

CALIFORNIA DENTAL ASSOCIATION

Dental Hygiene School Business Plan

DENTAL HYGIENE TASK FORCE
JULY 11, 2005

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I. EXECUTIVE SUMMARY

A. PROJECT SCOPE

Upon presentation of a CDA-sponsored hygiene school feasibility study, the 2004 House of Delegates passed Resolution 31RCB, requiring the development of a detailed dental hygiene school business plan – to include a funding plan, site selection, faculty recruitment, admission policies, and geographical equity. The resolution also required a status report on the progress of the CDA dental hygiene school be presented? to the 2005 House of Delegates.

With the consultative support of ECG Management Consultants, the 2005 Dental Hygiene Task Force (EXHIBIT I) has prepared this business plan to be presented to the 2005 House of Delegates. In addition to the items mandated by the 2004 House of Delegates, the task force has also included in this business plan a financial model and information regarding accreditation in order to provide a more complete report. In summary, the key issues addressed in this plan are:

- Site selection
- Geographic equity
- Faculty recruitment strategy
- Admission policy
- Financial model
- Funding strategies
- Institutional accreditation

B. METHODOLOGY

To address the above project scope, the 2005 Dental Hygiene Task Force was appointed by the CDA president and convened five times between March and July of 2005. At each meeting, information and documents were brought forth for discussion and review. Each meeting produced specific working documents for which the task force reviewed findings, deliberated the contents of all documents, provided project direction, and made recommendations for revision. With the consultative support of ECG Management Consultants, the 2005 Dental Hygiene Task Force has prepared this business plan to be presented to the 2005 House of Delegates. The working documents supporting all task force findings are also available.

C. SITE SELECTION

According to the feasibility study, it was suggested that multiple programs would need to be established to have a significant impact on the number of hygienists being trained in California. For the purposes of this business plan, the task force determined that five campuses would need to be established to have even a minimal impact on the number of graduates needed to address the perceived shortage.

To select sites for these campuses, the task force used Metropolitan Statistical Areas (MSAs). An MSA is defined by the Office of Management and Budget as a region that has at least one urbanized area of 50,000 or more population, plus adjacent territory that has a high degree of social/economic integration with the core as measured by commuting ties. It is important to note that the city names listed for each MSA identify a region and were not considered by the task force to specify a particular city location of any campus within that region. Each MSA is composed of one or more counties; thus county-based data can easily be mapped to an MSA. In California, there are 24 MSAs. The areas comprising San Francisco and Los Angeles are each divided into two Metropolitan Divisions, given the large area and population encompassed by these MSAs. Please see EXHIBIT II for a list of all MSAs and Metropolitan Divisions in the state.

There are a number of advantages to using MSAs as a means of segmenting the state. First, MSAs have the benefit of being somewhat more limited in scope than counties, yet there are demographic statistics widely available for this measure. Second, given that there are significant resources necessary to support a dental hygiene campus, it is

unlikely that a campus could be established in a city with less than 50,000 people. Factors such as rental housing for students, size of the student base, and lack of potential patients would limit the desirability of a less urban area. Further supporting the use of MSAs, it should be noted that all current dental hygiene schools are located within an MSA, thus confirming this method of analysis. The MSAs are fairly well distributed across all regions of the state, thus giving both Northern and Southern California reasonable representation. Please see EXHIBIT III for a graphical representation of the MSAs.

Using MSAs, a variety of parameters were examined including total population, population density, ratio of hygienists to dentists, presence of current dental hygiene schools, potential component support, attractiveness of location to faculty and students, and geographic characteristics. The task force narrowed the MSAs first to 13 potential sites based on the parameters of total population, population density, current dental hygiene schools located within the MSA, and hygienist to dentist ratio. Of those, five sites were selected regionally throughout the state based on the other factors.

The “Fairfield-Vallejo MSA” was selected for the first location as it met all the selected criteria and is also in the general proximity of the CDA headquarters, which allows for more direct oversight. General locations were also identified for subsequent campuses throughout the state that provide for geographic equity: In total, the five sites were selected as follows:

- Vallejo – Fairfield MSA
- San Francisco – San Mateo – Redwood City Metropolitan Division MSA
- Oxnard – Thousand Oaks – Ventura MSA
- Salinas MSA
- San Diego – Carlsbad – San Marcos MSA

Please see EXHIBIT IV for a graphical depiction of the MSAs selected. As this map shows, the MSAs selected are well distributed throughout the state.

D. GEOGRAPHIC EQUITY

In order to ensure that students from all areas of the state are given the equal opportunity to attend the CDA-sponsored school, geographic equity is accomplished using a dual approach. An admission policy that applies to the first campus will admit an equal number of qualified applicants from specified regions throughout the state, as well as a set number of at-large students. With the opening of the proposed five campuses and by locating campuses in the northern, central, and southern regions of the state, geographic equity will then be created by the statewide distribution of campuses. See EXHIBIT V for a list of the regional applicant pool assignments.

E. FACULTY RECRUITMENT

The plan proposes utilization of a core group of full-time faculty to include a site director who will spend half of his/her time in administration and the other half teaching. The faculty salaries and benefits will be competitive with existing schools and be adjusted based on the cost of living of each particular campus location. The faculty will also consist of part-time faculty and member volunteers. Additionally, as more campuses are opened, a central administration will be necessary.

F. ADMISSION POLICY

The CDA mission is to be the recognized symbol of excellence in education, advocacy and innovation, serving its members and assisting the dental community in fulfilling their responsibility to the public. The CDA sponsored dental hygiene program admission policy is aligned with this mission. The admission committee will consider each applicant’s scholastic record and written personal statement. Other personal attributes and qualities, along with work experience in the dental field will also be reviewed. Applicants who appear to meet the requirements and are considered strong candidates will be invited to attend a personal interview. Final admission will be determined on a specific admission point system and the fulfillment of the proposed geographic equity requirements.

G. FINANCIAL MODEL

The cost estimates developed and reported to the 2004 House of Delegates estimated that the cost of one 24-student program utilizing traditional teaching methods would be approximately \$3.3 million. Changes in this financial plan reflect a more detailed analysis of a five-campus program with supporting infrastructure. This business plan also assumes that CDA will lease rather than purchase the land and buildings for the campuses. This results in decreased start-up costs but higher operating costs.

Since the Vallejo – Fairfield campus will be the first constructed, efforts have been focused on refining the cost estimates for this site and providing more general analysis for the remaining proposed campuses. Costs for the remaining four sites are assumed to be similar to the Vallejo – Fairfield location with the exception of leasing costs, which are difficult to estimate as they will not be negotiated for several years. Additionally, the Consumer Price Index (CPI), estimated to be 3-percent per year, is used to adjust the model and make corrections for the effects of inflation.

All cost estimates are consolidated into a 10-year financial forecast, based upon the assumptions previously discussed. The first campus makes a modest profit beginning in Year 2, which partially offsets costs for constructing the second campus. This trend continues with the remaining campuses, as the growing income from the older campuses offsets the large start-up expenses associated with opening a new campus. The program, including all five campuses, begins to make its first sustained profit (initially \$340,000) in Year 8.

Tuition revenue will be based on an assumed tuition of \$30,000 for an 18-month-long program. The second class is assumed to start 9 months after the first class begins. The Consumer Price Index (CPI), estimated to be 3-percent per year, based tuition revenue on assumed tuition increases each year. This adjustment will correct for the effects of inflation.

H. FUNDING STRATEGY

The task force evaluated several funding strategies to support the program. In the final analysis, a proposed member dues assessment was determined to be the necessary funding strategy. According to this strategy, every CDA active member would be assessed a fee in addition to their annual dues to cover the capital and operating requirements of the school until it becomes self-sufficient. The dues assessment could be charged either on an annual basis for a 10-year period or it could be assessed as a onetime fee designed to finance the start-up and operation of all five campuses.

A dues assessment would take into account the costs of construction and operation of five programs over a 10-year period with a new campus opening every two years, a 6.5 percent interest rate and a total of 14,368 CDA active members (current members). The estimate for the annual assessment over a 10-year period would total \$918 dollars or approximately \$92 per year. Alternatively, CDA could charge a onetime assessment designed to cover the construction and operation of all five campuses until they become self-sufficient. Assuming the same 14,368 CDA active members, capital requirements and a 6-percent discount rate yield, a onetime dues assessment would be \$706 per active member.

I. INSTITUTIONAL ACCREDITATION

In completing this detailed business plan, the task force identified another matter critical to the success of the program - the issue of institutional accreditation. Outlined in the section on accreditation, the task force's analysis of the accreditation process reveals the complexity of CDA establishing accreditation for a dental hygiene school. It is clear that CDA must first establish its role as an educational enterprise. Once it establishes this role, CDA must pursue approval via the Department of Consumer Affairs' (DCA) Bureau for Postsecondary Professional and Vocational Education (BPPVE). This institutional accreditation precedes accreditation by the ADA's Commission

on Dental Accreditation (CODA). Finally, once CODA accreditation is achieved, Dental Board of California approval must be obtained.

To obtain accreditation, CDA must complete additional research to determine if the existing educational endeavors that CDA has established, such as adult education programs in dental continuing education, are sufficient to establish it as an educational institution.

J. GRADUATING STUDENTS

The business plan is not complete without consideration of the projected number of graduating hygiene students. Please see EXHIBIT X. Assuming an 18-month, 24-student program with a 10 percent attrition rate, the total number of graduates from the five campuses at the end of the 10-year period is projected to be 880. Once all five campuses are in operation, 286 students will graduate every two years.

K. CONCLUSIONS

Through the process of preparing this business plan, the task force identified some specific pros and cons of implementing this plan.

Pros:

- The business plan is feasible and responds to the perceived hygiene shortage.
- CDA has a track record of successfully engaging in new and innovative ventures that benefit dentistry.
- The plan provides for statewide geographic equity in its campus locations and admission policies, which helps distribute hygiene graduates throughout most of California.
- The admission policies reflect CDA's mission and are not regulated by mandates such as Title V.
- The financial model shows a potential for profitability in the long term.

Cons:

- The perceived shortage of hygienists may not be concordant with the degree of actual shortage.
- Acquiring institutional accreditation would require significant effort and may be difficult to achieve.
- There may be lost opportunities with such a large and lengthy dues assessment in that other programs/services that become urgent and important to dentistry over the 10-year period would be difficult to engage given the level of financial commitment by active members required for the hygiene school.
- The timeline is lengthy and it is difficult to assume that the many variables in this plan (financial, competitive, etc.) would remain constant over such a protracted time horizon.
- To be financially feasible, this plan requires assessing 100 percent of active members.

