

**Quinsigamond Community College**

**Internal Program Review**

**2002 - 2003**

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Dental Hygiene Program  
**Program**

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## Section I: Competitive Analysis and Regional Labor Market Demand

### 1. Market Influences

#### A. Provide a broad definition of this employment sector. List specific knowledge and skill requirements for employment in this field.

Graduates of the program are generally employed as dental hygienists in private dental offices, specialty dental practices, group practices, or dental clinics. A Dental Hygienist is a licensed health professional specializing in the prevention and treatment of oral diseases. Hygienists must be licensed by the state in which they practice. Licensure requires graduation from a program accredited by the American Dental Association and certification by examining boards. For Massachusetts, those boards are the National Board and the Northeast Regional Board of Dental Examiners

#### **Knowledge:**

**Medicine and Dentistry:** Knowledge of the information and techniques needed to diagnose and treat injuries, diseases, and deformities. This includes symptoms, treatment alternatives, drug properties and interactions, and preventive health care measures.

**Biology:** Knowledge of plant and animal living tissue, cells, organisms, and entities, including their functions, interdependencies, and interactions with each other and the environment.

**English Language:** Knowledge of the structure and content of the English language including the meaning and spelling of words, rules of composition, and grammar.

**Customer and Personal Service:** Knowledge of principles and processes for providing customer and personal services including needs assessment techniques, quality service standards, alternative delivery systems, and customer satisfaction evaluation techniques.

**Clerical:** Knowledge of administrative and clerical procedures and systems such as word processing systems, filing and records management systems, stenography and transcription, forms design principles, and other office procedures and terminology.

**Psychology:** Knowledge of human behavior and performance, mental processes, psychological research methods, and the assessment and treatment of behavioral and affective disorders.

#### **Skills:**

**Problem Identification:** Identifying the nature of problems.

**Reading Comprehension:** Understanding written sentences and paragraphs in work related documents.

**Critical Thinking:** Using logic and analysis to identify the strengths and weaknesses of different approaches.

**Equipment Selection:** Determining the kind of tools and equipment needed to do a job.

**Information Organization:** Finding ways to structure or classify multiple pieces of information.

**Judgment and Decision Making:** Weighing the relative costs and benefits of a potential action.

**Science:** Using scientific methods to solve problems.

**Speaking:** Talking to others to effectively convey information.

**Abilities:**

**Arm-Hand Steadiness:** The ability to keep the hand and arm steady while making an arm movement or while holding the arm and hand in one position.

**Oral Expression:** The ability to communicate information and ideas in speaking so others will understand.

**Information Ordering:** The ability to correctly follow a given rule or set of rules in order to arrange things or actions in a certain order. The things or actions can include numbers, letters, words, pictures, procedures, sentences, and mathematical or logical operations.

**Manual Dexterity:** The ability to quickly make coordinated movements of one hand, a hand together with its arm, or two hands to grasp, manipulate, or assemble objects.

**Vision:** The ability to see details of objects at a close range (within a few feet of the observer). Ability to differentiate various colors and shades of colors.

**Source:** Occupational Information Network, 1998

**B. Using relevant labor statistics, indicate whether employment opportunities in this field are expected to increase or decrease over the next 3-5 years. Please cite the sources that you have used to make these predictions. (Note: It is easier for Admissions and Marketing Departments to refer to these predictions if they can quote the source.)**

**Response:**

According to the U.S. Department of Labor, the demand for dental hygienists will increase much faster than the average through 2008. The Bureau of Labor Statistics reports that in 1998, the median hourly rate for hygienists was \$22.06 per hour, with the top 10% earning \$38.81 per hour. The most recent figures available from the Massachusetts Division of Employment and Training for the Northern Worcester SDA identifies a mean earning of \$45,570 for hygienists in 1997. An occupational growth rate of 41.4% is projected through 2006.

**C. Review and analyze the most recent five years of institutional data to determine whether graduates of this program have found employment in their field and/or transferred to related four-year programs in their field within one year of graduation.**

**Response:**

There is no formal institutional data in this area. Due to the strong job market in this field, virtually all program graduates who wish to be employed as dental hygienists can be. The department has compiled anecdotal data indicating the following

Year	Number of Graduates	Number Employed in the Field	Continuing Education
2000	15	11	1
1999	17	11	2
1998	16	10	
1997	17	11	1
1996	19	19	

**D. Please identify the specific occupations (and job titles, if possible) for which program graduates are prepared. Identify the types of employers that have hired graduates of this program within the last 5 years.**

**Response:**

Program graduates are prepared to work as dental hygienists. Graduates of the program are generally employed as dental hygienists in a variety of private dental offices, specialty dental practices, group practices, or dental clinics. In addition, a few of our graduates have been employed at the Great Brook

Valley Health Center. In addition to the traditional dental hygiene role, hygienists may work in health maintenance organizations, dental sales, or long-term care facilities; on military bases, or in school systems. With additional education, hygienists can assume positions in dental hygiene education, public health, or in research. Dental hygienists must have multiple and complex abilities to provide comprehensive dental hygiene care in all these settings, and new ones that are emerging every day.

The program is frequently contacted directly by employers interested in hiring dental hygiene graduates. The program secretary maintains a listing of job opportunities and regularly posts them on the bulletin board. Currently (April 2001), there are more than 25 job listings.

**E. Identify the institutions to which the students transferred in the last three years.**

**Response:**

<b>College</b>	<b>Degree</b>
<b>Forsyth/Northeastern University</b>	Dental Hygiene Baccalaureate Program
<b>Assumption College</b>	Pre-dental
<b>Boston University Dental School</b>	(students were dentists in another country)
<b>Worcester State College</b>	

**F. Summarize and Analyze: Market influences**

**Response:**

The Dental Hygiene program is well regarded in the area. The job market has always been very strong. If they wish, virtually all graduates of the program can be employed in the field. When the economy is strong, graduates can choose from a variety of positions. In a weaker economy, graduates will still be employed, but may be required to put together a few part-time positions if they desire to work full time.

## **2. Programmatic Currency**

### **A. Describe how the program maintains curricular currency.**

The program maintains curricular currency in a variety of ways. All program faculty are either licensed as dental hygienists or dentists. To maintain licensure, they must complete ten (hygienists) or twenty (dentists) units of continuing education annually. Faculty make use of the College's staff development funds for this purpose. As individual faculty members learn new techniques in their area of expertise, they will conduct in-service training programs for other members of the department so that these techniques can be integrated into the clinical curriculum. Faculty members have also been able to work in private offices during vacation periods. This helps maintain currency. In addition, two faculty members participated in the College's Faculty Externship program.

Adjunct dental hygiene faculty members are generally also employed in private offices. They are able to offer input regarding what is going on in practice. In addition, the dentists who provide supervision of patient treatment are all in active practice and provide input as well.

All program faculty are members of their professional organizations which provide additional sources of professional development

### **B. Explain the existing mechanisms that allow for regular input from local employers or other relevant sources**

#### **Response:**

The program has an active advisory committee that meets at least once each year. Members of the committee include practicing dentists, hygienists, and assistants who provide a broad range of feedback. In the past, the program conducted employer surveys, but without assistance from a Director of Institutional Research, it has been difficult to continue this practice. In addition, the Clinical Coordinator of the College's Dental Assisting program visits area dental offices weekly to supervise student externships. This enables her to keep abreast of current practices and inform program faculty of changes during regular department meetings.

### **C. Describe how this input affects the program. (Note: It is helpful with our accreditation process if you can include some specific examples of input that have led to recent changes in the program.)**

#### **Response:**

Recent feedback indicated that the clinical facilities (circa 1974) were not up to date. In the year 2000, the clinical was completely renovated. We are adding an additional clinic service (tooth lightening) in response to information that many offices now expect dental hygienists be prepared to provide this service. We are also incorporating digital radiography and other computer technology into the clinic in response to feedback received from the community.

### **D. Describe ways that the College could support program faculty's incorporating more area industry input.**

#### **Response:**

The program requires assistance in the area of data gathering; specifically, in the creation, administration, and analysis of outcome surveys. In the past, the College had a Director of Institutional Research who was able to provide some assistance with surveys; however, the office was understaffed. Because of this, there was a very long time lag between the administration of the surveys and the receipt of data.

### **E. Summary and Analysis: Currency**

#### **Response:**

The program has maintained curricular currency through faculty continuing education, in-service training, participation in the College's Faculty Externship program, and membership in professional organizations.

Adjunct dental hygiene and dental faculty are also employed in private practice which enables them to bring current concepts of dental practice to the department. It would be helpful to be able to conduct more surveys, but this is difficult without institutional support.

### 3. The Pipeline: OCC Feeders

- A. **Identify all feeders, both actual and potential, to the program. Identify any potential “customized “ feeders the College might be able to develop.**

**Response:**

Many of our applicants are currently employed as dental assistants in the area wishing to move up the career ladder. Other applicants come from the Quinsigamond Community College Dental Assisting program. Area dentists often recommend the program to their patients.

Current students (classes of 2001 and 2002) were queried as to how they found out about the program. Their responses indicated that the majority of our students are referred to the program by program alumni. Other students learned about the program when they were patients in the program’s dental clinic, through Internet searches for accredited programs, referrals from other students at the College, and general knowledge of the program’s reputation.

