to "develop a unified proposal endorsed by representatives of the Dental Assisting National Board, the American Dental Assisting Association, the American Dental Associations Commission on Dental Accreditation and the Dental Assisting section of the ADEA to present to the state dental boards and other interested parties" (Certified Press, 2003, p. 3).

The Dental Assisting National Board and the American Dental Assisting Association collaborated to research the competencies because of their mutual commitment to educating Dental Assistants to perform at high levels. The American Dental Assisting Association (ADAA) is the professional organization for Dental Assistants located in Chicago, Illinois. The ADAA provides a voice in national affairs

and representation to ensure an active future for Dental Assistants. The Dental Assisting National Board provides certification and credentialing for Dental Assistants and has certified over 30,000 Assistants nationwide (Certified Press, 2003).

### Statement of the Problem

Chippewa Valley Technical College graduates an average of 12 students each year from the dental assisting program. The question this study attempted to answer is: Does the dental assisting program at Chippewa Valley Technical College successfully prepare students for employment in the region?

### Purpose of the Study

The purpose of this study is to validate the curriculum in the dental assisting program at Chippewa Valley Technical College and to see if it satisfies the needs of the industry. For the method of comparison, the researcher uses the list of competencies developed through the survey done by the DANB/ADAA study and compares them to the competencies that make up the curriculum at Chippewa Valley Technical College.

### Research Objectives

The four objective of this study are to:

1. Identify the competencies required to enter employment as a Dental Assistant in the region.
2. Identify the competencies taught at Chippewa Valley Technical College that prepare Dental Assistants for employment.
3. Compare the Chippewa Valley Technical College curriculum with the DANB/ADAA core competency list to find congruency.

4. Compare the Chippewa Valley Technical College curriculum with the DANB/ADAA core competency list to find were they are not congruent.

### Significance of Study

The significance of this study is to:

1. Identify the value of the Chippewa Valley Technical College curriculum for dental professionals in the region.
2. Reinforce future curriculum needs that may assist in the implementation of statewide curriculum within the Chippewa Valley Technical College Dental Assisting Program.
3. Assist other technical programs in assessment of own curriculum.

### Limitations

1. This study is limited to Dental professionals at the Dental Assistant level. Dental Assistants that are nationally certified and/or state registered are not part of this research.
2. These results are limited to the curriculum of Chippewa Valley Technical College and any curriculum taught at the Dental Assisting level.

### Assumptions

1. It is assumed that the data gathered by the DANB/ADAA study are valid and reliable.
2. It is assumed that the CVTC DACUM process and results are valid and reliable.
3. It is assumed that all of the competencies taught at Chippewa Valley Technical College are listed in the curriculum.

## Definition of Terms

1. **Dental Assisting program** - an educational program that prepares a dental Assistant for work, but does not certify the student.
2. **DACUM** - Stand for develop a curriculum and is a tool used to perform an Occupational analysis. (Norton, 1998)
3. **Dental Assisting National Board (DANB)** - provides certification and credentialing for dental assistants and has certified over 30,000 Assistants nationwide.
4. **American Dental Assisting Association (ADAA)** - The American Dental Assisting Association (ADAA) is the professional organization for dental Assistants. The ADAA provides a voice in national affairs and Representation for dental assistants to ensure an active future for dental assistants. (ADAA).
5. **Competencies** - major skills, knowledge, attitudes or abilities needed to perform a task effectively and efficiently. (WIDS)
6. **Core competencies** - refer to the dental assisting competency list that was developed as a result of the DANB/ADAA study (Certified Press, 2002)

## **CHAPTER II**

### **REVIEW OF LITERATURE**

#### Introduction

The literature related to dental assisting competencies is vast. To fully understand the job of a Dental Assistant, one must define who a Dental Assistant is and the competencies required to perform at a Dental Assistant level. There are many ways to collect and analyze the data required to build a great Dental Assistant education program, but once the data is analyzed and presented, one must follow up with a study to evaluate the program against individual needs. Literature reviews define who the dental assistant is, how one is educated, credentialed, and how the program of education was developed, and applied.