The task force presents this business plan to the 2005 House of Delegates with the understanding that the first step must be to obtain institutional accreditation. Whether the House of Delegates chooses to implement this proposal or not, the efforts that have been directed toward the financial model, site locations, equipment and other logistical issues will be of great value to other institutions (i.e., proprietary and community colleges). The plan can also augment CDA's efforts, through the Accreditation Team, to assist institutions in gaining specialized accreditation for new dental hygiene programs and helping with the process of reaccreditation. The working documents and models supporting all task force findings in the development of this business plan will be made available to the Accreditation Team and component dental societies.

II. PROJECT SCOPE

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III. SITE SELECTION

A. SEGMENTATION OF THE STATE

Given the size and geographic diversity of the state, the first task was to select a method for dividing California into appropriate regions. The goal of this demarcation was to separate the state into regions for which statistical data is widely available and that will easily allow comparisons to be drawn. The following methods of delineating the state were considered:

- By county
- By component
- By region (Northern, Southern, and Central)
- By major city
- By Metropolitan Statistical Area (MSA)

Advantages and Disadvantages of Potential Methods

While most statistical data is available on a county basis, there are 58 counties in California, making this a somewhat unwieldy way to examine potential sites. In large urban areas such as the Bay Area, several counties form the metropolitan area, making it hard to differentiate between the constituent counties. While the CDA routinely examines information based on components, government data is not available on this basis. While some components are defined based upon county lines or city limits, this is not always the case, making it difficult to gather statistical data on this basis. This method could also be a cause of contention among members.

Looking at the state by region does not provide a fine enough distinction between potential sites. While areas in California are often classified as Northern, Central, or Southern, there are large economic and geographic differences within these regions. For example, while both San Francisco and Yuba City are usually defined as being in Northern California, the differences between the two cities are immense.

Examining the state by major cities would summarily rule out the possibility of establishing a school in an outlying area. For example, Santa Barbara might be a good choice for a dental hygiene campus site, but it would not be a candidate if only cities with a population greater than 500,000 are considered. Additionally, suburbs of major cities could make good sites as they are close to a large population base but feature less expensive real estate.

B. METROPOLITAN STATISTICAL AREAS

An MSA is defined by the Office of Management and Budget as a region that has at least one urbanized area of 50,000 or more population, plus adjacent territory that has a high degree of social/economic integration with the core as measured by commuting ties. Each MSA is composed of one or more counties; thus county-based data can easily be mapped to an MSA.

In California, there are 24 MSAs. The areas comprising San Francisco and Los Angeles are each divided into two Metropolitan Divisions, given the large area and population encompassed by these MSAs. Please see EXHIBIT II for a list of all MSAs and Metropolitan Divisions in the state.

Advantages and Disadvantages

There are a number of advantages to using MSAs as a means of segmenting the state. First, MSAs have the benefit of being somewhat more limited in scope than counties, yet there are demographic statistics widely available for this measure. Second, given that there are significant resources necessary to support a dental hygiene campus, it is

unlikely that a campus could be established in a city with less than 50,000 people. Factors such as rental housing for students, size of the student base, and lack of potential patients would limit the desirability of a less urban area. It should be noted that all current dental hygiene schools are located within an MSA, further supporting this method of analysis. The MSAs are fairly well distributed across all regions of the state, thus giving both Northern and Southern California reasonable representation. Please see EXHIBIT III for a graphical representation of the MSAs.

One of the main disadvantages of this methodology, however, is that several of the largest MSAs encompass a number of cities. If an MSA, such as Los Angeles, is chosen as a site, the specific location still needs to be selected. Issues such as available real estate will determine the precise location of the campuses, so this point is somewhat moot at this time. Another disadvantage of using MSAs is that rural locations, such as those used by the Oregon dental hygiene school, are not considered. Offsetting this concern is the fact that all current dental hygiene schools are located within an MSA. Oregon has fewer cities and less population density than California, which results in different geographic dynamics. Given the strong evidence in support of using MSAs, this methodology is used for delineating the state.

C. FURTHER REFINEMENT OF POTENTIAL SITES

Using MSAs to delineate the state yields 28 sites to be evaluated (24 MSAs plus four Metropolitan Divisions). Evaluating this many sites is somewhat cumbersome as it complicates the analysis and makes decision making more difficult. From these potential locations, five sites were identified for this business plan. The following criteria were used by the task force to select the five sites:

- Population
- Population density
- Current dental hygiene schools located within the MSA
- Hygienist to Dentist ratio

Analyzing the MSAs in terms of population and population density, the areas can be broken into three distinct tiers. The first tier consists of MSAs with more than 1 million residents. Eight MSAs fall into this tier, and not surprisingly, this includes the cities of San Francisco, Los Angeles, and San Diego. The second tier consists of MSAs with populations less than 1 million, but more than 300,000. It should be noted that many of these MSAs currently have a dental hygiene school. The next tier can be defined as those MSAs with less than 300,000 residents. Ten MSAs fall into this category.

A dental hygiene school requires many community resources to support it, and it may be difficult to host a school in a more rural area. There are only two dental hygiene schools that are currently located in an MSA with less than 300,000 people. Given this analysis, it was determined that the 10 MSAs with a population of less than 300,000 could be removed from further consideration.

The remaining MSAs were examined in terms of the presence of a dental hygiene school and the current hygienist to dentist ratio. Looking at the first tier of MSAs, all currently have dental hygiene schools, and most have several schools. Despite this fact, nearly all have a hygienist to dentist ratio of less than 0.6. The only exception to this is the Sacramento MSA. Sacramento currently has two dental hygiene schools and a hygienist to dentist ratio of 0.78. Given these statistics, the MSA was eliminated from further analysis because the region already has a number of schools and the hygienist to dentist ratio is reasonable in terms of ratios elsewhere.

In the second tier of schools, it was found that there are six MSAs which currently host dental hygiene schools. All six of these MSAs have a hygienist to dentist ratio of greater than 0.5. Indeed, five of the MSAs have a hygienist to dentist ratio of greater than 0.7. Given the population of these areas is in the midrange and the fact that these areas already host a dental hygiene program, it is not known if the areas can support a second school in terms of patient supply and other necessary resources. Thus, five of the six MSAs were not considered further.

D. FINAL SELECTION OF THE FIVE CAMPUSES

Five sites were selected in order to plan ahead for the opening of additional campuses and to foster geographic equity. Examples of some of the quantitative statistics considered included the ratio of dentists to hygienists, presence of current dental hygiene schools, and population. Qualitative factors, such as potential component support, attractiveness of location to faculty and students, and geographic characteristics, were then used to make the final selection. The following is a brief description of the five MSA selected for this business plan as the most optimal sites for future dental hygiene programs:

- Vallejo – Fairfield MSA.
 - » This MSA has a population of 395,000.
 - » The hygienist to dentist ratio here is 0.57, in the midrange.
 - » There are no dental hygiene schools located within this MSA.
 - » This is a rapidly developing area, and is within commuting distance from many parts of the Bay Area.
 - » Furthermore, this MSA is located within reasonably close proximity to the CDA headquarters in Sacramento.

- San Francisco – San Mateo – Redwood City Metropolitan Division.
 - » This area has a population of 1.7 million and a relatively high population density, not surprisingly.
 - » It has the second lowest hygienist to dentist ratio at 0.38.
 - » With the closing of the UCSF dental hygiene school, there are currently no dental hygiene schools in this region. This, coupled with the hygienist to dentist ratio, may make it a good site candidate.
 - » While this is a good area for faculty recruitment, it may be a somewhat difficult area for students. Rental housing can be difficult to find and is known to be quite expensive.

- Oxnard – Thousand Oaks – Ventura MSA.
 - » The population here is 753,000, much smaller than other neighboring MSAs.
 - » The hygienist to dentist ratio of 0.72 is relatively high when compared to other MSAs.
 - » There is one dental hygiene school in this area, located in Oxnard.
 - » A large portion of this MSA, particularly near Thousand Oaks, is within commuting distance of Los Angeles and is a rapidly developing area.
 - » Real estate here is somewhat less expensive than in Los Angeles proper (depending on the city), which may make it a good alternative to Los Angeles.

- Salinas MSA.
 - » This MSA has a population of 402,000, with a very low population density.
 - » There are no dental hygiene schools located within this MSA.
 - » The hygienist to dentist ratio is 0.63, in the middle of the range.
 - » This area is more rural than some of the others being considered. There are no other competing schools within this MSA, however.

- San Diego – Carlsbad – San Marcos MSA.
 - » This is one of the larger MSAs in the state, with a population of 2.8 million.
 - » The hygienist to dentist ratio is 0.54, in the middle of the range when compared to other areas.
 - » There is currently only one dental hygiene school in the area. Given the size of the MSA, it could likely support another school.
 - » The cost of living in San Diego is high, but not as great as in Los Angeles or San Francisco.
 - » Because San Diego is relatively close to Los Angeles, it may be easy to convince students to practice in the neighboring city, where the hygienist to dentist ratio is particularly low.

Furthermore, the task force selected the Vallejo – Fairfield MSA as the preferred location for the first campus. This site was selected because of its proximity to the CDA headquarters, allowing for more direct oversight. Please see EXHIBIT IV for a graphical depiction of the MSAs selected. As this map shows, the MSAs selected are well distributed throughout the state.

IV. GEOGRAPHIC EQUITY

ENSURING STATEWIDE DISTRIBUTION OF STUDENTS

In order to ensure this business plan represents all areas of the state, it is essential to adopt a strategy that creates geographic equity. Locating campuses in the northern, central, and southern regions of the state is the first step toward creating geographic equity. To supplement this, a formal admission policy should be established to ensure that applicants are accepted from all parts of the state.

The following is the proposed geographic equity strategy:

- Twenty-four students will be enrolled at each CDA-sponsored dental hygiene campus each year. To ensure a geographically diverse student body, the students will be admitted from all regions of the state.
- The 32 components will be divided into 6 distinct regions based upon location and membership. See EXHIBIT V for a list of component admission group assignments.
- Three students will be admitted from each of these regions, assuming there are a sufficient number of qualified applicants.
- The remaining six students will be selected from the general applicant pool, comprising all qualified applications received. The six most highly qualified candidates will be chosen, as determined by the admissions committee.
- If there are not three qualified applicants from a given region or if an applicant declines the invitation for admission, the openings will be filled with candidates from the general applicant pool.