- B. **List all articulation agreements currently in place in this program (i.e., agreements with local secondary schools, community-based organizations, proprietary schools. etc.).**

There are no formal articulation agreements in place.

- C. **Do program faculty regularly collaborate with their peers in local high schools, four-year colleges and universities, business and industry, or community-based organizations on such activities as curriculum development, work-based learning, or professional development? Please cite examples from most recent three-year period. If no active collaboration at this time, please comment on how this type of collaboration might enhance the program. In what ways could the College provide faculty support in this area?**

**Response:**

Program faculty have collaborated with peers in a variety of ways. Each year, the faculty advisor attends the regional meeting of the Student American Dental Hygienist Association where faculty sessions are held. For two out of the last three years, the Program Coordinator has attended the National Dental Hygiene Directors Conference, and also the Educators meeting of the Northeast Regional Board of Dental Examiners. The program coordinators of the five Massachusetts Dental Hygiene programs have started meeting four or five times a year. At the Yankee Dental Conference in Boston each January, there is a meeting of the dental hygiene educators that two or three of our faculty attend each year.

The College has supported individual faculty members through its staff development program. These funds are limited to \$700 per year for each faculty member. This level of funding is sufficient to attend local or regional meetings, but is not enough to cover national conferences.

During FY 2001, funds were depleted early and many faculty were unable to obtain funds.

Program faculty could benefit from more statewide conferences or faculty development programs. It would be helpful to have some collaboration among institutions with dental hygiene programs to sponsor activities of this sort.

- D. **Explain the mechanisms in place within the program to insure that students who have been granted credit through articulation agreements transition smoothly into the QCC program. In what ways could the College increase its support in this area?**

**Response:**

Not applicable.

**E. Explain the program's involvement with the Tech Prep consortia or other educational collaboratives, if relevant.**

**Response:**

Quinsigamond Community College is a partner in the Worcester Pipeline Collaborative program. The purpose of this program is to encourage and prepare middle and secondary school students in the Worcester North Quadrant for careers in the medical and biotechnology fields. As a member of the Collaborative, the College's programs are publicized to the participating Worcester middle and secondary schools. Meetings are held between the Collaborative staff and the Quinsigamond Community College Health Care Program Coordinators for the purpose of sharing information on matters related to curriculum and admissions.

As with most of the Health Care programs, external accrediting agencies closely regulate curricula; therefore, articulation is problematic, especially for professional courses. Therefore, graduates from a dental assisting program offered through a secondary school cannot be guaranteed that any of their credits/courses may be applied toward the Dental Hygiene degree. (The exception to this is for graduates of Quinsigamond Community College's Dental Assisting program who take several courses in common with the Dental Hygiene program; however, they must complete the clinical courses in the sequence they are offered.)

**F. Summary and Analysis: The Pipeline: QCC Feeders**

**Response:**

Applicants come from the local dental community as currently employed as dental assistants or graduates of our Dental Assisting program. Other students come right from high school or are members of the community making a career change. The program is always fully enrolled with qualified students, so this area does not appear to require modification at this time.

**4. Role of the Program Advisory Committee**

**A. Is there an Active (meets at least once a year) advisory committee for this program?**

**Response:**

Yes

**B. If yes, what is the composition of the advisory committee? How are appointments made to the committee?**

**Response:**

See attached.

**C. Explain the roles and responsibilities of this committee**

**Response:**

See attached.

**D. If possible, cite examples of how committee input has had an impact on the program over the last 3-5 years.**

**Response:**

The program advisory committee recommended that we upgrade our clinic and include/utilize more computer technology in the program. Last year, the dental clinic was completely renovated, and the technology for digital radiology and practice management was purchased.

**E. Summary and Analysis: Role of the Program Advisory Committee**

**Response:**

The program advisory committee meets at least annually. Its role is to provide a mechanism for maintaining an active liaison between the College Dental programs and community dental professionals. The committee has been very helpful and productive. The only institutional support required has been to provide an adequate meeting place and a light meal. For the past four years, this support has been provided and appreciated.

## **5. Competition, Market, Strategies, and Enrollment Projections**

- A. Identify the program's primary competitors. Describe the process utilized and/or the rationale to determine the list of competitors.**

**Response:**

The list of accredited Dental Hygiene programs in Massachusetts was reviewed. It was determined that there are no major competitors to the program. Secondary competitors would be the Forsyth School for Dental Hygienists in Boston and Mt. Ida College in Wellesley, both private institutions. Potential students at the periphery of the College's service area may choose to attend Springfield Technical Community College or Middlesex Community College due to the proximity/ease of commute or lack of space at Quinsigamond Community College.

- B. Identify QCC's program strengths and market niche with respect to these competitors. In other words, what makes QCC's program the first choice?**

**Response:**

Quinsigamond has a new state-of-the-art clinic and a strong faculty. It has the advantage of a very affordable tuition and is the least expensive of any community college.

The annual tuition at east of the private schools exceeds \$15,000. In addition, Forsyth is currently transitioning to a four-year baccalaureate degree program. The primary reason a student would choose to attend Forsyth or Mt. Ida is the desire of a residential college experience. Graduates of Quinsigamond could transfer to Forsyth/Northeastern for their degree completion program.

- C. Explain the specific marketing strategies the College has employed with respect to this program over the last three to five years. Please do NOT list general marketing strategies here. Identify marketing efforts relevant to your program specifically.**

**Response:**

No target marketing has occurred for the Dental Hygiene program within the last three to five years.

- D. Describe how program faculty work with the admissions officers to recruit students into the program. If unknown, outline a recruitment plan with specific activities.**

**Response:**

*The Admissions Office sends a representative to the Coordinators' meeting for purposes of communication, and program faculty have input in the determination of admissions criteria. The Dental Hygiene program is a high demand program and, thus, has not needed to actively recruit students. One area of improvement that could be made in the area of admissions would be with communication with program applicants and the department. During the spring semester, the department regularly receives calls from program applicants who were unable to find out their admission status. It would be helpful if there could be a better mechanism for keeping them informed/updated as to their status. In the Health programs, new students must be made aware of specific information regarding medical forms, uniforms, instruments, and supplies. This information is mailed out by the department. In the past years, it has been difficult for the program secretary to keep abreast of changes in the incoming class. It would be very helpful to have a mechanism in place whereby the department could be notified as soon as changes occur in the class list.*

- E. Is the need for this program expected to grow or decline over the next five years? Please base your response on specific data.**

**Response:**

The need for this program is expected to be constant or expand within the next five years. Department of Labor statistics indicate that the demand for dental hygienists will increase much faster than the average through 2008. In addition, area employers have cited a need for more dental hygienists. A new dental hygiene program has opened in Massachusetts, graduating its first class in 2001. Changing demographics

in the profession may serve to temper the need for program expansion. Dental hygiene has traditionally been a female profession with a portion of its members choosing to work part time to accommodate child-rearing responsibilities. Three of the past four classes have included at least one male student, with the current entering classes having three. Male hygienists tend to work more hours, thereby effectively increasing the number of hygienists.

Past experience in our service area has indicated that the program seems to have reached equilibrium in our service area. When the economy is strong, our graduates have their choice of jobs. When the economy softens, they are employed in two or more part-time positions. This equilibrium has helped maintain a reasonable wage scale for the profession.

**F. Based on analysis of information presented in this section, prepare enrollment projections for the next five years. Please describe what you believe is the optimum program size.**

**Response:**

We anticipate the enrollment to remain at 20 students per class per year. In terms of our resources and community need, we believe that this is the optimum program size.

**G. Summary and Analysis: Marketing Strategies, and Enrollment Projections**

**Response:**

There is very limited competition to our program currently. As the program has been able to maintain enrollment with well qualified students, we feel that no changes are needed at this time.

**6. Opportunities for Program Expansion**

**A. Are there other directions this program might evolve in order to sustain currency and quality?**

**Consider the following categories, but feel free to include other categories in your response:**

- **New certificate options within the program**
- **New concentrations within the program**
- **Different career ladder options within the program**
- **New Associate degree program possibilities**
- **Development of modularized courses**
- **Continuing/professional education in the field (i.e., CEU's, prep for recertification, etc.)**
- **Distance education course development**
- **More proactive job placement/support post-graduation**
- **Other.....**

**Response:**

The primary opportunity for program expansion is in the area of continuing education. As new procedures or materials come into use, the department provides continuing education for practicing hygienists. Our most recent update has been in the area of tooth lightening procedures. Within the next year, the Massachusetts Board of Registration in Dentistry will be implementing a change that will allow Dental Hygienists to administer local anesthesia. Since this is a new function, and since most Dental Hygiene curricula have not taught this function to clinical competency, we anticipate a great demand for continuing education in this area. Indications from the state board are that the requirements for certification in this area will include twelve to twenty-four hours of on-site training in an accredited dental or Dental Hygiene school. This will truly limit the competition in this area.