#### Educating Dental Assistants:

In the Handbook of Research on Teaching, (Achtenhagen & Grubb, 2001) educators in vocational programs must deal with the many complexities of varied competency levels, such as; literacy in several forms, manual and visual skills, interpersonal abilities, the higher-order competencies associated with high performance workplaces, and various norms of employment. The concern is whether the material was aligned with competencies development and whether the instructors are conveying the competency material in an explicit manner. Performance is made up of a mix of combined competencies and the unification of these skills and abilities; therefore, the program of study must meet the performance needs through curriculum and instruction. To insure that the dental assisting educators understand the connection between the skills and abilities and performance, they are required to have finished at least one year

working as a Dental Assistant before starting studies in teacher preparation. This sequence enables educators to become familiar with the various competencies necessary on the job (Wisconsin Technical College System, 2003).

Dental assisting instructors must meet the certification and registration requirements within his or her particular state. The State of Wisconsin requires adult education instructors to have a Bachelor of Science Degree with 30 credits in appropriate occupational area, with the remaining credits in Adult Education or Training. The educator must have 12 months of experience in any field except education (Wisconsin Technical College System, 2003) and two years of full-time dental experience or eight semesters of part-time teaching experience.

#### Commission on Dental Accreditation

The dental assisting educational institution is expected to meet the accreditation standards set by the commission on Dental Assisting Accreditation (2002). The mission of the Commission on Dental Accreditation is to:

“The commission on Dental Accreditation serves the public by establishing, maintaining and applying standards that ensure the quality and continuous improvement of dental and dental-related education and reflect the evolving practice of dentistry. The scope of the Commission on Dental Accreditation encompasses dental, advanced dental and allied dental education programs” (American Dental Association, 1998, p. 1).

Dental assisting programs are required to meet standards in the area on institutional effectiveness, educational program, administration, faculty and staff, education support services, health, safety provisions, and patient care services.



The approval status is granted when the educational program achieves or exceeds the basic requirements set by the Commission. “These Accreditation standards have been developed by the commission for the following reasons: (1) to protect the public (2) to serve as a guide for Dental Assisting program development (3) to serve as a stimulus for the improvement of established programs (4) to provide criteria for the evaluation of new and established programs” (American Dental Association, 1998, p. 2).

The commission on dental assisting accreditation values:

1. Evaluates dental assistant education programs on the basis of the extent at which program goals, institutional objectives, and approved accreditation standards are met.
2. Supporting continuing evaluation of and improvements in dental assistant education programs through student self-evaluation.
3. Encourages innovations in program design based on sound educational principles.
4. Provides consultation in initial and ongoing program development.

(American dental association, 1998, p. 6).

The commission identified three types of instruction that are relevant to the field; didactic instruction, laboratory or pre-clinical instruction, and clinical instruction- therefore, the instruction must be qualified to meet the standards of these areas. All educational materials must focus in one of these three areas. These skills must also meet the competency level set by the standard such as:

1. Exposure-the level of skill attained by observation of or part in a particular activity

2. Laboratory/Pre-clinical Competence: The achievement of a predetermined level of special skill derived from laboratory/pre-clinical instruction
3. Clinical Competence: The achievement of a predetermined level of special skill-derived from education and experience in a clinical setting

(American dental association, 1998).

### Curriculum Development

The Chippewa Valley Technical College Dental Assisting program is not an accredited program; the curriculum was developed by means of a DACUM. Many other educational institutions have used this method for curriculum development. For example, St. Vincent's, a two-year college used a DACUM in an allied health program to identify the education outcomes and competencies across the curriculum. The objective was to evaluate the college's effectiveness and assure student academic achievement. "A task force of the curriculum committee was appointed to develop general education outcomes or general education courses that would strengthen student's general skills and broad conceptual abilities" ("Survey to determine," 1992). The concepts, skills, and knowledge students would attain through these general education requirements included, basic communication skills, and an appreciation for society, basic math skills, basic research skills, and humanities. As well as knowledge of critical thinking, problem solving scientific principles, the natural or physical sciences ethics and values ("Survey to determine," 1992).

From each of these general educational requirements competencies were developed by means of a DACUM. Along with these DACUM results a survey, a competency review of the syllabi, tests and other methods were analyzed to ensure that students would provide the sufficient concepts, knowledge and skills needed to meet the program and job competencies (McCain, Hive, Wolfertz, 1998).

During the program development stage, an assessment of needs was conducted. This assessment was in the form of a survey that was administered to identify the need for the dental assisting program. The survey population included 189 dentists practicing in the region. There were 87 respondents; enough to show there was a definite need to educate dental assistants in the region (B. Brunelle personal communication, March 13, 1995).