V. FACULTY RECRUITMENT STRATEGY

This plan proposes that the school utilize a core group of full-time faculty to include a program director that will be in charge of coordinating all programs. This director potentially could be the same person that is hired to develop the CDA Accreditation/Program Development Team. The director will act as the administrator for all campuses. It is assumed that each site will have a site director who will spend half of his/her time in administration and the other half teaching.

Full and part-time faculty will be utilized with the recommended faculty/student ratio outlined in ADA's Dental Hygiene Program Guidelines. Opportunities will be available for CDA member dentists to participate by serving on advisory committees, teaching part-time in the clinical programs, and to teach courses on a variety of subjects in both basic and clinical sciences.

Customary recruitment strategies will be used to recruit faculty (e.g. local newspaper, web site and designated newsletter advertisements), as well as other more focused avenues such as through ADEA, current dental hygiene programs, and dental hygiene meetings.

VI. ADMISSION POLICY

The CDA mission is to be the recognized symbol of excellence in education, advocacy and innovation, serving its members and assisting the dental community in fulfilling their responsibility to the public. The CDA sponsored dental hygiene program admissions policy is aligned with this mission. The admission committee will consider each applicant's scholastic record and written personal statement. Other personal attributes and qualities, along with work experience in the dental field will also be reviewed. Applicants who appear to meet the requirements as outlined below and are considered strong candidates will be invited to attend a personal interview.

Admission Criteria:

Program applicants must complete all prerequisite courses with a minimum GPA of 2.75. In addition, the applicant must provide official transcripts of all completed prerequisite courses.

Applicants meeting the prerequisites and minimum requirements will be selected using points earned from: GPA on prerequisite courses, written personal statement, allied dental health or related work experience, leadership or community service and a personal interview. The prerequisite courses include:

- General/Inorganic Chemistry (including lab)
- Organic/Biochemistry (including lab)
- General Microbiology (including lab)
- Human Physiology (including lab)
- Human Anatomy (including lab)
- Writing and Composition
- Speech / Oral Communication
- Introduction to Sociology
- General Psychology
- Nutrition
- Interpersonal Communications/Cultural Awareness

The following summarizes the proposed criteria to be used by the admission committee in selecting applicants for acceptance into the program:

- College GPA on prerequisite courses (9 points for each .25 GPA above minimum 2.75)	45
- Written Personal Statement	15
- Bachelor's degree or higher in related field	5
- Full or part-time dental office employment (Minimum of 6 months)	5
- Graduation from an accredited dental assisting program	5
- RDA license	5
- Interview	15
- Leadership/Community Service	5
Total selection points	100

To ensure geographic equity of students throughout the state of California, the following policy for admission of students will be used:

- Twenty-four students will be enrolled in the CDA dental hygiene program each year. The state will be divided into 6 distinct regions (EXHIBIT V).
- Three students with the highest score will be admitted from each of these regions, assuming there are a sufficient number of qualified applicants.
- The remaining six students will be selected from the general applicant pool, comprising all qualified applications received. The six applicants with the next highest scores will be chosen.
- If there are not three qualified applicants from a given region or if an applicant declines the invitation for admission, the openings will be filled with candidates from the general applicant pool.

As additional campuses are opened, the admissions policy will reflect the increased geographic equity options.

VII. FINANCIAL MODEL

A. REVISIONS TO THE FEASIBILITY STUDY

The cost estimates developed and reported to the 2004 House of Delegates estimated that the cost of one 24-student program utilizing traditional teaching methods would be approximately \$3.3 million. The model set forth a projected income statement, as well as a matrix showing start-up costs and operating costs for a 24-student program. This section provides a description of the changes made to the costs estimates since they were presented to the 2004 House of Delegates, as well as the overall financial implications of the proposed business plan.

B. COST ESTIMATES FOR FIRST SITE

Since the Vallejo – Fairfield campus will be the first constructed, efforts have been focused on refining the cost estimates for this site (EXHIBIT VI). Changes were made to the feasibility cost estimates both to reflect market-specific costs in the Vallejo – Fairfield MSA, and to further refine the model's assumptions. As it will likely be several years before ground is broken on the remaining sites, forecasting costs for these locations cannot be done with precision and is based on general estimates only.

Start-up costs for the Vallejo – Fairfield MSA are estimated to be approximately \$2 million, as compared to the initial estimate in the feasibility study of \$3.3 million. This change is primarily due to the fact that the initial estimate assumed that the CDA would purchase the land for the school and construct the building. In contrast, the Vallejo–Fairfield model assumes that the building is leased. This results in decreased start-up costs but higher operating costs. Annual operating costs for the school were \$605,000 in the initial model. They are estimated to be \$784,000 in the revised model – an increase of \$179,000, largely the result of lease costs.

C. ASSUMPTIONS FOR COST ESTIMATES

The following is a detailed description of the assumptions underlying the financial model:

▪ Tuition Revenue

It is assumed that tuition will be \$30,000 for an 18-month program. Attrition is assumed to be approximately 10 percent at Month 9. The second class is assumed to start nine months after the first class begins. The Consumer Price Index (CPI), estimated to be 3-percent per year, based tuition revenue on assumed tuition increases each year. This adjustment will correct for the effects of inflation. The tuition revenue in Year 5 is shown as \$1,035,000.

▪ Clinic Revenue

Clinic revenue estimates from several dental hygiene schools in California were evaluated. Based on this information it is proposed that clinic revenue will reach \$15,000 per year of operation. It is assumed that most patients won't be charged for dental services in the first years of operation as the campus will need to cultivate a patient base. It is further assumed that the campus will reach the maximum level of clinic revenue by Year 5 of operation.

▪ Building Lease

To accurately estimate the costs of leasing commercial property in the Vallejo – Fairfield MSA, the Solano Economic Development Corporation was contacted. This is an organization devoted to encouraging new business in the area. Colliers International Property Consultants, Inc., one of the largest commercial real estate companies in the

region, was also contacted. Each of these sources was asked to provide listings of potential properties that would fit the needs of the dental hygiene school. In total, five properties were examined, all Class A developments zoned for business and professional office use. All properties had at least 11,000 square feet of building space available for lease and included at least three parking spaces per 1,000 square feet. Several of the properties are currently under construction and will not be completed until late 2005.

Based upon these applicable current listings, average lease prices in the Fairfield area are calculated to be approximately \$1.65 per square foot per month, NNN (lessee assumes most overhead costs). Lease costs ranged from \$1.15 to \$2.25 per square foot, with most differences owing to the age of the building and location. Assuming an average lease price of \$1.65 and a building size of 11,000 square feet, annual lease costs will be \$218,000 per year. If a building is leased at \$2.25, the high end of the spectrum, lease costs will increase by approximately \$79,000 to \$297,000 per year.

The leasing cost is greater than the initial estimate of building and real estate costs largely because of the current limited real estate capacity in the California market. Vacancy rates are extremely low, causing leasing expenses to rise as demand exceeds supply. The community college costs used to calculate the initial estimate may also be somewhat low compared to current market construction rates. The overall impact of these revised lease costs is a decrease in total start-up costs and an increase in annual operating costs.

- Buildout Costs

O'Brien Construction, one of the largest construction companies in the area, was contacted to estimate the buildout costs for the school. This company specializes in tenant improvements and has experience with medical offices (including ambulatory surgery centers, medical office buildings, and dental offices) as well as educational facilities. Using average costs supplied by O'Brien Construction, it is estimated that buildout costs for the classroom and office space will average \$40 to \$50 per square foot.

Mr. Greg Elmore, facilities planning manager for the UCLA School of Dentistry was contacted. He stated that the buildout costs for the clinic/lab space could easily be \$150 to \$175 and that buildout costs are extremely difficult to estimate, given the current real estate market. Because construction companies are extremely busy right now, they are charging a premium for small projects such as this one, sometimes up to 200 percent. Thus, while \$100 per square foot (PSF) might be a reasonable, if somewhat low, quote in a slow market, it should be inflated significantly to reflect current conditions. In his experience, he also stated that it might be prudent to build in a 30 percent contingency fee, because most buildouts end up going over budget because of change orders, etc.

Mr. Elmore also recommended we further consult Mr. Ken Liu, a partner with Lee, Burkhart, and Liu Architects, a firm which had helped him design a dental clinic similar to that being planned. Per Mr. Liu, the estimates provided by Mr. Elmore seemed reasonable. He reinforced the idea that the actual cost will vary greatly depending upon the architect's design and the condition of the building. Based on this information, costs for the clinic/lab space have been revised to \$175 PSF. This results in total buildout costs for the initial school to be \$1,224,000. To be conservative, and assuming that the CDA will want to limit the financial risk associated with a long-term lease, it is currently assumed that all tenant improvement costs will be borne by the CDA.

- Depreciation – Dental Equipment

The list of equipment needed for the dental hygiene schools is based on the input of task force members Ms. Doni Bird, Cindy Lyon, D.D.S., and Steven Schonfeld, D.D.S., Ph.D. Using this equipment list, price quotes were obtained from Patterson Dental Supply and Burkhart Dental Supply. Mr. Brian Klein, the educational sales representative for ADEC was also consulted.

This equipment list was sent to several vendors to receive competitive price quotes. Burkhart Dental Supply provided a quote of \$556,000 for the equipment listed. Based upon the same list, Patterson quoted the cost of the equipment at \$528,000. Mr. Klein of ADEC was also consulted regarding equipment costs. Given that these quotes are being obtained for budgetary purposes, it was concluded that either of the two suppliers would provide

representative quotes for ADEC equipment and that it was not necessary for him to provide a third cost estimate. Given that Patterson provided the lowest cost estimate, this quote was used in the financial model. Prices from both vendors were higher than estimates given to the Oregon dental hygiene school (Burkhart Dental Supply was the vendor used by this program). Slightly lower prices may be negotiated closer to the time of purchase.

- Depreciation – Office Equipment

Office furniture costs have been broken out to make the costs transparent. Office furniture quotes were obtained from Corporate Express, a national office supply vendor. Office furniture, including the reception area, faculty offices, and classroom, is estimated to cost \$34,000, or \$4,857 annually using a 7-year depreciation schedule.

- Depreciation – Computer Equipment

Both clinic and general office computer costs ensure that appropriate computer systems are included and with the most up-to-date prices. Mr. Richard L. Murphy, manager of IT for ECG Management Consultants, Inc., was consulted regarding computer specifications. Current prices were obtained from Dell and CDW.