## Section II: Curriculum, Instruction, Assessment, Program Credentials and Faculty

### 1. Foundations of the Program

#### A. Describe the rationale for offering the degree with respect to environmental scan information (job outlook) and its unique niche in its particular Employment sector.

**Response:**

Job outlook projections for Dental Hygiene in Massachusetts through 2008 indicate a 49% job growth rate, compared to the national average growth rate of 41% for the profession. The Quinsigamond Community College Dental Hygiene program is well regarded in the central Massachusetts area, and dentists seek to employ its graduates.

#### B. List degree or certificate objectives in measurable terms

**Response:**

The Dental Hygiene program has the following goals:

- To accept students into the program who have the potential for achieving the stated competencies and passing licensure examinations.
- To provide a curriculum that includes scientific advancements and innovations in Dental Hygiene practice and health care systems, as well as current information in the behavioral and dental sciences which will enable Dental Hygiene students to achieve the stated competencies required for the practice of Dental Hygiene.
- To prepare each Dental Hygiene graduate, as a member of the dental health team, to assume responsibility for ethical Dental Hygiene care in accordance with the laws of the Commonwealth of Massachusetts.
- To graduate students who will advance the profession through service activities and affiliations with professional organizations.
- To develop and provide ongoing continuing education programs for community dental professionals.

#### C. Define expected graduation competencies or student outcomes. Your response should include reference to general education outcomes, employability or “umbrella competencies”, and career-related competencies or technical skills.

**Response:**

The following knowledge and skills are those necessary for the competent practice of Dental Hygiene. Achievement of these competencies will require a general education background in oral and written communications, psychology, and sociology. Also required will be foundation knowledge in the biomedical sciences of anatomy, physiology, chemistry, biochemistry, microbiology, general pathology, nutrition, and pharmacology.

- Graduates must be competent in providing Dental Hygiene care for the child, adolescent, adult, geriatric, and medically compromised patient.
- Graduates must be competent in providing the Dental Hygiene Process of Care that includes:
  - Assessment: The systematic collection and analysis of the following data to identify patient needs and oral health problems:
    - medical and dental histories
    - vital signs
    - extra/intra-oral examination
    - periodontal and dental examination
    - radiographs
    - indices
    - risk assessments (i.e., tobacco, systemic, caries)

- **Planning:** The establishment of realistic goals and treatment strategies to facilitate optimal oral health.
  - Dental Hygiene diagnosis
  - Dental Hygiene treatment plan
  - informed consent
  - Dental Hygiene case presentation
- **Implementation:** Provision of treatment as identified in the assessment and planning phase.
  - infection control
  - periodontal debridement and scaling
  - pain management
  - application of chemotherapeutic agents
  - fluoride therapy
  - application of pit and fissure sealants
  - coronal polishing
  - care of oral prostheses
  - care and maintenance of restorations
  - health education and preventive counseling
  - nutritional counseling
- **Evaluation:** Measurement of the extent to which goals identified in the treatment plan were achieved.
  - indices
  - re-evaluation of oral and periodontal health status
  - subsequent treatment needs
  - continuing care (recall)
  - referral
  - patient satisfaction
- Graduates must be competent in providing Dental Hygiene care for all types of classifications of periodontal disease including patients who exhibit moderate to severe periodontal disease.
- Graduates must be competent in interpersonal and communication skills to effectively interact with diverse population groups.
- Graduates must be competent in assessing, planning, implementing and evaluating community-based oral health programs including health promotion and disease prevention activities.
- Graduates must be competent in providing appropriate life support measures for medical emergencies that may be encountered in Dental Hygiene practice.
- Graduates must be competent in the evaluation of current scientific literature.
- Graduates must be competent in problem solving strategies related to comprehensive patient care and management of patients.

**D. Describe how the program supports the College's mission and purpose.**

**Response:**

The program supports the College's mission and purpose through providing affordable, high quality education for individuals seeking a career in Dental Hygiene. The program has been made accessible to a diverse population through the rolling admissions process and counseling offered through the Health Careers Center. The clinical facility is state-of-the-art so that graduates of the program are well prepared to enter the workplace. Students who wish to continue their education are able to transfer to four-year institutions. The program also fosters lifelong learning through its provision of continuing education to community dental professionals.

#### **E. Summary and Analysis: Foundations of the Program**

**Response:**

The area job market for Dental Hygienists is strong and expected to continue in that vein. Program graduates are highly regarded in the College's service area. Program goals and competencies have been established to prepare graduates to enter the profession as well as continue their education as lifelong learners. The program goals and philosophy are consistent with the mission of the College.

## **2. Curriculum Strengths and Areas Needing Enhancement**

- A. Based on the analysis of regional labor market needs, evaluate the current curriculum strengths and identify those areas that you believe require enhancement.**

**Response:**

Regional labor market needs indicate a continuing strong need for licensed Dental Hygienists. Quinsigamond Community College graduates regularly pass their licensing examinations and enter the labor pool. The program was evaluated by the American Dental Association Commission on Dental Accreditation in October of 1999. At that time, there were no recommendations made regarding the program's curriculum.

In the year 2000, the Accreditation Standards for Dental Hygiene Education Programs were revised. In response to the new Standards, the program modified the program competencies and created the matrix for a comprehensive plan for the assessment of program curriculum. That matrix is attached to this report. During the 2001-2002 academic year, the department will implement that plan and make any needed recommendations for curricular revisions.

- B. Include the proposed curriculum for each of the current or proposed options in the program.**

**Response:**

There are no recommended changes at this time

- C. For each course in the revised curriculum, provide a description, statement of goals, major topics covered, primary tests or materials, and instructional technology used.**

**Response:**

There are no recommended changes at this time

- D. Describe the rationale for the course sequence in the revised program. A rationale of course sequence should be provided for the specific program related courses, the general education courses, electives, etc.**

**Response:**

There are no recommended changes at this time

- E. Explain how the general education components are integrated with the department specific courses.**

**Response:**

Students are expected to apply the subject matter learned in anatomy and physiology, chemistry, microbiology, and nutrition to their dental courses in oral pathology, periodontology, and clinical Dental Hygiene. Course material in sociology and psychology is intended to prepare students to work with diverse populations. Speech and English composition and literature are expected to assist the students in their ability to read, write, and communicate with patients, colleagues, and other professionals in the dental field.

- F. Does the curriculum incorporate "writing across the curriculum"? Provide an illustration, if applicable.**

**Response:**

Not Applicable.

**G. Describe how the program meets the QCC philosophy of “high tech, high touch, high quality”.**

**Response:**

With the opening of the new Dental Clinic on campus, it can be asserted that the Dental Hygiene program truly meets the Quinsigamond Community College philosophy of “high tech, high touch, high quality.” “High Tech” is exemplified, of course, by the new Dental Clinic which contains state-of-the-art dental equipment. To be truly “high tech,” the program must expand its computer capabilities to include use at chairside and, ultimately, voice-activated software so that students will have an opportunity to become familiar with these technologies.

“High Touch” is demonstrated through the program’s clinical structure by which each student is assigned to an individual “clinic support instructor.” Clinical support instructors are available to meet weekly with each student for such activities as reviewing all patient treatment, assisting with care planning, evaluation of clinical assignments, and providing remediation in clinic skills as needed. Clinic support instructors also monitor student progress and provide necessary direction to ensure that students are able to complete their clinic requirements.

“High Quality.” The program is staffed by well qualified, experienced faculty who are committed to graduating competent professionals. All full-time faculty members have at least a Master’s degree, and one member holds a Doctorate degree. The years of teaching experience for full-time faculty range from eighteen to twenty-seven. The core of full-time faculty is supplemented by dedicated adjunct faculty who are also employed in the community. They are able to provide input as to current trends in Dental Hygiene practice. The program is accredited by the Council on Dental Education of the American Dental Association whose standards require ongoing quality assurance.

**H. Does the program structure provide students with at least one elective choice? Please explain your response:**

**Response:**

There is one liberal arts elective in the curriculum.

**I. Summary and Analysis: Description of Curriculum**

**Response:**

General education and science courses provide a strong foundation for, and are integrated with, program specific courses. The program exemplifies the “High Tech, High Touch, High Quality” philosophy of the College through its modern Dental Clinic, the strong faculty support system, and the quality of its full-time and adjunct faculty.

As evidenced by the American Dental Association Commission on Dental Accreditation report of its site visit in October of 1999, the Dental Hygiene program meets or exceeds the Standards for Accreditation. Those standards were revised in the year 2000 and in response to the new Standards, the program has modified the program competencies and created the matrix for a comprehensive plan for the assessment of program curriculum (attached to this report). This will help ensure that the program will continue to comply with the Standards.

### **3. Relevance of Instructional Methodologies, Assessment Strategies and Program Credentials**

#### **A. Summarize the INSTRUCTION METHODOLOGIES utilized in the program. What are the strengths and challenges of these methodologies?**

**Response:**

Instructional methodologies utilized in the program include lecture, role playing, case based strategies, interactive CD ROM programs, collaborative learning, group projects, externships, clinical and laboratory experiences.