Chippewa Valley Technical College used a DACUM to develop the curriculum competencies required for the dental assisting program. This DACUM was accomplished by the participation of dental professionals at these levels, three dental assistants, one Certified Dental Assistant, one Certified and Registered Dental Assistant, and a facilitator served this process (“Survey to determine,” 1992).

The Chippewa Valley Technical College DACUM process resulted in general competencies that were broken down into categories including: knowledge skills and abilities, tools and equipment, and attitudes and future trends that would prepare students for work. The competencies developed during this DACUM process were implemented in 1995 when the Chippewa Valley Technical College launched its dental assisting program (“Survey to determine,” 1992).

The goals of the Chippewa Valley Technical College Dental Assisting Program were to 1) support economic development efforts, 2) provide, maintain, and plan for future technology, 3) strengthen educational effectiveness, 4) develop and implement college wide marketing process, and 5) deliver instruction to adapt to consumer needs. Presently, the program is laid out as a diploma program requiring 12 credits for completion (“Survey to determine,” 1992).

### Importance of Education

The completion of a Dental Assisting program can increase ones knowledge, confidence, and marketability. Furthermore, completing and passing the certification exam administered by the Dental Assisting National Board can increase ones credentials and professionalism.

Harvey Weener, DDS, in September 1999, stated that he wanted all five of his Dental Assistants to be certified. Jeanne E. Schwartz, one of Dr. Weeners Dental Assistants said, “At my age?” His immediate response was, “it’s never too late.” So at 51 years of age, Jeanne decided to become certified and enrolled in the Dental Assisting program at New Hampshire Technical College, Concord, N.H. This shocked Dr. Weener because he thought his Dental Assistants would prepare for the exam from home and the office by preparing for the chair-side challenge exam. “Our instructors gave us the clinical and technical knowledge needed to perform our assistant duties well, and to pass the chair-side and infection control examination.” Jeanne states that, “education and certification have proven to be the positive experiences I needed to become more confident and assertive in my job.” Dr. Weener, through his experience with his staff, believes that, “qualified, Certified Dental Assistants are a plus in the dental practice.

They help the dentist provide better and more expedient patient care, better utilize his time, help to gain and maintain patient confidence, and increase overall productivity” (Schwartz, 2002).

Strong Dental Assisting programs that have a strong curriculum promote areas of competency in health services, social services, physical education, nutritional services, health promotion for staff, healthy school environment, and parent and community involvement (Schwartz, 2002).

### Dental Assistant Responsibilities

The responsibilities of a Dental Assistant are significant and require great efficiency when delivering quality dental health care. This occupation demands strong communication skills as well as hands and mind on skills. When making the decision to pursue a career as a Dental Assistant, it is best to enter into a program that is accredited by the Commission on Dental Accreditation because it will provide a range of skills needed to perform as a Dental Assistant as well as instruct students about the most up to date techniques. This type of education is not required in all states, but encouraged by the American Dental Association. Dental Assistant responsibilities consist of assisting the dentist in many procedures as well as some more independent functions, such as taking and developing radiographs, taking impressions, and sterilizing instruments and equipment. To perform these tasks the Dental Assistant must be proficient in the area of interpersonal and technical skills.

The competencies that Dental Assistants perform vary between states due to regulations set by that state, although the basic competencies that are performed are:

- Assisting the dentist during a variety of treatment procedures;

- Taking and developing radiographs,
- Asking about patient's medical history and taking blood pressure and pulse,
- Serving as an infection control officer, developing infection control protocol, and preparing and sterilizing instruments and equipment,
- Helping patients feel comfortable before, during, and after dental treatment,
- Providing patients with instructions for oral care following surgery or other dental treatment procedures, such as the placement of restoration (filling),
- Teaching patients appropriate oral hygiene strategies to maintain oral health, (e.g., tooth brushing, flossing, and nutritional counseling),
- Taking impressions of patients' teeth for study casts (models of teeth),
- Performing office management tasks that often require the use of a personal computer,
- Communication with patients and suppliers (e.g., scheduling appointments, answering the telephone, billing and ordering supplies), and
- Assisting with and helping to provide direct patient care in all dental specialties, including orthodontics, pediatric dentistry, periodontics, and oral surgery.