In terms of clinic/lab computer systems, the following are included:

- Quotes for clinic workstations were obtained from Dell Inc.'s web site (www.dell.com). Assuming that the workstations would be standard models, the cost for each computer is estimated to be \$1,244.
- Total charges for computer/lab equipment are estimated to cost \$25,000.
- The following is a list for general office computer equipment estimates:
 - The cost of the network server is estimated to be \$7,500.
 - Looking at the network chosen, a fast printer is necessary to meet the demands of multiple users. The cost of this printer is \$1,499.
- The equipment list and general office computer equipment is assumed to cost \$33,000.

- Occupancy Expenses

Since it is assumed that students will incur the cost of clinic supplies, these supply costs are estimated at \$1,500 per student per year, therefore, no large occupancy expenses will occur.

D. INFRASTRUCTURE COSTS

- Infrastructure Requirements

It is assumed that an infrastructure will be needed to support the development and maintenance of five campuses and their associated students, faculty, and staff. The campuses will need an academic infrastructure to manage student records, screen applications, and facilitate financial aid requests. Finally, technology support will be required to maintain the computer systems. Below is a brief description of the assumed infrastructure costs.

- Student Administration Needs

One of the most critical elements of the infrastructure is the academic infrastructure. By law, student records must be maintained and updated as appropriate. Someone must also be available to screen applicants and verify prerequisite requirements have been fulfilled. Finally, it is necessary to provide a staff member to facilitate student loans and financial aid. A central registrar/financial aid specialist will be needed to provide these services. It is assumed that one individual can fulfill these duties for two campuses, with an additional staff member added as a third and fifth campus open. Ideally, these staff would be based in a central location, such as Sacramento. To

support the registrar, a staff member would be hired at each location to manage paperwork and provide on-site assistance to students. As accreditation requirements are investigated, additional thought should be given to the infrastructure responsibilities mandated by the various accrediting and licensing bodies.

- Technology Support

Since each campus will have 24 computers, it is assumed that an IT support person will have to be available for network management and technical troubleshooting. It is assumed that one full-time tech support person can handle two or three campuses. Thus, a second FTE will be added when the third campus opens. The salary for this person is assumed to be \$50,000 per year, the average for a junior network administrator in Vallejo per *www.salary.com*.

E. COST FACTORS FOR OTHER LOCATIONS

Costs for the remaining four sites are assumed to be similar to the Vallejo–Fairfield location with the exception of leasing costs. Because leases for the other locations will not be negotiated for several years, it is somewhat difficult to estimate what leasing costs will be at that time due to variability in the real estate market. To estimate approximate leasing costs, regional market forecasts were consulted, where available. Local real estate agents were contacted to supplement and verify this information. Based upon this research, the following are estimated leasing costs per square foot for commercial/industrial buildings in the MSAs under consideration.

Location	Monthly Lease Costs per Square Foot	Annual Building Lease Costs
San Francisco – San Mateo – Redwood City Metropolitan Division MSA	\$1.95	\$257,400
Oxnard – Thousand Oaks – Ventura MSA	\$1.69	\$223,080
Salinas MSA	\$1.00	\$132,000
San Diego – Carlsbad – San Marcos MSA	\$1.61	\$212,520

Not surprisingly, this analysis shows that Salinas is the least expensive area researched, and the Bay Area is the most expensive. As market dynamics and interest rates continue to shift, however, these estimates will likely continue to change.

F. COST ESTIMATES – 10-YEAR FINANCIAL FORECAST

The cost estimates have been consolidated into a 10-year financial forecast encompassing all five campuses (EXHIBIT VII). The cost estimates are based upon the assumptions previously discussed. Construction is assumed to occur in the year prior to a campus opening. Expenses for all campuses are based on costs estimated for the Vallejo-Fairfield location. The only expenses which vary by location are leasing costs. All costs are increased by an inflation factor of 3 percent per year.

As EXHIBIT VII shows, the first campus loses \$784,000 in its first year of operation. Infrastructure costs (as described above) increase costs by \$188,000, leading to a total net loss in Year 1 of \$972,000. Infrastructure costs are broken out as a separate line item because they are a shared cost, not attributable to a single campus. The first campus makes a modest profit beginning in Year 2, which partially offsets costs for constructing the second campus. This trend continues with the remaining campuses, as the growing net income from the older campuses offsets the large start-up expenses associated with opening a new campus.

The campuses begin to make their first profit in Year 8, with total net income of \$340,000. In this model, the campuses make more money the longer they are in operation, both because clinic revenues stabilize and because

computer and dental equipment becomes fully depreciated after 5 and 7 years respectively. Costs for starting and operating the campuses vary because of the effects of inflation and because of differing assumed lease costs.

G. CAPITAL REQUIREMENTS

The capital requirements are calculated on a cash basis. For example, the full cost of the buildout is treated as an expense in Year 0, rather than being depreciated over a 39-year basis. Not surprisingly, capital requirements are highest in the development periods (Years 0, 2, 4, 6, and 8) when start-up costs are incurred. This analysis (EXHIBIT VII) shows that the project will generate positive cash flows in Year 8.

H. SENSITIVITY ANALYSIS

As has been previously discussed, the cost estimates are subject to change and are highly dependent upon the assumptions made. In order to conservatively account for changes, the Consumer Price Index (CPI) was adjusted to scenarios of 4-, 5-, and 6-percent. All other assumed figures were held constant although membership growth and other factors are anticipated to increase in this time period. However, as the estimates for leasing and other costs had to be estimated over a very long time horizon, this conservative model was selected by the task force with the guidance of the CDA Finance staff.

It is important to note that any changes in actual costs may result in an increase or decreased (rebated) member assessment (see following section).

VIII. FUNDING STRATEGY

The task force evaluated several funding strategies. These options were evaluated based upon their cost to the CDA in terms of both financing and administration. In the final analysis, a proposed member dues assessment determined the best funding strategy to support a CDA sponsored dental hygiene school.

MEMBER DUES ASSESSMENT

According to this strategy, every CDA active member would be assessed a fee in addition to their annual dues to cover the capital and operating requirements of the school until it becomes self-sufficient. The dues assessment could be charged either on an annual basis to cover the following year's projected expenses or it could be a onetime fee designed to finance the start-up and operation of all five campuses.

A dues assessment (EXHIBIT VIII) would take into account the costs of construction and operation of five programs over a 10-year period with a new campus occurring every two years, a 6.5 percent interest rate and a total of 14,368 CDA active members. The estimate for the annual assessment over a 10-year period would total \$918 dollars or approximately \$92 per year.

Alternatively, CDA could charge a onetime assessment designed to cover the construction and operation of all five campuses until they become self-sufficient. Assuming there are 14,368 CDA active members, capital requirements as outlined in (EXHIBIT VIII) and a 6-percent discount rate yield a onetime dues assessment of \$706.

The model projects a positive operating income stream within 10-years (all start-up and negative operating costs are funded through the dues assessment until the program is self-sufficient). In this case, the revenue from the program could eventually offset other CDA activities or member dues. However, using such a long-term projection is not a reliable method for determining expected financial return.

IX. INSTITUTIONAL ACCREDITATION

As this business plan unfolded, the key element of accreditation clearly became an area that needed further investigation. Although this was not mandated as part of the House of Delegates resolution, understanding of this issue is imperative to provide a comprehensive look at establishing a CDA-sponsored dental hygiene school.

Outlined in EXHIBIT IX is a summary prepared by task force member, Dr. William Crawford, pertaining to the detailed and complex process of acquiring institutional accreditation. Dr. Crawford authored the 2003 Dental Hygiene Feasibility Study and volunteered to review the process of accreditation on behalf of the task force for this business plan. The summary provides brief reviews of the scope of accreditation/approval activities for four accrediting agencies as well as their requirements and Dr. Crawford's comments following each section.

This summary reveals the complexity of CDA establishing accreditation for a dental hygiene school. To understand this process, it is essential to gain a complete picture of the role that accreditation plays in this proposed endeavor.

X. CONCLUSION

The business plan is not complete without consideration of the projected number of graduating hygiene students. Please see EXHIBIT X. Assuming an 18-month, 24-student program with a 10 percent attrition rate, the total number of graduates from the five campuses at the end of the 10-year period is projected to be 880. Once all five campuses are in operation, 286 students will graduate every two years.

Through the process of preparing this business plan, the task force identified some specific pros and cons of implementing this plan.

Pros:

- The business plan is feasible and responds to the perceived hygiene shortage.
- CDA has a track record of successfully engaging in new and innovative ventures that benefit dentistry.
- The plan provides for statewide geographic equity in its campus locations and admission policies, which helps distribute hygiene graduates throughout most of California.
- The admission policies reflect CDA's mission and are not regulated by mandates such as Title V.
- The financial model shows a potential for profitability in the long term.

Cons:

- The perceived shortage of hygienists may not be concordant with the degree of actual shortage.
- Acquiring institutional accreditation would require significant effort and may be difficult to achieve.
- There may be lost opportunities with such a large and lengthy dues assessment in that other programs/services that become urgent and important to dentistry over the 10-year period would be difficult to engage given the level of financial commitment by active members required for the hygiene school.
- The timeline is lengthy and it is difficult to assume that the many variables in this plan (financial, competitive, etc.) would remain constant over such a protracted time horizon.
- To be financially feasible, this plan requires assessing 100 percent of active members.

The task force presents this business plan with the understanding that the first step must be to obtain institutional accreditation. Whether the 2005 House of Delegates chooses to implement this proposal or not, the efforts that have been directed toward the financial model, site locations, equipment and other logistical issues will be of great value to other institutions (i.e., proprietary and community colleges). The plan can also augment CDA's efforts, through the Accreditation Team, to assist institutions in gaining specialized accreditation for new dental hygiene programs and helping with the process of reaccreditation. The working documents and models supporting all task force findings in the development of this business plan will be made available to the Accreditation Team and component dental societies.