#### **B. Provide recommendations for additional methodologies that would enhance students' learning. More specifically, are there additional ways in which instructional technology could enhance students' learning? Options for distance learning? Please explain your answer and include how the College might support these efforts.**

**Response:**

The addition of additional case-based material to the second year would enhance the students' development of clinical thinking skills and better prepare them for their National Board Examination. To do this effectively, classrooms should be equipped with adequate technology. Over the last five or six years, program faculty have developed PowerPoint presentations but have become frustrated by the unreliability of the equipment. The College should ensure that enough classrooms are CONSISTENTLY equipped with WORKING data projectors and screens so that faculty will be able to count on utilizing the technology.

A Service-Learning component would also enhance student learning. In June of 2001, the College launched a Service-Learning program, and the Dental Hygiene faculty member who is responsible for the program externships has expressed an interest in pursuing this opportunity.

#### **C. Provide a detailed assessment plan outlining the methodologies used for ongoing student assessment and final outcome assessment.**

**Response:**

Currently, students are assessed by individual instructors within each didactic course by means of written examinations, individual oral presentations, group presentations, written reports, and presentation of case studies. Clinically, students are assessed by clinic faculty in accordance with written guidelines in their clinic portfolios. Evaluation of clinical competency is based upon assessment of process and product. Students are expected to perform at progressively higher levels and in each clinical semester an emphasis is placed upon different skills.

In the year 2000, the revised Accreditation Standards for Dental Hygiene Education Programs took effect. In response to the new Standards, the program has modified the program competencies and created a matrix for a comprehensive plan for the assessment of program goals and competencies (attached to this report). During the 2001-2002 academic year, these documents will be circulated among communities of interest, including faculty, students, and advisory committee members, to obtain broad-based input into the process. The department will then implement the curriculum assessment plan and make recommendations for any curricular revisions.

#### **D. Describe the strengths and challenges of each of the assessment methodologies listed above.**

**Response:**

Individual written evaluations are valuable for consistent objective evaluation of specific knowledge as well as application of that knowledge. Oral presentations can also be evaluated consistently, as most of the program faculty have developed rating sheets based on the stated objectives of each assignment. Evaluation of the clinical component of the curriculum is the most challenging aspect of the program.

Adjunct faculty and the supervising dentist do much of the instruction. Although orientation sessions are held for faculty, there is not enough time built into the program for true instructor calibration. Additionally, process evaluation is very time consuming. The clinic instructor-student ratio (including the clinic dentist) is 1:6. When an instructor is doing a process evaluation on one student who is performing a procedure that may take 30 minutes, there is insufficient time to work with and/or supervise the remaining five students. In addition, the supervising dentists have additional ongoing responsibilities in the clinic which conflict with their instructional duties. The ultimate result is often superficial or incomplete supervision and evaluation.

**E. Provide recommendations for additional methodologies to evaluate student achievement.**

**Response:**

The program would most benefit by expanding its calibration of clinical instruction and evaluation for full-time faculty and substitute faculty members. The addition of another Dental Hygiene faculty member to each clinic session would enable faculty to fully evaluate each student. This would ensure that the evaluation mechanisms already in place are consistently and completely utilized.

The new curriculum assessment plan is designed to identify how and to what level each stated goal and competency is evaluated. As this plan is implemented, we will be able to identify any additional methodologies that should be developed for student and/or program evaluation. It is anticipated that the program will need to add a summative evaluation to assess clinical competency at the end of the final clinic semester.

**F. Has the program been evaluated by an EXTERNAL ACCREDITATION organization within the last five years?**

**Response:**

Yes

**G. If yes, please provide name of the organization and date of last accreditation review. Did the program meet all of the accreditation requirements? If no, please explain. Attach the summary of the accrediting team's recommendations.**

**Response:**

The program was evaluated by the American Dental Association Commission on Dental Accreditation. The last site visit was October 5-4, 1999. The program has complied with all of the Standards except in the area of institutional support. The visiting committee noted that services of institutional supportive personnel were adequate to facilitate program operation, with the exception of clinical support staff. It was recommended that sufficient, qualified clerical staff be provided for the program to support management of the clinic and appointments of patients. The program's status was listed as "approval with reporting requirements."

The secretary to the dental programs has been reassigned to the position of Technical Assistant II. During the academic year, she will be responsible for clinic operations. When school is not in session, she will provide clerical support to the department. Her work history includes prior employment as a Certified Dental Assistant, so she is well suited to assume her new responsibilities. On March 8, 2001, a part-time secretary was hired to work twenty-five hours per week during the academic year. She will provide the necessary clerical support to the department. Student assignments to clerical and assisting responsibilities are now minimal and are designed to give them experience specifically in processing radiographs and instrument recirculation. This information was forwarded to the Council in a progress report on May 8, 2001. At its July 27, 2001 meeting, the Commission determined that the recommendations cited in the October 5-6, 1999 site visit report have been met and adopted a resolution to change the program's accreditation to "approval without reporting requirements." The next site visit for the program is scheduled for 2006.

**H. If the program has not been evaluated externally, list any appropriate professional accreditation or licensure for the program that the College should pursue. (E.g., Industry certifications, professional associations, etc.)**

**Responses:**

Not Applicable.

**I. What changes, if any, might need to be considered to foster enhanced program quality? Consider the following, but you need not limit your response.**

- **Change in admission requirements**
- **Inclusion of an internship or other work-based learning experiences**
- **Introduction of 1 or 2 electives to allow students to self-select learning experiences**
- **Development of a capstone course to synthesize the learning experience**
- **Varied instructional methodologies**
- **Enhanced assessment of student competencies**
- **Better integration of technology application**
- **Specific instructional aides/software etc.**
- **More coordination of faculty efforts, including the possibility of more full-time faculty**
- **Attainment of program accreditation. Certification, or licensure**

**Response:**

The admission policies and procedures were changed for the class entering in the Fall of 1999. Prior to the change, students were accepted to the program through a competitive process, with the students with the strongest academic record being accepted into the program. The new process entails a rolling admission policy whereby students are eligible to enter the program as soon as they have attained the minimum criteria for admission. With the changed policy, the department faculty have noted that students in the program are not as well prepared for the rigorous science curriculum as in the past years. There has been no formal evaluation of the results of the new policy; one should be undertaken as soon as a Director of Institutional Research is hired.

It would be worthwhile to consider adding another criterion to the admissions requirement that applicants need to attain a specific score on an allied health or science aptitude test.

The program would benefit by the addition of another full-time faculty member to be shared with the Dental Assisting program. This is further addressed in the "Faculty" section of this report.

The duties of the clinic dentists should be redefined to fully utilize their education and skills and allow them to focus on providing the necessary supervision of patient care. Additional rationale for this is provided in the "Faculty" section of this report.

**J. Summary and Analysis:**

**Response:**

The program utilizes a variety of instructional methodologies. All of the methodologies employed are relevant to the achievement of program goals and competencies. There is a lack of institutional support for classroom technology; specifically, for data projectors and screens. This has hampered faculty members' ability to present course materials as comprehensively as they would like. Service learning would be an attractive addition to the second year of the program, and this option should be pursued.

A matrix for a comprehensive curriculum assessment plan has been designed to evaluate the program goals and competencies that were revised to reflect accreditation standards. During the 2001-2002 academic year, this document will be utilized by the program to obtain broad-based input into the assessment process.

Evaluation of the clinical component of the curriculum continues to be most challenging. A program for calibration of instruction and evaluation should be developed. In addition, the clinic faculty-student ratio should be adjusted to allow for proper supervision and evaluation of students.

The program has been evaluated and accredited by the American Dental Association Commission on Dental Accreditation. Currently, the Commission is monitoring the program to ensure that proper clerical support is provided for operation of the Dental Clinic. It is expected that they will approve the current level of support. This accreditation process provides for ongoing program review and quality assurance.

Recommendations for program enhancement include the addition of a full-time faculty member to be shared with the Dental Assisting program, adjustment of the clinic faculty ratio, modification of the admissions requirement to include testing for science placement.

#### **4. Program Growth Opportunities**

- A. In your opinion, would it be beneficial to develop a common core curriculum along related career programs? E.g., computer education, business, administrative support, electronics, etc.) Please explain your answer.**

**Response:**

The minimum content of the Dental Hygiene curriculum is proscribed by its accrediting agency. Within the confines of the Associate degree, there is really no room for additional courses.

- B. Describe, in detail, all potential areas for program growth. Include, but do not limit your response to the following:**

- **Career Ladder Potential**
- **New Degree or Certificate Options**
- **Professional/continuing Education Opportunities**
- **Professional Recertification Preparation/Test**
- **Flexible Delivery Options**
- **Enhanced Instructional Methodologies**
- **Improving Assessment for Student Competencies**
- **Distance Learning Course Development**

**Response:**

One attractive potential for program growth that the program would like to investigate is the model for dual enrollment that is in place at CCRI and URI. Dental Hygiene students take a year of Pre-dental Hygiene at URI, then two years in the Dental Hygiene program at CCRI, after which they are awarded an AAS degree. They are then able to return to URI and complete a BS with one additional year. We currently have an articulation agreement with URI, and they are interested in working with us to expand our relationship. A description of that program is attached. It is possible that this model could be replicated in a partnership with Worcester State College.