(American Dental Association, 1995-2003, p.1)

The advantages to a career as a Dental Assistant are the variety, flexibility, excellent working conditions, and personal satisfaction that the job offers. Dental Assistants work in a variety of settings such as solo, group or specialty practices, public health programs, hospitals and dental school clinics, as well as other career opportunities in insurance companies, education, and dental product sales (American Dental Association, 1995-2003).

### Dental Assisting Programs

The educational programs offered for Dental Assistants are usually nine to eleven months in length and most result in certification. These programs are accelerated and are also often times offered in a distance education or part-time format. It is suggested that when choosing the best Dental Assisting school, one should research the program to be sure it meets the accreditation standards of the Commission on Dental Accreditation of the American Dental Association (American Dental Association, 1995-2003).

### DANB Study

The Dental Assisting National Board (DANB) certifies Dental Assistants through an examination that tests a breadth of knowledge in all areas of the occupation. Exam candidates must have completed a program accredited by the Commission on Dental Accreditation or have completed two years of full-time work experience. Some states require a registration examination that is state specific in order to be a practicing Dental Assistant in that particular state (American Dental Association, 1995-2003).

DANB publishes a quarterly newsletter called the “Certified Press.” In the Winter 2003 issue, DANB published a study that was conducted in partnership with the American Dental Assisting Association. This study was titled, “Core Competency Survey First Step Towards Nationwide Continuity” (Certified Press, 2003, p.1). The industry competency needs were identified through a survey performed by the Dental Assisting National Board and The American Dental Assisting Association that developed a ranking for the core competencies from entry-level dental assisting to expanded function dental assisting.

The Dental Assisting National Board and the American Dental Assisting Association's Ad Hoc Committee is in the process of completing this study in hopes of the implementation of nationwide continuity of dental assistant levels, tasks, and knowledge.

The purpose of the study being done by the Ad Hoc committee is to “develop a unified proposal endorsed by representatives of the Dental Assisting National Board, the American Dental Assisting Association, the American Dental Association's Commission on Dental Accreditation, and the Dental Assisting section of the ADEA to present to the state dental boards and other interested parties (Certified Press, 2003).

#### American Dental Assisting Association

The American Dental Assisting Association has a 75-year history of providing education to Dental Assistants through many venues such as; home study courses, professional journals, and local, state, and national meetings with education agendas (American Dental Assisting Association, n.d., p.2).

The American Dental Assisting Association is the oldest and largest organization representing the Dental Assistant. It encourages education, registration, and certification for Dental Assistants and many other benefits for its members. Anna Nelson, CDA, RDA the past president of the ADAA and educator in San Francisco, CA, says, “Think of educating as a career track for Dental Assistants! The number of dental assisting students in programs has grown over the last 5 years reflecting the growing demand for professional dental assistants, we need you!” (American Dental Assisting Association, n.d., p.2)



Continuing education is encouraged and/or required for most practicing Dental Assistants. These requirements vary from state to state. For the region Chippewa Valley Technical College is located in there are no current state requirements for dental assistants to receive continuing education. Education is valued in the world of dentistry; therefore, it is important that current dental assistants and future graduates meet the needs of the occupation (American Dental Assisting Association, n.d., p.2).

## **CHAPTER III**

### **METHODOLOGY**

#### Overview of the Study

The research evaluated the Dental Assisting core competency research from the Dental Assisting National Board/American Dental Assisting Association and the list of competencies taught in the Chippewa Valley Technical College Dental Assisting program. The purpose of this study was to validate the curriculum in the Dental Assisting program at Chippewa Valley Technical College and to see if it satisfies the needs of the industry. For the method of comparison, the researcher used the list of competencies developed through the survey done by the Dental Assisting National Board/American Dental Assisting Association study and compared them to the competencies that make up the curriculum at Chippewa Valley Technical College.

#### Research Objectives

This research will address the following objectives:

1. Identify the competencies required to enter employment as a Dental Assistant in the region.
2. Identify the competencies taught at Chippewa Valley Technical College that prepare Dental Assistants for employment.
3. Compare the Chippewa Valley Technical College curriculum with the DNB/ADAA core competency list to find congruency.

4. Compare the Chippewa Valley Technical College curriculum with the DNB/ADAA core competency list to see were they are not congruent.