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CALIFORNIA DENTAL ASSOCIATION
DENTAL HYGIENE SCHOOL BUSINESS PLAN

2005 Dental Hygiene Task Force

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CALIFORNIA DENTAL ASSOCIATION
DENTAL HYGIENE SCHOOL BUSINESS PLAN

METROPOLITAN STATISTICAL AREA DEMOGRAPHICS

MSA¹	County(s)¹	Location in State	Population²	Population Density²	Dental Hygiene Schools³	RDH to DDS Ratio⁴
Los Angeles – Long Beach – Glendale Metropolitan Division	Los Angeles	South	9,519,338	2,344	Cerritos College, Pasadena City College, University of Southern California, West Los Angeles College	0.34
Riverside – San Bernardino – Ontario	Riverside, San Bernardino	South	3,254,821	119	Loma Linda University, Riverside Community College, San Joaquin Valley College	0.54
Santa Ana – Anaheim – Irvine Metropolitan Division	Orange	South	2,846,289	3,606	Cypress College, Diablo Valley College	0.55
San Diego – Carlsbad – San Marcos	San Diego	South	2,813,833	670	Southwestern College	0.54
Oxnard – Thousand Oaks – Ventura	Ventura	Central	753,197	408	Oxnard College	0.72
Fresno	Fresno	Central	799,407	134	Fresno City College	0.81
Bakersfield	Kern	Central	661,645	81	Taft College	0.78
Salinas	Monterey	Central	401,762	121		0.63
Santa Barbara – Santa Maria – Goleta	Santa Barbara	Central	399,347	146		0.59
Visalia – Porterville	Tulare	Central	368,021	76	San Joaquin Valley College	0.76
San Luis Obispo – Paso Robles	San Luis Obispo	Central	246,681	75		1.04
Hanford – Corcoran	Kings	Central	129,461	93		1.13
Oakland – Fremont – Hayward Metropolitan Division	Alameda, Contra Costa	North	2,392,557	1,642	Chabot College	0.64
Sacramento – Arden Arcade – Roseville	El Dorado, Placer, Sacramento, Yolo	North	1,796,857	353	Sacramento City College, Western Career College	0.78
San Jose – Sunnyvale – Santa Clara	Santa Clara, San Benito	North	1,735,819	648	Foothill Community College	1.00
San Francisco – San Mateo – Redwood City Metropolitan Division	Marin, San Francisco, San Mateo	North	1,731,183	1,705		0.38
Stockton	San Joaquin	North	563,598	403	University of the Pacific	0.57
Santa Rosa – Petaluma	Sonoma	North	458,614	291	Santa Rosa Community College	0.79
Modesto	Stanislaus	North	446,997	299		0.74
Vallejo – Fairfield	Solano	North	394,542	476		0.57
Santa Cruz – Watsonville	Santa Cruz	North	255,602	574	Cabrillo College	1.52
Merced	Merced	North	210,554	109		0.61
Chico	Butte	North	203,171	124		0.86
Redding	Shasta	North	163,256	43	Shasta College	0.95
El Centro	Imperial	North	142,361	34		0.23
Yuba City – Marysville	Sutter, Yuba	North	139,149	113		0.38
Napa	Napa	North	124,279	165		1.01
Madera	Madera	North	123,109	58		0.90

¹ Source of data is the California Employment Development Department(<http://www.calmis.ca.gov/htmlfile/msa.htm>) .

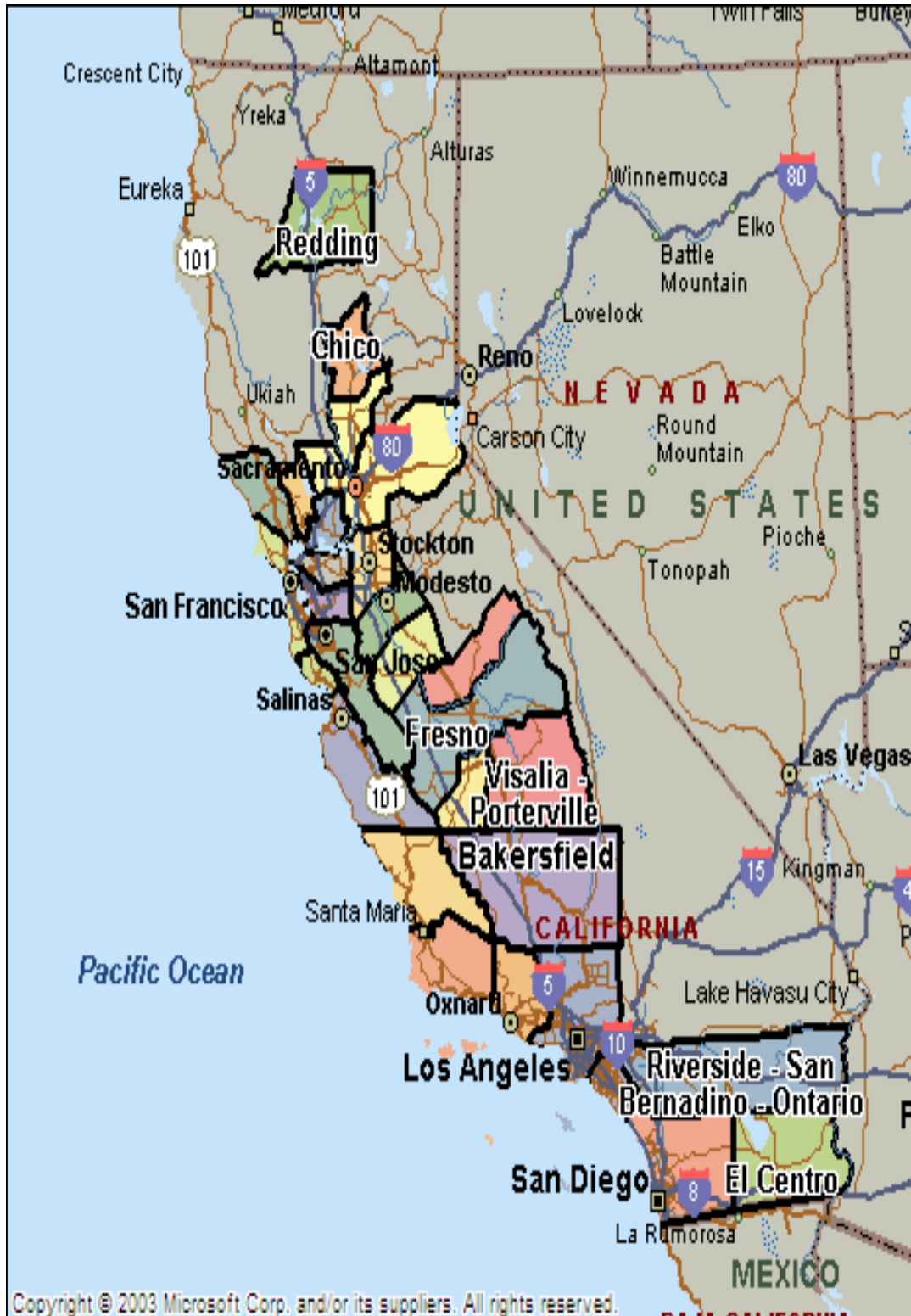
² Source of data is the U.S. Census Bureau, 2000 Census.

³ Per the American Dental Hygienists' Association Web site.

⁴ Estimated by UCLA Center for Health Policy Research. Number of RDHs based upon information from the CDA, October 2002. Number of DDSs excludes ineligible specialties (oral and maxillofacial surgeons, oral and maxillofacial pathologists, oral and maxillofacial radiologists, and public health dentists) and dentists in the licensure board database who were assumed to be not practicing in the state because they were over age 85, lived out of state, had an expired or inactive license, or were retired, deceased, or students.

CALIFORNIA DENTAL ASSOCIATION
DENTAL HYGIENE SCHOOL BUSINESS PLAN

ALL METROPOLITAN STATISTICAL AREAS IN CALIFORNIA



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CALIFORNIA DENTAL ASSOCIATION
DENTAL HYGIENE SCHOOL BUSINESS PLAN

SITES CHOSEN FOR FUTURE DENTAL HYGIENE SCHOOLS



CALIFORNIA DENTAL ASSOCIATION
DENTAL HYGIENE SCHOOL BUSINESS PLAN

PROPOSED COMPONENT GROUPING FOR NOMINATING APPLICANTS

Group	Component	Number of Members¹
Region A	Butte-Sierra District	161
	Humboldt-Del Norte	97
	Northern California	301
	Napa-Solano	297
	Redwood Empire	407
	Southern Alameda County	642
	Sacramento District	1,352
	San Joaquin	363
Subtotal		3,620

Region B	Alameda County	295
	Berkeley	207
	Contra Costa	718
	Marin County	279
	Mid-Peninsula	332
	San Francisco	938
	San Mateo County	553
Subtotal		3,322

Region C	Central Coast	238
	Fresno-Madera	442
	Kern County	260
	Monterey Bay	445
	Santa Clara County	1,453
	Stanislaus	253
	Tulare-Kings	181
	Yosemite	90
Subtotal		3,362

Region D	Santa Barbara-Ventura	724
	San Fernando Valley	1,240
	San Gabriel Valley	862
	Western Los Angeles	953
Subtotal		3,779

Region E	Harbor	760
	Los Angeles	1,040
	Orange County	1,768
Subtotal		3,568

Region F	San Diego County	1,718
	Tri-County	1,533
Subtotal		3,251

Total CDA Membership		20,902
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¹ Based on membership as of 4/1/05.

CALIFORNIA DENTAL ASSOCIATION
DENTAL HYGIENE SCHOOL BUSINESS PLAN

Exhibit VI

Vallejo Campus - Detail Estimate
Proforma Financials - Cash Basis

Key Assumptions:	
Location	Vallejo-Fairfield
Annual clinic revenue	\$ 15,000 (reached by year 5)
CPI annual inflation factor	3.0%
Lease cost per square foot	\$ 1.65
Total building square footage	11,000

	Development Year 2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Revenue														
Tuition		\$590,000	\$948,000	\$976,000	\$1,005,000	\$1,035,000	\$1,066,000	\$1,098,000	\$1,131,000	\$1,165,000	\$1,200,000	\$1,236,000	\$1,273,000	\$1,311,000
Clinic Revenue		-	-	5,000	10,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000
Total Revenue		590,000	948,000	981,000	1,015,000	1,050,000	1,081,000	1,113,000	1,146,000	1,180,000	1,215,000	1,251,000	1,288,000	1,326,000
Expense														
Faculty Salaries & Benefits		\$372,000	\$383,000	\$394,000	\$406,000	\$418,000	\$431,000	\$444,000	\$457,000	\$471,000	\$485,000	\$500,000	\$515,000	\$530,000
Staff Salaries & Benefits		101,000	104,000	107,000	110,000	113,000	116,000	119,000	123,000	127,000	131,000	135,000	139,000	143,000
Building Lease		218,000	218,000	218,000	218,000	218,000	218,000	218,000	218,000	218,000	218,000	218,000	218,000	218,000
Operating Expense		85,000	88,000	91,000	94,000	97,000	100,000	103,000	106,000	109,000	112,000	115,000	118,000	122,000
Other Expense		8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000	8,000
Start-Up Costs:														
Buildout	1,224,000													
Equipment	654,000					50,000					500,000			
Curriculum Development	97,000													
Total Expense	1,975,000	784,000	801,000	818,000	836,000	904,000	873,000	892,000	912,000	933,000	1,454,000	976,000	998,000	1,021,000
Net Income/(Loss)	(\$1,975,000)	(\$194,000)	\$147,000	\$163,000	\$179,000	\$146,000	\$208,000	\$221,000	\$234,000	\$247,000	(\$239,000)	\$275,000	\$290,000	\$305,000
Cumulative Income/(Loss)	(\$2,169,000)	(\$2,022,000)	(\$1,859,000)	(\$1,680,000)	(\$1,534,000)	(\$1,326,000)	(\$1,105,000)	(\$871,000)	(\$624,000)	(\$863,000)	(\$588,000)	(\$298,000)	\$7,000	