Within the next year, it is anticipated that the state Dental Practice Act would allow Dental Hygienists to administer local anesthesia. Since Dental Hygienists have never before been permitted to perform this function in Massachusetts, there will be a great demand for continuing education to prepare practicing hygienists for certification in this skill. This would consist of both didactic and clinical education. Distance learning is not an option in this area, as the Massachusetts Board of Registration in Dentistry has stated that all instruction in this area must be on site in an accredited Dental Hygiene or dental school.

**C. Summary and Analysis: Program Growth Opportunities**

**Response:**

The primary avenue for program growth would be in the area of continuing education; specifically, in the administration of local anesthesia. Since this would be a new Dental Hygiene function in Massachusetts, very few hygienists in the state are certified to perform this procedure.

Another area to explore would be dual enrollment between the Quinsigamond Community College Dental Hygiene program and a four-year institution such as URI or Worcester State College.

**5. Students and Program Assessment (Review relevant data over the last five year period.)**

**A. What have been the incoming students' average scores on QCC placement tests each year for the last five years?**

**Response:**

This information is not available

**B. What is the graduation students' average college GPAs over the last five years? GPAs in major courses? Please describe the additional measures of central tendencies: i.e. median, mode, etc.**

**Response:**

<u>Year</u>	<u>Average GPA</u>
1996	3.05
1997	3.16
1998	3.32
1999	3.48
2000	3.45

The average GPA for major courses is not currently available from the CARS system. However, to successfully complete the Dental Hygiene program, students must pass all major courses with a grade of "C" or better.

**C. If relevant, how have students performed during their field placements or related work based learning experiences?**

**Response:**

Clinic and field/community work is incorporated into several of the major (professional) courses; as such, student performance is evaluated by program faculty in accordance with published learning outcomes. A minimum grade of "C" is required for passing in all major courses. Additional validation of student clinical performance is obtained from the results of the licensing examination administered by the Northeast Regional Board.

**D. Indicate the number of students who have transferred to four-year programs, if applicable.**

**Response:**

Transfer information is not available.

**E. Track the average earnings of program graduates each year for the three years immediately following graduation.**

**Response:**

Information is unavailable.

**F. Provide a summary of the program's enrollment patterns over the last five years.**

**Response:**

The Dental Hygiene program has admitted 20 students per year over the last five years. The number of program applications follow:

<b>Year</b>	<b>Number of Applicants</b>
1996	80
1997	129
1998	103
1999	81
2000	79

The apparent drop in applications in 1999 and in 2000 may be related to rolling admissions or may simply reflect the norm with the years 1997 and 1998 being aberrations of the usual pattern of applications. Additionally, students who would normally apply to the Dental Hygiene program may be applying to the Dental Assisting program.

**G. Indicate the program retention rate over the same period. Note: Consider two cohorts: fall to spring (same year); fall to Following Fall (one year).**

**Response:**

Retention Data					
Fall	Spring	%	Fall	Fall	%
1996	1997	95	1996	1997	80
1997	1998	90	1997	1998	90
1998	1999	85	1998	1999	90
1999	2000	90	1999	2000	90
2000	2001	95	2000	2001	75

**H. Determine the average number of semesters it takes for students to complete the program.**

**Response:**

Once admitted to the program, students must complete in two academic years. Students who cannot maintain the curriculum driven schedule for academic or personal reasons, must drop out of the program and apply for readmission. What is unknown and cannot be tracked at this time is the number of semesters students take either as Special students or General Studies students preparing for entry into the Dental Hygiene program.

**I. Define indicators of program quality. Describe strategies used to assess the success of the program in achieving its stated objects.**

**Response:**

Listed below are the indicators of program quality that are currently in place and were evaluated during the program's last site visit. All program surveys are going redesigned to reflect the changes in the stated outcomes assessment.

- Program completion rate
- Course completion rate
- Results on the Dental Hygiene National Board
- Occupational Education Follow-up Report
- Student surveys
- Graduate surveys
- Employer surveys

**J. Summary and Analysis: Program Assessment**

**Response:**

Outcomes are consistent with stated goals to a great extent. The program has an excellent course completion and graduation rate, although there has been greater attrition during the past two years. This could be related to the change in admissions criteria and procedures. Further evaluation in this area is required.

The passing rate for the Dental Hygiene National Board ranges from 82-100 percent. Although the passing rate has been consistently high, we noted a decrease in the level of scores prior to 1998, and our average scores ranked in the lowest 10% in the country.

To counter that, one of our adjunct faculty members has attended a comprehensive review course for the National Examination Board for two out of the past three years. She then shared the content of the course with program faculty to provide them with an additional measure of course currency, and also conducts board preparation review sessions for the second year students prior to their taking the examination. This increased the ranking of our average to the top 10% nationally for two years, and the top 50% in the third year.

Follow-up reports indicate approximately 95% of our alumni are employed in Dental Hygiene at salaries ranging from \$22-35 per hour, depending on benefits.

## **6. Faculty**

### **A. Is the current faculty able to adequately address the instructional needs of all courses, both general and specialty, in the program?**

#### **Response:**

In general, the current faculty is able to adequately address the instructional needs of all Dental Hygiene courses. In areas where the program is lacking, adjunct faculty are employed to teach those courses (Pharmacology, Head & Neck Anatomy, Histology & Embryology, Oral Pathology, and Periodontology). The full-time faculty member who has been responsible for teaching the Dental Radiology course has just retired and a replacement has been hired. She will need some assistance in upgrading her skills in this area. In the near future, licensed Dental Hygienists in Massachusetts will be permitted to administer local anesthesia. Only one full-time faculty member is qualified in that area.

The role of the supervising dentist for the Dental Hygiene Clinic must be evaluated. According to the Massachusetts Dental Practice Act, Dental Hygienists must work under the supervision of a licensed dentist. This means that there must be a dentist present whenever patients are being treated in the Dental Hygiene Clinic. Currently, the dentists are hired as clinical faculty members at a rate of \$35 per hour; and, they must join the Union. Their duties include acting as Dental Hygiene instructor as well as supervising dentist.

As the scope of Dental Hygiene practice has changed over the years, the responsibilities of the clinic dentist have increased and the job has become less desirable. It is difficult to keep this position staffed with a qualified dentist who is interested in teaching Dental Hygiene students. For the Fall 2001 semester, it was not possible to find one dentist to cover the entire Tuesday clinic session, so it was necessary to split the day between two dentists. This lack of continuity is confusing to the students and also creates an additional problem with instructor calibration.

### **B. Is institutional support for upgrading faculty credentials required? If yes, please explain the kind of upgrade required and approximate cost associated with the upgrade?**

#### **Response:**

All full time faculty hold at least a Master's degree and one has completed her Doctorate in Education as well as an additional graduate degree in Acupuncture/Complementary Health.. Individual faculty maintain currency in their subject matter through independent study and attendance at local continuing education courses. The types of support described below would be required to ensure that faculty are current in the subject areas.

- During the next academic year, all program clinical faculty should become proficient in administering and teaching the administration of local anesthesia in anticipation of adding this to the program. Training for this would consist of a 24-contact-hour course of lecture and clinical practice. This could be accomplished by offering the qualified faculty member a stipend to teach the material to other faculty members and support to the faculty who participate.
- Periodically, there are national or regional institutes sponsored by the American Dental Education Association and/or other organizations that are designed to provide Dental Hygiene educators with the advanced training necessary to teach various subjects. These institutes are the best way for faculty to upgrade their subject knowledge and skills and ensure that the content of their courses is in line with what is being taught throughout the country. The cost for attending one of these institutes would be \$1,200-\$1,500. It would be beneficial to the program to send at least one faculty member per year to a subject-specific institute. It is specifically recommended that the newly hired faculty member attend the institute for radiology instructors during the Summer of 2002.
- The role of the clinic dentist should be evaluated to determine whether it should remain a faculty position or have some other designation.

**C. Over the last five years, what has been the ration between full-time and part time faculty within this program?**

**Response:**

N/A

**D. Describe how adjunct faculty are integrated into the existing program.**

**Response:**

The department holds a clinic orientation for faculty at the start of each semester, and a faculty manual is being developed to further assist adjunct faculty. The Program Coordinator maintains contact with adjunct faculty who teach didactic courses throughout the semester. It is very difficult to integrate adjunct faculty, especially clinical faculty, into the existing program because most of them work in other places as well.

**E. Should the College employ additional full or part-time faculty in this discipline? Provide a detailed rationale.**

**Response:**

The new accreditation standards state that faculty are responsible for ensuring that the services delivered by students meet current standards for dental hygiene care as well as instruction and evaluation of students. In addition, evaluation of process as well as the end result of treatment must occur. To that end, the faculty/student ratios in clinical courses must not exceed 1:6. The supervising dentist has always been included in that ratio, performing the duties of a dental hygiene clinic instructor as well as the supervising dentist. In the early years of the program that was acceptable, but the nature of clinic instruction and evaluation, as well as the duties of the dentist, have changed. In addition to serving as a clinic instructor, the supervising dentist must, among other things, evaluate the medical histories of medically compromised patients to determine any modifications in treatment, prescribe all dental x-rays, review all x-rays to identify any dental needs, examine any oral lesions to determine the need for referral, administer local anesthesia as necessary, and approve teeth for sealants. It is very difficult for the dentists to do all of this as well as teach dental hygiene skills. This impacts instructional quality and patient safety. It is recommended that an additional dental hygiene faculty member be provided for each clinic session to allow the clinic dentists to fully meet their supervisory and consultative responsibilities.