### Research Design

The literature review revealed the importance of a strong curriculum within an educational program. This strong curriculum provides successful dental education in didactic instruction, laboratory or pre-clinical instruction, and clinical instruction. The research methodology for this study is a quasi-experimental design. This design method allows for comparison between two sets of data that identify the Dental Assisting competencies needed to enter employment.

### Data Collection

The competency list from the DANB/ADAA study and the competency list from the Chippewa Valley Technical College curriculum are compared to identify congruency. The differences identified were acknowledged and studied to better understand how the results might have affected the educational value of Dental Assisting students at Chippewa Valley Technical College.

### DANB/ADAA Data Source

A list of Dental Assisting core competencies was developed from a survey administered by the Dental Assisting National Board and the American Dental Assisting Association. This survey population included two groups that were chosen through a stratified random sampling process, Dental Assisting educators, and Certified Dental Assistants. The participants were given a list of 70 tasks and asked to identify the level of education or experience they felt was needed to perform the task. The results of this study identified four predefined category levels of dental assisting and each category had

a list of competencies that were required to perform at each particular level. The Dental Assisting level was predefined as “Up to 12 months of formal education or training, or less than two years full-time or up to four of years part-time Dental Assisting work experience. “These tasks are appropriate for relatively new OJTs and students currently enrolled in a formal Dental Assisting education program” (Certified Press, 2003).

#### Chippewa Valley Technical College Data Source

The competency list that was pulled from the Chippewa Valley Technical College curriculum was developed by means of a DACUM and was implemented in 1995. A similar population as the DANB/ADAA study served this DACUM. The participants were dental professionals at these levels, three Dental Assistants, one Certified Dental Assistants, one Certified and Registered Dental Assistant, and a facilitator served this process.

#### Data Analysis

The competency lists were identified and then compared using quasi-experimental design. The competency list developed through a survey done by the Dental Assisting National Board/American Dental Assisting Association studies were identified. Next, the list of curriculum competencies from the Chippewa Valley Technical College dental assisting program was identified. Finally, the two lists were compared in order to find commonalities.

## **CHAPTER IV**

### **DATA ANALYSIS AND RESULTS**

#### Purpose of the Study

The purpose of this study was to validate the curriculum in the dental assisting program at Chippewa Valley Technical College and to see if it satisfies the needs of the industry. For the method of comparison, a list of competencies were developed through a survey done by the Dental Assisting National Board/American Dental Assisting Association and were compared with the competencies that make up the curriculum at Chippewa Valley Technical College.

#### Data Analysis

Each competency was compared on an individual basis. This chapter compares the two dental assisting competency lists and results are formulated in consideration of the four research objectives. The research objectives addressed are the following:

1. Identify the competencies required to enter employment as a Dental Assistant in the region.
2. Identify the competencies taught at Chippewa Valley Technical College that prepare Dental Assistants.
3. Compare the Chippewa Valley Technical College curriculum with the DNB/ADAA core competency list to see where they agree.
4. Compare the Chippewa Valley Technical College curriculum with the DNB/ADAA core competency list to see where they disagree.

Identify the competencies required to enter employment as a Dental Assistant

The industry competency needs were identified through a survey performed by the Dental Assisting National Board and the American Dental Assisting Association that developed a ranking for the core competencies from entry-level Dental Assisting to expanded function dental assisting.

The Dental Assisting National Board and the American Dental Assisting Association's Ad Hoc Committee is in the process of completing this study in hopes of nation-wide continuity of dental assistant levels, tasks and knowledge.

The purpose of the study being done by the Ad Hoc committee is to "develop a unified proposal endorsed by representatives of the Dental Assisting National Board, the American Dental Assisting Association, the American Dental Associations Commission on dental accreditation and the Dental Assisting section of the ADEA to present to the state dental boards and other interested parties (Certified Press, 2003).