**10 Year Proforma Financials - Cash Basis
Summary of Individual Locations**

Location	First Year of Operation
Vallejo-Fairfield	2008
San Francisco-San Mateo-Redwood City	2010
Oxnard-Thousand Oaks-Ventura	2012
Salinas	2014
San Diego-Carlsbad-San Marcos	2016

NEW LOCATION OPENS EVERY 2 YEARS

Annual Financials (\$000's)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Revenues													
Vallejo-Fairfield	\$ -	\$ -	\$ 590	\$ 948	\$ 981	\$ 1,015	\$ 1,050	\$ 1,081	\$ 1,113	\$ 1,146	\$ 1,180	\$ 1,215	\$ 1,251
San Francisco-San Mateo-Redwood City	-	-	-	-	645	1,036	1,072	1,109	1,147	1,181	1,216	1,252	1,289
Oxnard-Thousand Oaks-Ventura	-	-	-	-	-	-	704	1,132	1,171	1,211	1,252	1,289	1,327
Salinas	-	-	-	-	-	-	-	-	770	1,237	1,279	1,322	1,366
San Diego-Carlsbad-San Marcos	-	-	-	-	-	-	-	-	-	-	841	1,352	1,398
Total Revenue	-	-	590	948	1,626	2,051	2,826	3,322	4,201	4,775	5,768	6,430	6,631
Expenses													
Vallejo-Fairfield	\$ -	\$ -	\$ (784)	\$ (801)	\$ (818)	\$ (836)	\$ (854)	\$ (873)	\$ (892)	\$ (912)	\$ (933)	\$ (954)	\$ (976)
San Francisco-San Mateo-Redwood City	-	-	-	-	(899)	(917)	(936)	(955)	(975)	(996)	(1,017)	(1,039)	(1,061)
Oxnard-Thousand Oaks-Ventura	-	-	-	-	-	-	(942)	(962)	(983)	(1,004)	(1,026)	(1,048)	(1,070)
Salinas	-	-	-	-	-	-	-	-	(910)	(932)	(954)	(977)	(1,001)
San Diego-Carlsbad-San Marcos	-	-	-	-	-	-	-	-	-	-	(1,109)	(1,133)	(1,157)
Infrastructure Costs	-	(2)	(188)	(194)	(258)	(267)	(481)	(495)	(573)	(591)	(717)	(737)	(759)
Total Expense	-	(2)	(972)	(995)	(1,975)	(2,020)	(3,213)	(3,285)	(4,333)	(4,435)	(5,756)	(5,888)	(6,024)
Operating Income/(Loss)	\$ -	\$ (2)	\$ (382)	\$ (47)	\$ (349)	\$ 31	\$ (387)	\$ 37	\$ (132)	\$ 340	\$ 12	\$ 542	\$ 607
Start-Up and Refurbishment Costs													
Vallejo-Fairfield	-	\$ (1,975)	-	-	-	-	\$ (50)	-	-	-	-	\$ (500)	-
San Francisco-San Mateo-Redwood City	-	-	-	\$ (2,052)	-	-	-	-	\$ (50)	-	-	-	-
Oxnard-Thousand Oaks-Ventura	-	-	-	-	-	\$ (2,243)	-	-	-	-	\$ (50)	-	-
Salinas	-	-	-	-	-	-	-	\$ (2,450)	-	-	-	-	\$ (50)
San Diego-Carlsbad-San Marcos	-	-	-	-	-	-	-	-	-	\$ (2,677)	-	-	-
Total Start-Up and Refurbishment	-	(1,975)	-	(2,052)	-	(2,243)	(50)	(2,450)	(50)	(2,677)	(50)	(500)	(50)

**Proforma Financials - Cash Basis
DUES ASSESSMENT**

Special Assessment Calculations

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Initial Borrowing @ 6.5%		\$ 1,977											
Debt service on initial borrowing 2yrs		1,053	1,053										
Second Borrowing @ 6.5%				\$ 2,481									
Interest on second borrowing 2yrs				1,321	1,321								
Third Borrowing @ 6.5%						\$ 2,561							
Interest on third borrowing 2yrs						1,364	1,364						
Fourth Borrowing @ 6.5%								\$ 2,850					
Interest on third borrowing 2yrs								1,518	1,518				
Fifth Borrowing @ 6.5%										\$ 2,519			
Interest on third borrowing 2yrs										1,341	1,341		
Annual Debt Service	-	1,053	1,053	1,321	1,321	1,364	1,364	1,518	1,518	1,341	1,341	-	-
Number of members (whole #)	14,368	14,368	14,368	14,368	14,368	14,368	14,368	14,368	14,368	14,368	14,368	14,368	14,368
Annual assessment per member	\$ -	\$ 73	\$ 73	\$ 92	\$ 92	\$ 95	\$ 95	\$ 106	\$ 106	\$ 93	\$ 93	\$ -	\$ -

Annual assessment per member

Year 1	\$ 73
Year 2	\$ 73
Year 3	\$ 92
Year 4	\$ 92
Year 5	\$ 95
Year 6	\$ 95
Year 7	\$ 106
Year 8	\$ 106
Year 9	\$ 93
Year 10	\$ 93
	<u>\$ 918</u>

**One-time special assessment required \$ 706
(Assumes 10 years and 6% discount rate)**

Model assumes CPI = 3% per year

Change in assessment assuming:

	Multi-Yr	One-Time
CPI = 4%	\$ 962	\$ 737
CPI = 5%	\$ 1,017	\$ 775
CPI = 6%	\$ 1,075	\$ 815

Institutional Accreditation:

Background

Outlined in this section is background information pertaining to the process of acquiring accreditation. Although this is not an exhaustive summary, it provides a snapshot of the complex process of CDA establishing accreditation to provide dental hygiene education. William Crawford, D.D.S. authored the 2003 Dental Hygiene Feasibility Study and volunteered to review the process of accreditation the Task Force. He provides a review of four agencies; one regional agency, two national agencies, and the State of California. Brief reviews of the scope of accreditation/ approval activities for each agency as well as the requirements are presented below, with comments following each section.

Institutional Accrediting Agencies

Accrediting Commission for Schools, Western Association of Schools and Colleges

In this regional accreditation agencies portfolio is accreditation of schools below the college level. Included are elementary, junior high, middle, high and adult schools, whether public, private, or church-related. It accredits a host of high schools, many employment training centers, adult schools, and occupational centers. It is the only WASC Commission that might recognize CDA as an educational institution.

WASC Schools Commission Accreditation Requirements¹

To be considered for WASC affiliation, the applicant must meet the following conditions:

1. Be in operation, with students, teachers, and administration
2. Have developed and published clear statement plans for a curriculum to carry out those purposes.
3. Have a properly functioning governing board.
4. Have employed a chief administration officer position.
5. Have an organization, facilities, and course offerings, for the schools stage of development.
6. Have a school plan including objectives for student assessment plans to measure progress toward
7. Have an admissions policy compatible with the school's stated objectives.
8. Offer instruction in all subject areas required by written sequential curriculum appropriate to the school's purpose.
9. Have a qualified instructional staff.
10. Have plans to provide access to appropriate extracurricular enrichment activities.
11. Have developed an adequate financial base to continuing financial stability.

Comments:

It is clear from these requirements that the WASC Schools Commission expects an educational enterprise to be in operation prior to accreditation.

Accrediting Bureau of Health Education Schools (ABHES)

This is a national accrediting agency specializing in health education schools. It accredits Apollo College (formerly the American Institute of Health Technology) that offers a for-profit dental hygiene program in Boise ID. It also accredits an institution in Provo UT that offers dental assisting (DA) and dental laboratory technology (DLT) programs and, apparently, a nascent DH program. Given its track record with accrediting institutions with dental programs and being CODA sanctioned, it is the first national institutional accreditation agency that CDA should approach.

¹ Accreditation Manual: Initial Visit Procedures. Conditions of Eligibility, pg. 7. Western Association of Schools and Colleges Accrediting Commission for Schools, 2004-2005 Edition.

ABHES Accreditation Requirements¹

In order for an institution to apply for accreditation by the Commission and to remain accredited, it must meet the following minimum criteria:

- a) It is (1) an institution in the private sector at the postsecondary level whose principal activity is education, (2) a hospital or laboratory based training school, (3) a vocational institution, or (4) a Veteran Administration (V.A.) hospital, rehabilitation institution, or a federally-sponsored Armed Forces program.
- b) It is an educational institution that offers programs predominantly in the allied health education field. An institution meets this requirement if (1) 70 percent or greater of its full-time equivalent students are enrolled in allied health programs, or (2) 70 percent of its active programs are in the allied health education field, provided that a majority of the institution's full-time equivalent students are enrolled in those programs. A program is active if it has a current student enrollment and is seeking to enroll students.
- c) Its programs are vocational in nature and are designed to lead to employment.
- d) It is located in the United States or its territories.
- e) It has been continuously providing instruction as an institution for at least the prior two years and is properly licensed, chartered, or approved to provide education beyond the secondary level under the laws and regulations of the state or territories in which it is located.
- f) It has enrollment sufficient in the program(s) to be included in the grant of accreditation to allow evaluation of student outcomes (see Chapter IV, Section B).
- g) It has at least one graduating class from the program(s) currently offered and to be reviewed. The number of graduates must be sufficient to determine the overall educational effectiveness of the program(s) of study offered.

Comment:

Requirements "e," "f," and "g" clearly state that the educational program must have been in operation for at least two years and graduated at least one class before eligible for accreditation. Requirement "e" also indicates that State approval is a prerequisite.

Accrediting Commission of Career Schools and Colleges of Technology (ACCST)

This agency accredits over 100 institutions offering DA programs (many at Bryman), a dozen or so institutions offering DLT programs and one that offers a dental radiology program. Given its track record with accrediting institutions with dental programs and being CODA sanctioned, it probably would be willing to look at CDA's credentials as an educational institution.