During the last several years, at least one full-time faculty member has been on sabbatical, leave of absence, or had released time for another project. Without the core of full-time faculty, curriculum assessment, planning, and revision have been difficult. The addition of the Dental Assisting program, with shared courses and facilities, has necessitated more curriculum development and integration. As the Dental Assisting program expands, it will become ore difficult to accomplish all required activities inherent in providing quality program instruction. It is recommended that an additional full-time faculty member be hired who is qualified both as a Dental Hygienist and a Certified Dental Assistant. This would provide more depth to the Dental Assisting program and enhance curriculum development in both programs.

**F. Describe how all faculty members contribute to curriculum development and over all program cohesiveness. Do ALL faculty members, both full and part-time have an opportunity to contribute to curriculum development?**

**Response:**

All full-time program faculty meet bi-weekly to discuss program issues. Adjunct faculty are invited to attend these meetings, but do not often attend. This is due to both time constraints and the fact that they are not usually paid to attend. They do meet at

**G. Does the current level of support staff meet the needs of the program faculty?  
Please explain your answer.**

**Response:**

The Dental Hygiene and Dental Assisting programs share a full-time staff person who has secretarial responsibilities as well as the responsibility for managing the Dental Hygiene Clinic. Her clinical responsibilities include the clinic supply inventory, ordering supplies, scheduling patients, supervising the sterilization of instruments, overseeing clinic equipment maintenance and repair, maintaining patient records, assisting with clinic correspondence, collecting patient fees, performing clinic reception duties, and many other tasks.

In March 2001, an additional part-time secretary was employed for the academic year. It is hoped that this new level of support will meet the needs of the program faculty.

**H. Summary and Analysis: Faculty**

**Response:**

All full-time faculty hold at least a Master's degree and one has completed her Doctorate in Education, as well as an additional graduate degree in Acupuncture/Complementary Health.

The core of full-time faculty is supplemented by adjuncts who provide needed instruction in the dental sciences and clinical dental hygiene. Most of the adjunct faculty are working toward their Master's degrees and are also actively working in the field. This helps to ensure that our clinical training is consistent with current work practices.

Institutional support will be needed for upgrading faculty credentials in the area of administration of local anesthesia. Within the next year, it is anticipated Hygienists in Massachusetts will be permitted (and expected) to perform this function so that program faculty must be prepared for it.

The newly hired radiology instructor should attend a National Radiology Institute in the Summer of 2001 to ensure that she is presenting the most current information in that area. It would also be helpful for other instructors to attend content-specific institute as they are offered.

The clinic dentists perform dual roles of supervising dentist and Dental Hygiene instructor. This does not lend itself to quality instruction nor does it comply with current accreditation standards. The limited orientation that can be given to our clinic dentists does not fully prepare them to teach and evaluate Dental Hygiene skills. In addition, the turnover in dentists does not allow for ongoing development inasmuch as the supervising dentist performs one-third of the Dental Hygiene instruction and evaluation in each clinic session. This creates a problem with consistency of instruction and evaluation. The time that the dentists must spend in teaching Dental Hygiene skills compromises their ability to perform their supervisory and consultative duties. Other community college Dental Hygiene programs in Massachusetts are hiring their clinic dentists as consultants and not faculty. Quinsigamond Community College should do the same.

The program has a Policy and Procedure Manual for students and faculty. It should also have a manual specifically for program faculty. This would provide a basis for orientation and calibration of full-time and adjunct faculty.

With full-time faculty members having increased overall responsibilities, and with the addition of dental assisting, curriculum assessment, planning, and revision have been difficult. As the Dental Assisting program expands, it will become more difficult to accomplish all required activities inherent in providing quality program instruction. It is recommended that an additional full-time faculty member be hired who is qualified both as a Dental Hygienist and a Certified Dental Assistant. This would provide more depth to the Dental Assisting program and enhance curriculum development in both programs.

It is also recommended that one additional adjunct faculty member be scheduled for each clinic session to allow the clinic dentists to focus on their supervisory and consultative responsibilities.

### SECTION III: Institutional Support and Other Program Resources

**1. Program Support (Please note: Use this section to reflect upon what institutional supports would be useful and why).**

The Early Childhood coordinator and faculty do most of the marketing for the Early Childhood Programs. Our marketing and recruitment efforts are sufficient enough to support enrollment for the Associate Degree but we have not been able to support the certificate programs with the same effort as there just isn't enough time to do this and we lack sufficient skills in marketing and design. Additional help with these new certificate programs is greatly needed.

**A. List targeted program marketing and recruitment strategies employed over the last two years? In your opinion, are they appropriate to sustain strong enrollment?**

**Response:**

- Not Applicable

**B. Provide recommendations for new or additional marketing or recruitment strategies.**

**Response:**

At this time, the program is full for the next two years; additional recruitment strategies are not necessary.

**C. Does the program have sufficient linkages with business, community-based organizations, other colleges and universities, or K-12 public schools? Please explain and cite specific examples. Present in chart form as explained in the guidelines for C & D, opposite page.**

**Response:**

The program has developed a number of linkages with business, community-based organizations, colleges and universities, as well as some of the public schools.

Name	Nature of contribution
Central Mass Oral Health Initiative	Liaison with area professionals to provide dental care to underserved populations
Community Health Link	QCC students visit this agency as part of their externship program. They provide dental health education to clients of the agency.
Dental Program Advisory Committee	Liaison to community professionals
Faith House	QCC students visit this agency as part of their externship program. They provide dental health education to clients of the agency.
Family Health and Social Service Center	QCC students visit their dental clinic as part of their externship program. This gives them an opportunity to observe dental care in a public health setting.
Fluoride rinse program: Massachusetts Department of Public Health/ Worcester School Department.	QCC DH sponsored community service program. Dental hygiene students go into the public schools to administer fluoride rinse program to children. Provides opportunity for current dental hygiene students to work in a community service project.
Friendly House	QCC students visit this agency as part of their externship program. They provide dental health education to clients of the agency.
Great Brook Valley Health Center	QCC Dental Clinic is made available to service providers from Great Brook Valley so that they can provide dental treatment to members of the community. QCC students also visit the dental clinic at GBV as part of their externship program.
Ionic Ave. Boys Club Girls Club Inc.	QCC students visit these agencies as part of their externship program. They provide dental health education to clients of the agency.
Kidseal	QCC DH sponsored community service program for and with Worcester public schools. This is program is conducted on campus in the dental clinic. Provides dental sealants, fluoride treatments, and examinations for underserved children in the community. Also provides continuing education and volunteer opportunities for community dentists, assistants, and hygienists.
Nursing Homes: Dodge Park Holy Trinity Jewish Health Care Center, Inc. St. Francis Home	QCC students visit these homes as part of their externship program. They provide dental health education to staff and residents. Students receive experience in working with the geriatric population as well as care givers.
University of Rhode Island	Agreement that will permit QCC DH graduates to transfer directly into their baccalaureate degree program.
Worcester Age Center Nutrition Sites: Auburn Senior Center	QCC students visit these homes as part of their externship program. They provide dental health education to clients who participate in the meals program. Students receive experience in working

Webster Square Lincoln Towers Pleasant Towers Zion Lutheran West Boylston Senior Center Holden Senior Center	with the geriatric population.
Worcester District Dental Hygienists Association	Members of our student organization are invited to participate in their events. The association also provides scholarship assistance to our students. Members also serve on our program advisory committee.
Worcester District Dental Society	Our students are invited to participate in their events. The association also provides scholarship assistance to our students. Members also serve on our program advisory committee.
Worcester Pipeline	Linkage with North Quadrant Worcester Public Schools

**D. Provide suggestions for improved program linkages. What, if any, assistance do the program faculty need in order to facilitate these linkages effectively?**

**Response:**

It would be helpful to have some type of formal degree completion program with Worcester State College. Program faculty would need the assistance of the appropriate College administrators to develop this program.

**E. Does the program have appropriate equipment to meet the instructional demands of the program? (e.g., medical equipment, laboratory supplies, computer hardware and/or peripherals)**

**Response:**

The program does have appropriate clinic equipment, but furnishings are lacking in the dental laboratory, and window shades have not been installed in the Clinic (the old plastic shades were rehung on the south side of the Clinic for light control, but their appearance is not in keeping with the new Clinic) or laboratory. The lack of window shades in the lab make showing slides impossible. There are no lab tables or stools, nor is there an instructor's table. The Dental Assisting program will have an accreditation site visit on October 11-12, 2001. It is important that this furniture be in place for that visit. The Resource Room is also in need of furniture. New window shades have not as yet been installed in the Clinic. In order to implement chairside-computing, laptop computers and the appropriate software module are needed for the Clinic.