The 32 competencies required to enter employment at the dental assisting level were identified by educators and certified dental assistants (CDA) who participated in a survey administered by the DANB/ADAA. This survey was a stratified random sample of Certified Dental Assistants across the country. The survey listed 70 competencies that were to be ranked according to training, education and/or experience. Each participant's response expressed which of these ranks were required to perform each task. The 32 tasks required for Dental Assistants at entry level are identified and listed on the following page:

DANB/ADAA Dental Assisting competency list

1. Expose radiographs
2. Apply topical fluoride
3. Fabricate custom trays, to include impression and bleaching trays, and athletic mouthguards
4. Using the concepts of four-handed dentistry, assist with basic intraoral surgical procedures, including extractions, periodontics, endodontics, and implants
5. Take preliminary impressions
6. Complete laboratory authorization forms
7. Identify intraoral anatomy
8. Pour, trim, and evaluate the quality of diagnostic casts
9. Chart existing restorations or conditions
10. Respond to basic dental emergencies
11. Monitor vital signs
12. Maintain emergency kits
13. Provide pre-and post-operative instructions
14. Select and manipulate gypsums and waxes
15. Using the concepts of four-handed dentistry, assist with basic restorative dentistry
16. Provide patient preventive education and oral hygiene instruction
17. Clean and polish removable appliances and prosthesis
18. Recognize basic dental emergencies

19. Recognize basic medical emergencies
20. Maintain field of operation during dental procedures through the use of retraction, suction, irrigation, drying, placing, and removing cotton rolls, etc.
21. Take and record vital signs
22. Demonstrate understanding of the OSHA hazard communication standard
23. Mix dental materials
24. Identify features of rotary instruments
25. Demonstrate understanding of the centers of disease control and prevention guidelines
26. Apply effective communication techniques with a variety of patients
27. Mount and label dental radiographs
28. Transfer dental instruments
29. Perform routine maintenance of dental equipment
30. Perform sterilization and disinfection procedures
31. Process dental radiographs
32. Prepare procedural trays/ armamentaria set-ups

(Certified Press, 2003, p.1)

Identify the competencies taught at Chippewa Valley Technical College that prepare dental assistants.

A DACUM was used for the development of the Dental Assisting program at Chippewa Valley Technical College. This DACUM was accomplished by the participation of dental professionals and a facilitator that served this process.



Over the past seven years, instructors have added and subtracted items in the curricula. The following list reflects the competencies that are currently taught in the Chippewa Valley Technical College Dental assisting program:

Chippewa Valley Technical College competency list

1. Disinfection and Treatment room care
2. Sterilization and Instrument care
3. Communication of pain and anxiety control
4. Moisture control
5. Instrument identification
6. Instrument transfer
7. Identify hand-pieces
8. Dental Dam
9. Restorative dentistry
10. Preventive dentistry
11. Coronal polish
12. Basics of dental specialties
13. Asepsis/Infection control
14. OSHA Standards
15. Professional and legal aspects
16. Dental charting
17. Basics Dental/medical emergencies
18. Receptionist techniques
19. Employment strategies

20. Impressions
21. Pouring, trim and evaluate models
22. Bleaching trays
23. Bite registration
24. Mix cements/amalgam/ composite/ crown and bridge materials
25. Custom trays
26. Oral anatomy
27. Oral physiology
28. Structures of the skull
29. Oral Pathology
30. Occlusion
31. Radiation safety
32. Full mouth radiograph techniques
33. Developing radiographs
34. Mounting radiographs
35. Radiology equipment maintenance

Compare the Chippewa Valley Technical College curriculum with the DANB/ADAA core competency list to find congruency

The 47 Chippewa Valley Technical College and DANB/ADAA competencies presented in table 1 are the competencies that are equal in task. Simply putting the two lists next to each other and matching up the equal competencies achieved this process. It was found that the wording of the competencies was somewhat different from one another but the meaning was the same. The results show that 65% of the Dental

Assisting competencies between the Dental Assisting National Board/American Dental Assisting Association study and the Chippewa Valley Technical College curriculum were congruent or are equal in task.