ACCST Accreditation Requirements²

1. Eligibility

To be eligible for ACCST accreditation, an institution must be legally established, licensed by the appropriate state agency and in compliance with state, federal and local government requirements. To demonstrate financial stability, the school must have been in continuous operation for a minimum of two years prior to application for accreditation and have graduated at least one class of students from its longest program. The primary scope of the training offered by the institution must be vocational in nature.

Comments:

Similarly, ACCST, in its brief statement, requires that an educational enterprise be in operation for two year and have graduated one class prior to accreditation.

¹ Accrediting Bureau of Health Education Schools (ABHES). Accreditation Manual, 12th Edition, pg 15.

² The Accrediting Process: The Steps of the Accrediting Process. Accrediting Commission of Career Schools and Colleges of Technology. ACCST Web Site: http://www.accst.org/getting/get_mainframe.html.

State of California Approval

All matters relating to education in the State are included in the Education Code. This is a huge document covering the details of education at all levels. Sections 94700-94999¹ cover private postsecondary and vocational education, sections that seem to apply to CDA if it should become an educational institution and seek State approval.

Approval Requirements in the Education Code

Section 94800.

All institutions approved under this chapter shall be maintained and operated, or in the case of a new institution, shall demonstrate that it will be maintained and operated, in compliance with all of the following minimum standards:

- a) That the institution is financially capable of fulfilling its commitments to its students.
- b) That upon satisfactory completion of training, the student is given an appropriate degree, diploma, or certificate by the institution, indicating that the course or courses of instruction or the program or programs of instruction or study have been satisfactorily completed by the student.
- c) That the institution provides instruction as part of its educational program. Instruction shall include any specific, formal arrangement by an institution for its enrollees to participate in learning experiences wherein the institution's faculty or contracted instructors present a planned curriculum appropriate to the enrollee's educational program.

Section 94802.

- a) Each institution desiring to operate in this state shall make application to the bureau, upon forms to be provided by the bureau. The application shall include, as a minimum, at least all of the following:
 1. A catalog published, or proposed to be published, by the institution containing the information specified in the criteria adopted by the bureau. The catalog shall include specific dates as to when the catalog applies.
 2. A description of the institution's placement assistance, if any.
 3. Copies of media advertising and promotional literature.
 4. Copies of all student enrollment agreement or contract forms and instruments evidencing indebtedness.
 5. The name and California address of a designated agent upon whom any process, notice, or demand may be served.
 6. The information specified in Section 94808.
 7. The institution's most current financial report as described in Section 94806.
 8. An application submitted by a non-WASC regionally accredited institution, as defined in Section 94740.5, shall include a copy of the certificate of accreditation issued by the non-WASC regional accrediting agency, as defined in Section 94740.3.
- b) Each application shall be signed and certified under oath by the owners of the school or, if the school is incorporated, by the principal owners of the school (those who own at least 10 percent of the stock), or by the corporate officers or their designee.
- c) Following review of the application and any other further information submitted by the applicant, or required in conformity with Article 8 (commencing with Section 94900) and Article 9 (commencing with Section 94915), and any investigation of the applicant as the bureau deems necessary or appropriate, the bureau either shall grant or deny approval to operate to the applicant.

Comments:

The excerpts presented above are just a few of a large number of Sections in the Educational Code covering private postsecondary education; there may be others that may require a different interpretation. Based in these excerpts, it seems that State approval is meant to precede starting operation of an educational organization. The opening paragraph in Section 94800 gives credence to this interpretation: "...or in the case of a new institution, shall demonstrate that it will be maintained and operated, in compliance with all of the following minimum

¹ Accessed through <http://www.leginfo.ca.gov/> under "California Law."

standards...”. On the other hand, paragraph 8 in Section 94802a implies that institutional accreditation is required - a Catch-22. The Code creates a body to evaluate and approve applications from private postsecondary organizations. It is the Bureau of Private Postsecondary and Vocational Education (BPPVE) housed in the Department for Consumer Affairs. Its website is located at <http://www.bppve.ca.gov>. Its data base provides listings of degree-granting, non-degree-granting, and religious-exempt institutions. A dozen application forms are also included in the site. Of these the “Agent Permit” and “Certificate of Authorization for Service” are of most immediate interest.

Accreditation: An Overview

In Dr. William Crawford’s 2003 Feasibility Study, included was a description of the accreditation gauntlet through which CDA must run. The proposed path of accreditation includes:(1) State Approval, (2) Institutional Accreditation, (3) CODA accreditation, and (4) California Dental Board approval. Excerpts to follow from Dr. Crawford’s report provide insight in to the process of accreditation.

Trends in the Accreditation Process

The accreditation process requires preparation of lengthy and detailed reports. After submission, an evaluation team visits the institution and subsequently reports its findings to the institution.

Usually the initial report follows a format developed by the accrediting organization. In the past, the format required specific responses to very general questions or information requests. In providing this information the institution often felt as if the accrediting organization was dictating the missions and goals of the educational institutions. Now, the institution is usually required to conduct a “self-study” and respond to accreditation standards in the context to its mission statement and expressed (written) goals.

The on-site visiting team is typically composed of “experts” in the field. If the institution is large and complex (like a university) the team is also large and complex: experts in a number of academic and administrative areas (e.g., liberal arts, sciences, administration, finance, etc.).

Accreditation organizations assess educational processes, like faculty development, budget procedures, and classroom teaching. In recent years, coupled with the notion of “self-study,” focus is increasingly directed to assessment of “outcomes.” The idea is, the institution, through its self-study determines how well it meets its stated mission and educational goals by demonstrating measurable, unambiguous outcomes (e.g., employment figures, licensing examination results, and faculty publications).

The Federal Role in Accreditation

American educational institutions have a long history of examinations by outside agencies. The general purpose of these examinations is to insure that minimum standards exist and to insure general equivalency of resources, facilities, and educational processes regardless of the institution’s location.

At first, accreditation, as external examinations came to be known, were voluntary. Now they are required to meet federal requirements governing distribution of federal funds for, for example, student aid and research. This federal role is supervised by U.S. Department of Education.

While the Department maintains overall control, it does not actually perform accreditation examinations. Rather, it publishes a list of accrediting agencies it considers as “reliable authorities” to conduct examinations of programs in its professed field of expertise. Some of these approved agencies conduct examinations of educational institutions while others conduct examinations of specialized programs within educational institutions. The ADA’s Commission on Dental Accreditation (CODA) is the approved specialized accreditation agency for dental hygiene education. The institutions conducting hosting dental hygiene programs are also examined by an approved accrediting organization (institutional accreditation).

Approval by the State of California

The law covering private postsecondary schools was enacted in 1989 under the title of “The Private Postsecondary and Vocational Education Reform Act of 1989.” Among many other things, the law

establishes a “Bureau for Private Postsecondary and Vocational Education within the Department of Consumer Affairs (94770). The Director of Consumer Affairs is charged with “administering and enforcing” the law under Chapter 7 (94771.a). Section 97405.i describes, in general terms, the roles and functions of the Bureau.

The intent of the law governing private postsecondary education is covered in section 97405: It is the intent of the Legislature to promote the effective integration of private postsecondary education into all aspects of California's educational system and to foster and improve the educational programs and services of these institutions while protecting the citizens of the state from fraudulent or substandard operations. (97405).

While integration and protection are important parts of the Bureau’s mandate, so is recognition of the important role of private postsecondary education in the state:

It is further the intent of the Legislature to recognize the enormous diversity of California's private postsecondary educational enterprise, with its approximately 2,300 privately supported institutions of academic and vocational education. (97405).

Program Approval

The law clearly states that all new private postsecondary schools must be approved (by the council) prior to operation (94780). Applications to develop a private postsecondary academic program are reviewed by the council:

Each institution desiring to operate in this state shall make application to the council, upon forms to be provided by the council. The application shall include, as a minimum, at least all of the following: (94802.a).

As part of the review process, the council is authorized to perform on-site evaluations before and after granting approval to new programs (94901.a). After approval, the council is further authorized to conduct announced or unannounced follow-up visits (94774.5.b). A fee is charged the applying institution; additional annual fees should be expected. The fee schedules are to be published and made available to the public (94772, 94932.c.1, 94932.c.3).

Degrees

The law authorizes approved institutions to offer degrees. The general criteria are presented in Article 8 (“Standards and Evaluation Procedures for Degree-Granting Institutions”: 94900-94905). The law seems to encourage granting degrees:

That upon satisfactory completion of training, the student is given an appropriate degree, diploma, or certificate by the institution, indicating that the course or courses of instruction or the program or programs of instruction or study have been satisfactorily completed by the student (94800.b). [26]

The law also seems to encourage articulation of degrees between private and public institutions:

Ensuring minimum standards of instructional quality and institutional stability for all students in all types of institutions, and thereby encouraging the recognition by public and private institutions of completed course work and degrees and diplomas issued by private institutions, to the end that students will be provided equal opportunities for equal accomplishment and ability. (97405.a).

If that interpretation proves to be correct, public educational institutions should recognize the degree granted by a CDA-owned program. That means, for example, a CDA Associate’s degree should be honored if a graduate subsequently enters a public college to earn the baccalaureate degree.

It was especially surprising and gratifying that the Code recognizes and seemingly encourages distance learning and other non-traditional educational modalities. For example, under Article 2 (definitions) is the following:

“Correspondence school” or “home study school” means any institution that provides correspondence lessons for study and completion by a student at a location separate from the institution, including those institutions that offer that instruction by correspondence in combination with in-residence instruction (94723).

In fact, it seems that the council may intercede on behalf of an approved institution if some private accrediting body balks at programmatic innovations:

Recognizing and encouraging quality nongovernmental accreditation, while not ceding to that or any other nongovernmental process the responsibility for state oversight for purposes of approval, if the accreditation process fails either to protect minimum standards of quality or to acknowledge legitimate innovative methods in postsecondary education. (97405.h).

Further, the council will take innovations into account when assembling a visiting committee to evaluate a new program:

When evaluating an institution whose purpose is to advance postsecondary education through innovative methods, the visiting committee shall comprise educators who are familiar with, and receptive to, evidence bearing on the educational quality and accomplishments of those methods (94901.d).

Institutional Accreditation

The U.S. Office of Education recognizes a number of agencies to act on its behalf to evaluate and accredit educational institutions. These approved agencies, some regional and others national, evaluate and accredit public and private universities, public and private colleges, and many specialized private academies and institutions. While it is obvious that universities and community colleges are accredited it may be surprising that many small private for-profit enterprises are accredited as well; some examples will be presented in a following paragraph.