Networking Services has provided the appropriate cabling to each workstation; there is, however, insufficient access to a data projector for PowerPoint® presentations. It would be very beneficial to have a system that could project computer and VCR images in the laboratory. Space is a consideration in the laboratory, and ceiling and wall mounts should be considered.

**F. If no, provide a list of required equipment purchases or upgrades. Please present this list in prioritized fashion and identify immediacy of the priority.**

**Response:**

<b>IP</b>	<ul style="list-style-type: none"> <li>• Laboratory furnishings <ul style="list-style-type: none"> <li>• Lab tables and stools with seating for at least 20 students</li> <li>• Instructor's table</li> </ul> </li> <li>• Window shades for Clinic, laboratory, and Resource Room.</li> <li>• Resource Room furniture <ul style="list-style-type: none"> <li>• Table and 8 chairs</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Date: September 1, 2001</li> <li>• Date: September 1, 2001</li> <li>• Date: September 2, 2001</li> </ul>	
	<b>HP</b>	<ul style="list-style-type: none"> <li>• Wall ceiling mounted data projector/VCR/screen for PowerPoint® and VCR presentations</li> </ul>	<ul style="list-style-type: none"> <li>• Date: January 30, 2002</li> </ul>

<b>EP</b>	<ul style="list-style-type: none"> <li>• Laptop computer access at each treatment station so that students are able to utilize chairside dental software</li> </ul>	<ul style="list-style-type: none"> <li>• Date: September 1, 2002</li> </ul>
	<ul style="list-style-type: none"> <li>• Module for voice activation of chairside software</li> </ul>	<ul style="list-style-type: none"> <li>• Date: September 1, 2003</li> </ul>

**G. Summary and Analysis: Program Supports**

**Response:**

There are no targeted marketing or recruitment strategies in place for the Dental Hygiene program; however, since the program is full for the next two years, additional strategies need not be implemented at this time. It is important to monitor program demand and respond to any decrease in applications.

The program has developed many linkages with business, community-based organizations, colleges, and universities as well as some of the public schools. The program would benefit from a formalized degree completion program with Worcester State College. This was described in more detail in the curriculum section of this document.

Equipment is adequate in the Dental Clinic; however, there are no lab tables, instructor’s demonstration table, or stools in the laboratory. The absence of these items makes quality laboratory instruction impossible. A data projector and screen should also be provided for the laboratory to enable faculty to make presentations for both regular instructional needs and continuing education. Furniture has not been provided for the Resource Room adjacent to the Clinic and window shades are lacking in the entire facility. The cabling is in place so that each Clinic station can have computer access, but laptop computers must be provided so that students can learn to use chairside computer technology.

**2. Academic Supports**

**A. Are there sufficient instructional/research resources to support student learning in this program?**

**Response:**

The addition of Internet resources has greatly expanded the scope of instructional/research resources available to faculty and students. These resources are adequate to support student learning in the program.

**B. Assess the overall currency of the current collection of books, periodicals, and audiovisual materials in the library. Recommend new acquisitions and/or periodical subscriptions. In addition, please work with the library staff to weed outdated materials from the library's current holdings.**

**Response:**

The currency and quality of the current collection of books, periodicals, and audiovisual materials in the Library was evaluated and upgraded for the program site visit. These resources are complete and adequate. Faculty members will be asked to review their specific subject material during the 2001-2002 academic year for the purpose of weeding outdated material.

**C. Are there sufficient technology resources, specifically software and hardware resources? Are these resources available and accessible to students? To faculty?**

**Response:**

There are sufficient technology resources available to the students (except those recommended for the Clinic). Faculty resources for classroom presentations are inadequate and, in fact, have diminished since 1998. There has been an insufficient number of slide projectors available for classroom use. As of May 2001, the classroom (367A) primarily used for Dental Hygiene lecture classes has no projection screen, so slides must be projected onto the wall. Picture quality is very poor. Most of the program faculty have attended workshops to learn how to use PowerPoint® and then spent many hours preparing their lecture material in that format. They are very frustrated by the fact that the data projectors required for their presentations are often not available or, when they are available, do not work. The portable arrangements, with the laptop wired to the cart, do not allow for a professional or graceful presentation.

**D. Provide a list of recommended technology acquisitions (i.e., software, hardware, PC projection units, etc.) Please prioritize this list and identify the immediacy of the priority.**

**Response:**

<b>IP</b>	<ul style="list-style-type: none"><li>Additional slide projectors be made available to the program</li><li>A screen be provided for the classroom used for the Dental Hygiene classes</li></ul>	<ul style="list-style-type: none"><li>Date: September 1, 2001</li><li>Date: September 1, 2001</li></ul>
<b>HP</b>	<ul style="list-style-type: none"><li>Data projectors be installed in the classrooms used by the health programs</li></ul>	<ul style="list-style-type: none"><li>Date: January 30, 2002</li></ul>

**E. Does the Individualized Learning Center provide ample academic support services for students in the program?**

**Response:**

The Individualized Learning Center provides ample support services to students in the program. Disks/Slide/Tape materials (instructional and self-instructional) are housed in the Individualized Learning Center in the Administration Building. The Individualized Learning Center provides seating for 100 students. Learners have access to 13 computers with Internet access; one computer equipped with adaptive technology including a screen reader, speech synthesizer, and video magnification software; and four computers with access to the Library's online catalog, electronic databases, and Internet.

Program students routinely use the Library to prepare reports, abstracts of professional research articles, and scientific presentations. They also view videotapes of preclinical presentations that they missed. The Individualized Learning Center provides ample academic support services in all areas except for tutors.

**F. Provide recommendations for improved academic support services.**

**Response:**

Most of the dental science courses are taught by adjunct faculty who are not available to provide additional help to students having difficulty in those courses. Provision of tutors for the basic dental science courses would enhance these services.

**G. Summary and Analysis: Academic Supports**

**Response:**

Academic support services in general are more than adequate to support student learning. The only lacking is in tutoring services in the basic dental sciences.

### **3. Student Supports**

#### **A. How do your students explore career opportunities and prepare to access them?**

**Response:**

Students explore career opportunities through their externships and networking with professionals in the community. Course content, especially in the “Dental Ethics, Jurisprudence, and Dental Hygiene Issues” provides students with information regarding various career opportunities. The program also provides assistance with placement by receiving and making available to students information regarding employment opportunities.

#### **B. Provide recommendations for enhancing students’ career exploration and planning.**

**Response:**

Graduate surveys indicate that all of our graduates who wish to be employed in the field are employed. It would seem that no enhancement is warranted at this time

#### **C. Are current student support services adequate to support the teaching and learning process?**

**Consider:**

- **Counseling Services**
- **Disability Services**
- **Health/Wellness Center**
- **Transfer Information**
- **Other Services (as listed in QCC catalog)**

**Response:**

Counseling Services, Disability Services, the Health/Wellness Center, and Transfer Information adequately address the needs of the students. Prior to entering the program, most students have utilized the Health Careers Center.

#### **D. Provide recommendations for additional services that would be beneficial to your students.**

**Response:**

Most of our students have children of various ages. They are able to make child care arrangements for routine situations. Problems arise during times when children are ill and unable to go to their normal placement, or when the children’s school vacations or snow days do not coincide with Quinsigamond Community College’s vacation and snow days. It would be a wonderful service if the College could provide a school vacation camp or “sick bay day care” for the children of its students.

#### **E. Summary and Analysis: Student Supports**

**Response:**

Student support services, in the area of career exploration and job placement, are adequate. This is demonstrated by the graduate student surveys that show all alumni who wish to work in the field are doing so. Counseling Services, Disability Services, the Health/Wellness Center, Health Careers Center, and Transfer Information all adequately address the needs of the students in the program.

An additional area of support that could be provided would be childcare for snow days, school vacations, and ill children.

#### **4. Physical Facilities**

##### **A. Are the current physical facilities sufficient from an instructional perspective? If no, explain and provide recommendations.**

**Response:**

There is a lack of classroom space. The size of the classroom used by the Dental Hygiene program was minimally adequate for Dental Hygiene students. With the addition of the Dental Assisting students in the core courses, the room size is inadequate.

The lack of adequate parking is an inconvenience to students and faculty. It is detrimental to student learning in the Clinic. When patients attempt to come to the Clinic and cannot easily find a place to park, they will often leave and the student is then without a patient for that clinic session. Additionally, many of our patients are elderly and/or medically compromised; parking on the upper levels is not appropriate for these patients. The policy of Campus Security is that they assist these patients in finding appropriate parking. In practice, this does not reliably occur.

##### **B. Are the current physical facilities sufficient from a competitive perspective? If no, explain and provide recommendations.**

**Response:**

The actual Clinic is an asset from a competitive perspective. The classroom used by the program is shabby, crowded, and poorly equipped. The student locker room provides day locker space only, so students are not able to regularly store their clinic attire in the facility. All of the other Dental Hygiene programs in the state provide full-time locker rooms for their Dental Hygiene students.

##### **C. Given enrollment projections, will additional classrooms or laboratories be required? If yes, please specify the requirements and identify immediacy of the need.**

**Response:**

Although the Dental Hygiene enrollment is not projected to increase, it is hoped that the Dental Assisting program will increase to twenty students. This will require that a larger classroom be provided for the core courses taken by both Dental Hygiene and Dental Assisting students. This classroom must be able to hold 40 students.