**Table 1: Comparison of CVTC and DANB/ADAA Competencies that were congruent**

<b>Current CVTC Competencies</b>	<b>DANB/ADAA Competencies</b>
Expose radiographs	Expose radiographs
Fabricate bleaching and custom trays	Fabricate custom trays, to include impression and bleaching trays
Basics of dental specialties	Using the concepts of four-handed dentistry, assist with basic intraoral surgical procedures, including extractions, periodontics, endodontics, and implants
Impressions	Take preliminary impressions
Oral anatomy	Identify intraoral anatomy
Pouring, trim and evaluate models	Pour, trim, and evaluate the quality of diagnostic casts
Dental charting	Chart existing restorations or conditions
Basic dental/medical emergencies	Respond to basic dental emergencies, recognize basic dental emergencies, and recognize basic medical emergencies
Restorative dentistry	Using the concepts of four-handed dentistry, assist with basic restorative dentistry
Preventive dentistry	Provide patient preventive education
Moisture control Dental dam	Maintain field of operation during dental procedures through the use of retraction, suction, irrigation, drying, placing and removing cotton rolls, etc.
OSHA Standards	Demonstrate understanding of the OSHA hazard communication standard
Mix cements/amalgam/composite/ crown and bridge and other materials	Mix dental materials Select and manipulate gypsums and waxes
Identify hand-pieces	Identify features of rotary instruments
Asepsis/Infection control	Demonstrate understanding of the centers of disease control and prevention guidelines
Developing/mounting of radiographs	Mount and label dental radiographs
Instrument transfer	Transfer dental instruments
Disinfection/Treatment room care Sterilization and Instrument care	Perform sterilization and disinfection procedures
Developing radiographs	Process dental radiographs

Compare the Chippewa Valley Technical College curriculum with the DANB/ADAA core competency list to find were they are not congruent.

The result of the comparison process left 25 competencies that were not congruent, 12 competencies from the Dental Assisting National Board/American Dental Assisting Association list and 13 from the Chippewa Valley Technical College list. The competencies found not congruent were 35% of the total competencies. The competencies that were not congruent are listed in tables 2 & 3.

**DANB/ADAA had these competencies that were not on the CVTC list:**

The competencies listed are required to perform at a dental assisting level by the Dental Assisting National Board/American Dental Assisting Association study but are not listed as competencies taught in the Chippewa Valley Technical College dental assisting program. The 17% of competencies found not congruent are listed in table 2.

**Table 2: DANB/ADAA Competencies found not congruent with CVTC**

Apply topical fluoride
Athletic mouthgaurds
Complete laboratory authorization forms
Monitor vital signs
Maintain emergency kits
Provide pre-and post-operative instructions
Oral hygiene instruction
Clean and polish removable appliances and prostheses
Take and record vital signs
Apply effective communication techniques with a variety of patients
Perform routine maintenance of dental equipment
Prepare procedural trays/armamentaria set-ups

**CVTC competencies that were not found on the DANB/ADAA list:**

The competencies listed are required to graduate from the Dental Assisting program at Chippewa Valley Technical College. The Dental Assisting National Board/American Dental Assisting Association study did not list these as competencies required to perform at a dental assistant level. The 18% percent of competencies found not congruent are listed in table 2.

**Table 3: CVTC Competencies not found in DANB/ADAA competencies:**

Coronal polish
Professional and legal aspects
Receptionist techniques
Employment strategies
Bite registration
Oral physiology
Structures of the skull
Oral Pathology
Occlusion
Radiation Safety
Pain and anxiety control
Radiology equipment maintenance
Instrument identification

## **CHAPTER V**

### **CONCLUSIONS AND RECOMMENDATIONS**

#### Overview

The purpose of this study was to validate the curriculum in the Dental Assisting program at Chippewa Valley Technical College to see if it satisfies the needs of the industry. For the method of comparison, the researcher used the list of competencies developed through the survey done by the Dental Assisting National Board/American Dental Assisting Association study and compared them to the competencies that make up the curriculum at Chippewa Valley Technical College. The objectives were met through a quasi-experimental design method that compared the Chippewa Valley Technical College curriculum competency list to a list developed from research done by the Dental Assisting National Board/American Dental Assisting Association to see where they are congruent. The comparison process involved matching the tasks from both lists that were identical in meaning, then through the process of elimination, the competencies that did not agree were revealed. The results of this comparison were evaluated and analyzed. Finally, recommendations for possible changes were made for the Chippewa Valley Technical College Curriculum.

#### Conclusions and Recommendations

Research objective one was to identify the competencies required to enter employment as a Dental Assistant in the region. The core competencies identified were a result of the Dental Assisting National Board/American Dental Assisting Association study that came from a group of participants that were educators and experienced dental

professionals. The 32 competencies required to enter employment at the Dental Assisting level were identified by educators and Certified Dental Assistants (CDA) who participated in a survey administered by the Dental Assisting National Board/American Dental Assisting Association. This survey was a stratified random sample of Certified Dental Assistants across the country. The survey listed 70 competencies that were to be ranked according to training, education and/or experience; each participant's response expressed which of these ranks were required to perform each task. Based on that data, it can be concluded that the group of participants had developed a clear-cut idea of what is the expected performance level for dental assistants. It revealed that the participant's beliefs about competency needs are valid and useful for dental assistants on a national level.