Specialized accrediting organizations, like CODA, require the parent institution to be accredited before they will evaluate a program within it. In most institutions, like universities and community colleges, accreditation is taken for granted and therefore is of only small concern to CODA when it visits a dental hygiene program.

If, however, CDA should choose to offer a dental hygiene program, institutional accreditation will cause CODA significant concern.

Of those listed, it is possible that one of WASC commissions might agree to accredit a CDA dental hygiene program. Among the others is the Accrediting Bureau of Health Education Schools (ABHES). As presented in its web site, this agency states as its first objective:

To serve as a nationally recognized accrediting agency of health education institutions and those offering specialized medical laboratory technician and medical assistant education programs (<http://www.abhes.org/overview.asp>).

The ABHES is the accrediting agency that approved the American Institute of Health Technology (AIHT) of Boise, Idaho, a private, for-profit educational organization. The AIHT offers a dental hygiene program that has recently won CODA approval. The dental hygiene program offers the associate's degree and has a first year tuition of \$11,800.

Specialized Accreditation (Commission on Dental Accreditation - CODA)

For over sixty years the ADA has been responsible for accrediting dental educational programs. For the first 35 years an ADA council, the Council on Dental Education, carried out accreditation functions. In 1975, anticipating changes in national attitudes about "inclusiveness," a separate agency, renamed the Commission on Dental Accreditation, was established. This new agency of the ADA included among its membership a representative of the American Dental Hygienists' Association (ADHA) as well as representatives of specialty organizations and representatives of the lay public. CODA is recognized by the U.S. Office of Education to accredit basic programs in dentistry and its related disciplines.

In its Statement of General Policy, CODA lists its basic functions pertaining to dental hygiene education:

- Evaluates dental hygiene education programs on the basis of the extent to which program goals, institutional objectives and approved accreditation standards are met;
- Supports continuing evaluation of and improvements in dental hygiene education programs through institutional self-evaluation;
- Encourages innovations in program design based on sound educational principles;
- Provides consultation in initial and ongoing program development.

As CDA contemplates initiating a dental hygiene program, it is reassuring that CODA “encourages innovations in program design” and “provides consultation” during program development. It is also clear that CODA embraces the process of “self-study” or “self-evaluation” (as CODA puts it). This is important because coupled with its first stated policy, institutions are evaluated in the context of their own, not CODA’s, goals and objectives; this evaluation is carried by a self-study created by the institution. These statements seem to encourage institutions or organizations in nontraditional settings to carry out non-traditional programs as long as it has clearly articulated educational goals and objectives (and meets CODA’s accreditation standards).

CODA inherited accreditation “standards” from the Council on Dental Education. These were not standards as currently defined; rather, many were vague, open to varying interpretations, and constituted a “black box” for the examined institutions. In the late 1980s the accreditation guidelines were rewritten as “minimums” that all institutions were to fulfill regardless of their setting, their goals, and their objectives. These “minimums” were to be clear and unambiguous—they now qualified as “standards.” CODA offers the following definition of “standards”:

Offers a rule or basis of comparison established in measuring or judging capacity, quantity, quality, content and value; criterion used as a model or pattern.

There are six categories of standards and 50 specific ones in the accreditation requirements for dental hygiene educational programs. Most of them pertain to the details of managing and delivery of an academic program (e.g., general content areas, basic course design, and student competencies). These and other similar ones will guide the development of a dental hygiene program if CDA chooses to create one. There are, however, a couple of standards that have bearing on the feasibility of CDA establishing a dental hygiene educational program. The first is institutional accreditation (Standard 1-3). This standard states that

Programs must be sponsored by institutions of higher education that are accredited by an institutional accrediting agency (i.e., a regional or appropriate national accrediting agency) recognized by the United States Department of Education for offering college-level programs.

At first reading, this standard seemed to preclude CDA developing a self-owned (proprietary) dental hygiene program; however, as has already been presented, California has many private vocational programs that have earned institutional accreditation.

The second is standard 2-5; it states that

The curriculum must include at least two academic years of full-time instruction or its equivalent at the postsecondary college-level. The scope and depth of the curriculum must reflect the objectives and philosophy of higher education. A college catalog must be submitted listing degree awarded, course titles and descriptions.

In a two-year college setting, the graduates of the program must be awarded an associate degree. In a four-year college or university, the graduates of the program must be awarded an associate degree, certificate, or a baccalaureate degree.

The first part of this standard implies that dental hygiene must be two academic, not calendar years in length. While the definitions differ from institution to institution, an academic year usually consists of two 15-week semesters, three 12-week quarters, or two 15-week trimesters. In other words, an academic year is about 30- 35 weeks long. The statement of intent accompanying this standard allows considerable flexibility:

However, the curriculum may be structured to allow individual students to meet performance standards specified for graduation in less than two academic years as well as to provide opportunity for students who require more time to extend the length of their instructional program.

Standard 2-5 references conferment of degrees. It seems to state that community college (two-year institutions) must offer the associate’s degree but that in a university more leeway is given. Since the standard and its statement of intent does not reference non-college and non-university programs an interpretation of this standard as it applies to a proprietary CDA program needs to be sought.

State Licensing Board Approval (California Board of Dental Examiners)

California's Dental Practice Act in the California Code of Regulations has a brief section devoted to approval of dental hygiene programs (Pages 271-274, 1119; 1072 and 1072.1). Generally, the approval requirements are in consonance with CODA standards. However, there are five differences worth noting now.

First, it is necessary to formally seek approval of the California Board of Dental Examiners (Board) prior to operation of a new dental hygiene program (1072, c). Second, a high school diploma or GED is the minimum entrance requirement of a dental hygiene program (1072.1, c, 1). Third, entrance into an "accredited college of liberal arts" seems to be required. However, the Code goes on to define a college of liberal arts as an

"An accredited college of liberal arts shall mean an institution approved by the Association of American Universities or by one of the regional accrediting agencies."

While CDA would not qualify as a "college of liberal arts," it might be accredited by a regional accrediting agency (1072.1, c, 2). Fourth, the Code states a dental hygiene program

"...Must meet the test of a true university discipline and shall include lectures, laboratory experiments and exercises and clinical practice under supervision."

A "true university" is further defined

"As providing instruction at the level offered in approved dental schools."

These statements probably refer to a level of instruction offered in dental hygiene programs and not DDS programs in approved dental schools. The "shall include" statement in this requirement probably provides enough flexibility to develop a non-traditional program; that is, there will no doubt be some lectures, and, certainly supervision of clinical practice. The prerequisite sciences would probably fulfill the requirement for "laboratory experiments." (1072.1, d, 1).

Fifth, the Board requires three content areas not required by CODA: periodontal soft tissue curettage, administration of local anesthesia, and administration of nitrous oxide. CODA does not require these content areas because dental hygienists are not allowed to perform them in most states (1072.1, g, 4).

Sixth, while CODA avoids any mention of required number of clock hours, the Board requires that dental hygiene programs be "not less than 1,600 clock hours." No doubt, this requirement has not been revised for decades; however, the issue is probably moot since all modern programs greatly exceed 1,600 hours (1072.1, h).

Finally, there is a discrepancy between two requirements in the Code. Toward the beginning, it states that the program should lead to an associate's or higher degree (1072, a). However, later on it states that the educational program should lead to a certificate (1072.1, h). Given this and CODA's discrepancy on the same issue, it seems that CDA program could offer a certificate and be in compliance with both the Board and CODA.

Conclusions

From all that has been presented in the two reports on institutional accreditation, it is clear that somehow, CDA must first establish its role as an educational enterprise.

Once it establishes this role, the CDA should pursue State approval via the Department of Consumer Affairs' (DCA) Bureau for Postsecondary Professional and Vocational Education (BPPVE). CDA has a successful track record working with the Sacramento bureaucracies. Perhaps an initial probing contact could be made at the BPPVE with those experienced at dealing with the DCA. State approval seems to be the first accreditation step.

Given that all the institutional accrediting agencies require educational organizations to be in operation for two year and to graduate one class prior to an accreditation visit, the CDA would need to, after State approval, to meet these requirements. Institutional accreditation precedes accreditation by the ADA's Commission on Dental Accreditation. Finally, once CODA aggregation is achieved, Board of Dental Examiners' approval need be obtained. These steps are summarized below:

- State approval (DCA's BPPVE)

- Institutional accreditation (WASC School's Commission, ABHES, or ACCSSCT)
- CODA accreditation
- California Dental Board approval

In conclusion, it needs to be determined whether it is appropriate or whether it is realistic for CDA to enter the business of education at a level sufficient to gain recognition as an bona fide educational institution. Recent efforts have been directed toward financial, location, and equipment and other logistic issues. These will be most helpful if CDA decides to establish an educational organization. If not, these efforts may be of value to other institutions (i.e., community and proprietary colleges) and augment CDA's efforts to assist these institutions in gaining specialized accreditation (CODA) for new dental hygiene programs.

PROJECTED NUMBER OF GRADUATING HYGIENE STUDENTS

Numbers Graduated

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Vallejo-Fairfield	-	-	-	22	44	22	22	44	22	22	44	22	22
San Francisco-San Mateo-Redwood City	-	-	-	-	-	22	44	22	22	44	22	22	44
Oxnard-Thousand Oaks-Ventura	-	-	-	-	-	-	-	22	44	22	22	44	22
Salinas	-	-	-	-	-	-	-	-	-	22	44	22	22
San Diego-Carlsbad-San Marcos	-	-	-	-	-	-	-	-	-	-	-	22	44
Annual Graduations	-	-	-	22	44	44	66	88	88	110	132	132	154
Cumulative Graduations	-	-	-	22	66	110	176	264	352	462	594	726	880

Graduation Model

18 month program

Programs start 9 months apart

24 students

10% attrition = 22 graduate

	Start	End	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
1st class	Jan-08	Jul-09				22									
2nd class	Sep-08	Mar-10					22								
3rd class	Jun-09	Dec-10					22								
4th class	Mar-10	Sep-11						22							
5th class	Dec-10	Jun-12							22						
6th class	Sep-11	Mar-13								22					
7th class	Jun-12	Dec-13								22					
8th class	Mar-13	Sep-14									22				
9th class	Dec-13	Jun-15										22			
10th class	Sep-14	Mar-16											22		
11th class	Jun-14	Dec-15											22		
12th class	Mar-15	Sep-16												22	
13th class	Dec-15	Jun-17													22
14th class	Sep-16	Mar-18													
15th class	Jun-17	Dec-18													
16th class	Mar-18	Sep-19													
17th class	Dec-18	Jun-20													
			0	0	0	22	44	22	22	44	22	22	44	22	22