##### **D. Summary and Analysis: Physical Facilities**

**Response:**

Adequate designated parking must be provided for patients who come to the Dental Clinic. The lack of parking negatively impacts the supply of patients willing to come to the Clinic and, thus, the ability of students to have enough patients to complete their requirements.

The Clinic facility is modern and an asset to the program, but the locker room is inadequate. Students have only day locker space so they cannot regularly store their clinic attire in the facility. All other programs in the state provide full-time locker storage and a spacious locker room for their Dental Hygiene students.

Currently, the classrooms used by the program are crowded and need refurbishing. With the expansion of the Dental Assisting program, larger classrooms will be required for courses taken by students in both dental programs.

**5. Program Financing**

**A. Has the program’s funding been sufficient over the last five years? Please explain your response.**

**Response:**

The program’s funding has been sufficient over the last five years except in the area of personnel. There was insufficient support staff for the operation of the Clinic, and student learning was impacted. This was cited in the last accreditation cycle and has been somewhat corrected. Another inadequacy is the salary for the supervising dentist in the Clinic. The hourly rate paid to the dentist is insufficient to provide for consistent long-term staffing of the position.

**B. Provide an analysis of the cost of this program. Be sure to include ALL costs. (For example, costs associated with instructional salaries, space, lost opportunity costs, equipment rentals and/or maintenance, etc.**

**Response:**

<b>Program costs 2000-2001</b>	
Full time faculty	\$301,326.48
Adjunct faculty	\$17,740.88
Secretarial support (PT)	\$10,000
Other (Clinic Manager)	\$24,534.56
“03” employees )clinic substitutes	8300
Office supplies	400
Printing expenses	100
Software	4272
Subscriptions & memberships	1115
Facility furnishings	1442
Classroom supplies	7290
Honoraria	2300
Accreditation costs	620
Uniform rentals	1200
Educational equipment	76
Educational equipment repair	500

**C. Based on your enrollment projections, are there projected increases or decreases in the budgetary requirements of this program over the next five years?**

**Response:**

Projected increases in the budgetary requirements are expected to increase over the next five years. In addition to the increase to provide for inflation, the primary need for increased funds would be in salaries. There should be an increase in the rate paid to the clinic dentists and additional funds allocated for increased faculty coverage in clinic as would be required by changing the clinic dentists’ duties

**D. Summary and Analysis: Program Financing**

**Response:**

Program budget for the next 3-5 years.

<b>Estimated Program Operating Budget for next 3-5 years</b>	
Full time faculty	*
Adjunct faculty	*
Secretarial support	*
Other	*

“03” employee addition to compensate for increase in dentist salary from \$35 to \$75 hour. Salary range for clinic dentists in state is from \$32 to \$100 per hour. (480 total clinic hours)	19200
“03” employee addition for additional adjunct faculty clinic coverage 480 hours @ \$32 per hour.	15360
“03” employees (clinic substitutes)	8300
Office supplies	400
Printing expenses	100
Software	4272
Subscriptions & memberships	1200
Facility furnishings	1442
Classroom supplies	7290
Honoraria	2300
Accreditation costs	620
Uniform rentals	1500
Educational equipment	70000
Educational equipment repair	2400

**\* Contractually mandated pay increases only**

## Section IV: Executive Summary of Findings

- A. Briefly summarize the program highlights and recommendations for program improvement (2-4 pages). Provide a summary of action steps that prioritize what needs to be done with an estimated timeline for completion. Remember that this document will be presented to the QCC Board of Trustees and the President's staff as a tool for negotiating necessary program resources.**

### **Response:**

#### **The Program and Profession**

The Dental Hygiene program was established as a career and transfer program at Quinsigamond Community College in 1972. Since its inception, the program has enjoyed the strong support of area dentists who have served as advisory board members, adjunct faculty, guest lecturers, clinical dentists, and externship mentors. The program is very well regarded in the area, and its graduates are in high demand.

A Dental Hygienist is a licensed health professional specializing in the prevention and treatment of oral diseases. Hygienists must be licensed by the state in which they practice. Licensure requires graduation from a program accredited by the American Dental Association and certification by examining boards. For Massachusetts, those boards are the National Board and the Northeast Regional Board of Dental Examiners.

Graduates of the program are generally employed as dental hygienists in private dental offices, specialty dental practices, or group practices. A number of our graduates have worked as hygienists at the Great Brook Valley Health Center and for Project Head Start.

According to the U.S. Department of Labor, the demand for dental hygienists will increase much faster than the average through 2008. The Bureau of Labor Statistics reports that in 1998, the median hourly rate for hygienists was \$22.50 per hour, with the top 10% earning \$38.00 per hour. The most recent figures available from the Massachusetts Division of Employment and Training for the Northern Worcester SDA identify a mean earning of \$45,570 for hygienists in 1997. An occupational growth rate of 41.4% is projected through 2006.

The primary opportunity for program expansion is in the area of continuing education. As new procedures or material come into use, the department provides continuing education for practicing hygienists. Within the next year or so, it is expected that the Massachusetts Board of Registration in Dentistry will implement a change that will allow dental hygienists to administer local anesthesia. Since this is a new function, and since most dental hygiene curricula have not taught this function to clinical competency, we anticipate a great demand for continuing education in this area. Indications from the state board are that the requirement for certification in this area will include 12 to 24 hours of on-site training in an accredited dental or dental hygiene school. Because the training must be conducted by an accredited program, competition for these courses will be limited.

#### **The Curriculum**

The program is accredited by the Council of Dental Education of the American Dental Association whose standards require ongoing quality assurance. As evidenced by their report of the 1999 site visit, the Dental Hygiene program meets or exceeds the Standards for Accreditation. The next accreditation site visit will occur in 2006.

The program has well defined goals and objectives as well as a curriculum assessment and inventory plan. The plan, which is being implemented during the Spring 2002 semester, will document where content is delivered and how and to what level each competency is evaluated.

The program supports the College mission and purpose through providing affordable, high quality education for individuals seeking a career in Dental Hygiene. The clinic facility is state of the art, so that graduates of the program are prepared to enter the workplace. To maintain its "high tech" image, the program must continually monitor the clinic facility to be sure new technologies are acquired.

Most students take three or more years to complete the program. It would be beneficial to develop some type of formal articulation or dual enrollment program where students could earn a Bachelor's degree utilizing more of their professional courses.

### **Faculty and Instruction**

All full-time faculty hold at least a Master's degree, and one has completed her doctorate in education as well as an additional graduate degree in Acupuncture/Complementary Health. The core of full-time faculty is supplemented by adjuncts who provide support in the basic dental sciences and clinical dental hygiene. Many of the adjunct faculty are working toward their Master's degrees and all are actively employed in the field. This helps to ensure that our clinical training is consistent with current work practices.

The new accreditation standards have emphasized that faculty are responsible for ensuring that the services delivered by students meet current standards for Dental Hygiene care, as well as instruction and evaluation of students. In addition, evaluation of the process as well as the end result of treatment must occur. To comply with this, we can no longer include the supervising dentist in the instructional ratio for the clinic and must add an additional Dental Hygiene faculty member to each clinic session. The clinic dentist should be hired as a consultant, not as an instructor, and additional faculty employed to maintain the mandated clinic ratio.

In order for faculty to remain current in their field, they should receive support for faculty development. It is especially desirable for them to attend the course-specific national faculty development institutes, as they are offered by professional organizations.

Although the clinic facility is state of the art, resources for classroom presentations are inadequate and, in fact, have diminished since 1998. Faculty should have available to them as needed: data projectors, as well as video records, slide projectors, overhead projectors, and projection screens.

### **Institutional Support**

Student services and enrollment management administers the recruitment and admissions of students to the Dental Hygiene program. New admissions criteria and procedures were developed with the input of program faculty. These were implemented in the Fall of 1999, but there has been no analysis to evaluate the validity of these criteria. The program needs the assistance of an institutional research person to assist in the evaluation of the admissions criteria as well as assist with outcomes assessment and other areas of data collection and analysis.

<b>Action Steps</b>	<b>Timeline</b>	<b>Completed</b>
Tables and stools for the Dental Laboratory and Radiology Viewing area	Fall 2001	Spring 2002
Furnishings for Clinic Resource Room	Fall 2001	Spring 2002
Shades for dental clinic and laboratory	Fall 2001	
Completion of Program Curriculum Assessment and Inventory	Spring 2002'	In progress
Change title of clinic dentist from instructor to consultant and hire additional clinic faculty	Fall 2003	
Upgrade classrooms and laboratories so that they are equipped with adequate instructional technology	Spring 2003	
Provision of tutors for basic dental sciences	Ongoing	
Provide institutional support for faculty to become certified to administer and teach local anesthesia	Spring 2003	
Provide institutional support for faculty to attend content-specific institutes and workshops	Ongoing	
Add an additional full-time faculty member to be shared with the Dental Assisting program	Fall 2003	
Addition of lap top computers to the clinic so that chair side patient management software can be utilized	Spring 2003	