It is recommended that the competency list that resulted from the Dental Assisting National Board/American Dental Assisting Association survey should be used as a guide for future program development because moving to nation-wide continuity would decrease deviations in program curriculum development. This would also increase the marketability of dental assistants because they would be able to work in any dental practice nation-wide regardless of state regulations.

The second objective was to identify the competencies taught at Chippewa Valley Technical College that prepare Dental Assistants. The 13 general skill areas that resulted from the DACUM process were broken down into competencies included knowledge, skills and abilities, tools and equipment, as well as attitudes, and future trends that would prepare students for work. In 1995, the curriculum was developed using the competencies from the DACUM.

Based on the data, it can be concluded that the competencies were pulled directly from the Chippewa Valley Technical College curriculum. The data revealed that the Chippewa Valley Technical College competencies were identifiable but could have been more descriptive. For example, “Impressions” were listed as a competency, but there was no indication of what type of impression. Two of the Chippewa Valley Technical College competencies were listed as actual tasks within the Dental Assisting National Board/American Dental Assisting Association competencies. In the figure under Chippewa Valley Technical College lists radiology maintenance as a competency, yet there is no mention of other dental equipment. Dental Assisting National Board/American Dental Assisting Association on the other hand feels it is important for Dental Assistants to be proficient in general maintenance of dental equipment.

#### CVTC

#### DANB/ADAA

<ul style="list-style-type: none"> <li>▪ <i>Radiology equipment maintenance</i></li> </ul>	<ul style="list-style-type: none"> <li>▪ <i>Perform routine maintenance of dental equipment</i></li> </ul>
<ul style="list-style-type: none"> <li>▪ <i>Instrument identification</i></li> </ul>	<ul style="list-style-type: none"> <li>▪ <i>Prepare procedural trays/ armamentaria set-ups</i></li> </ul>

It is recommended that Chippewa Valley Technical College use the Dental Assisting National Board competency list as a guide in creating a new DACUM for the dental assisting program.



The third objective was to compare the Chippewa Valley Technical College curriculum with the DANB/ADAA core competency list to find congruency. Based on the data, it is concluded that CVTC and the core competency list from DANB/ADAA are congruent with 19 competencies. These comparative results refer to the same tasks but are worded somewhat differently between the two lists. It was revealed that there is a nation-wide trend in competencies. These competencies are valid because the two lists are similar and it is clear that there is a standard of care that is manipulated in all regions.

It is recommended that the Dental Assisting program consider the implementation of a one-year statewide curriculum that has been approved by the commission on accreditation. With this program accreditation, the Chippewa Valley Technical College and its Dental Assisting students can be confident that a solid pre-approved curriculum is in place and ready for use. This will give students the advantage as job seekers because they have completed an accredited program. The students would be prepared to take the certification exam upon completion of the program. Dentists in the region would benefit from this one-year accredited program because students entering the workforce would have a high level of knowledge that would increase their performance on the job.

The fourth objective was to compare the Chippewa Valley Technical College curriculum with the DANB/ADAA core competency list to find where they are not congruent. Based on the data, it is concluded that the two competency lists are not congruent in a total of 25 areas. Chippewa Valley Technical College did not have 12 of the Dental Assisting National Board/American Dental Assisting Association core competencies in their curriculum. It was also clear that thirteen of the Dental Assisting National Board/American Dental Assisting Association competencies were not included

on the Chippewa Valley Technical College list. The data revealed that both of the lists had unmatched competencies but the Dental Assisting National Board/American Dental Assisting Association competencies as a whole were more universal and holistic. The Chippewa Valley Technical College program may cover these tasks at one point in the academic calendar, but they are not documented as competencies in the curriculum. It is recommended that the dental assisting programs in the region that are not accredited, consider implementation of an accredited one-year program to strengthen the curriculum content.

#### Recommendations for future research

1. It is recommended that a study be done on the competency deviation from the DACUM used in the implementation of the CVTC program to the current competency list.
2. It is recommended that a study be done to evaluate the need for statewide curriculum for dental assistants.
3. A study is recommended that would identify the competencies that the CVTC students are taking into the workforce.

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