Delaware Health Care Commission

Dental Care Access Improvement Committee

Report and Recommendations

to the

Delaware Health Care Commission

March 2, 2000

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Delaware Health Care Commission
Dental Care: Access Improvement Project

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Executive Summary

Delaware Health Care Commission
Dental Care Access Improvement Committee

Background
Individuals, community organizations, legislators and state agencies have been working to improve access to dental care services for some time.

One notable event was a public hearing held by the Senate Health and Social Services Committee, chaired by Senator Patricia M. Blevins (D-Elsmere), in the spring of 1997. The hearing was prompted by heightened community concern about the supply of dentists in downstate Delaware and inadequate access to services, particularly among the poor.

On January 8, 1998, Senator Blevins requested the Delaware Health Care Commission (hence forward, the Commission) to conduct a review of the Delaware Institute of Dental Education and Research (DIDER) to determine its role in the provision of dental care to Delawareans.

Simultaneously, the Department of Health and Social Services was working with Dental Health Administrative and Consulting Services (DHACS), Inc. to study access to dental care for Medicaid and other recipients of health services provided by the state.

Recognizing the seriousness of the problems in both the Medicaid and general populations, and the need to bring all parties together to develop workable solutions, the Commission in the fall of 1998 included this project in its multifaceted strategic plan designed to promote accessible, affordable, quality health care for all Delawareans.

To conduct the project, the Commission formed a committee that would reflect a balance of perspectives and include representation from groups already examining the wide array of factors impacting dental care access in Delaware. Lois M. Studte, R.N. chaired the committee.

The Committee conducted its work in two phases. Phase One was devoted to fact finding comprised of research and presentations. Phase Two was devoted to consensus building and developing recommendations.
This report reflects the culmination of this effort. It presents key findings and recommendations for improving access to needed dental health care services in Delaware. A review of the original stated purposes for DIDER, combined with new ideas on how DIDER could function more effectively is a key component of this report. Equally important are more general recommendations for improving the effectiveness of public health and the private sector in meeting Delaware’s dental health care needs.

DIDER – The Delaware General Assembly in 1981 enacted legislation establishing the Board of Trustees of the Delaware Institute of Dental Education and Research as a state agency. Since its creation, DIDER has functioned as a funding conduit between the state of Delaware and the general practice residency program at Christiana Care Health Systems, Inc. (previously the Medical Center of Delaware). The residency program provides post-graduate dental training consistent with a provision in Delaware law which requires one year of general practice residency training in a hospital as a condition of licensure.

DIDER's Statutory Purposes
Title 14, Chapter 88, of the Delaware Code establishes the statutory purposes of the Delaware Institute of Dental Education and Research. The purposes set forth are to support, encourage, and promote:
1. Accredited general practice residencies in dentistry at any general hospital in the State that will provide a comprehensive post-graduate training program pursuant to the requirements of Chapter 11 of Title 24.¹
2. Expansion of opportunities for Delaware residents to obtain post-graduate dental training.
3. A strengthening of the factors favoring the decision of qualified dental personnel to practice in Delaware.
4. Dental needs of the community at large and particularly those who do not have ready access to dental programs.

¹ Delaware Code: Dentistry and Dental Hygiene
Committee Recommendations
At A Glance

DIDER Purposes and Administration
• Place the administration of the Delaware Institute of Dental Education and Research within the offices of the Delaware Health Care Commission to allow it to function in a manner that serves its broad public purpose and functions in concert with DIMER and other state health care policy activities.
• Examine overall Board composition to ensure its structure reflects Delaware’s broad dental care needs. In particular, create a position on the DIDER Board of Trustees for the state dental director.
• Support the expansion of opportunities for Delaware residents to obtain dental education and training -- at all levels.

Resources
• DIDER’s statute anticipates multiple purposes for the organization, yet its administrative and financial resources limit its activities to only one purpose -- support for a hospital-based general practice residency training program for dentists. DIDER can plan a pivotal role in implementing many of the recommendations contained in this report, but cannot do so without additional resources -- both financial and administrative. These include:
  ➢ Attracting needed dental care personnel (dentists and dental hygienists) to Delaware.
  ➢ Providing enhanced education opportunities to Delawareans interested in pursuing dental care careers, and
  ➢ Improving access to dental care services, particularly for the underserved.

Residency Training
• Explore expanded opportunities for dental school graduates to obtain general practice residency training in Delaware, and thereby meet Delaware’s licensure requirements. In particular, explore the feasibility of developing programs at satellite sites or through partnerships with local dental schools and hospitals.

Recruitment
• Develop comprehensive recruitment campaign, possibly with DIDER as the coordinator, to market benefits and opportunities of practicing in Delaware to all needed qualified personnel. The recruitment campaign should take into consideration the racial, linguistic and cultural composition of the targeted underserved population and, to the extent possible, seek to recruit dental care providers representative of the targeted population.

In particular, consider testing new, creative recruitment approaches for underserved areas on a pilot project basis. Examples include:
- Loan repayment programs designed to attract dental personnel to Delaware’s underserved areas.
- Programs of financial assistance for capital costs of establishing a dental practice in underserved areas as a recruitment tool.
- Preceptorship and reciprocity programs under which dentists can practice in underserved areas in lieu of hospital-based residency training as a condition of licensure.

As envisioned by the Committee on Dental Care Access Improvement Committee’s Subcommittees on Reciprocity and Preceptorship, both programs would initially be implemented on a pilot project basis. If successful, the programs could be extended.

In general terms:

The reciprocity program would offer provisional licensure by credentials for dentists licensed in other states who have a certain amount of practical experience. These dentists could practice general or pediatric dentistry for a period of time (i.e. two years) in an underserved area in lieu of the state’s one-year general practice residency requirement as a condition of licensure.

The preceptorship program would be available to dentists who are Board eligible in Delaware. These requirements would include graduation from an accredited dental school and passage of the dental national board examination with an acceptable score. Dentists qualified under this program could practice general practice or pediatric dentistry for a period of time (i.e. two years), under the direct supervision of a Delaware fully licensed dentist in an underserved area in lieu of the state’s one-year general practice residency requirement as a condition of licensure.

Under both programs, participating dentists would be required to pass the Delaware clinical exam within a specified time frame. An “oversight board” would be created to facilitate administration of the programs.

- Provide competitive salaries for public health dentists and dental hygienists.

Access
- Increase the number of dental hygienists in public health clinics.
- Explore extending hours of operations for public health and other dental clinics (Wilmington Hospital) or staggering hours to provide evening and weekend care.
- Allow dental hygienists to practice under the general supervision of the state dental director in select environments – i.e., schools, mobile health vans, Federally Qualified Health Centers, nursing homes.
Licensure – Dentists and Dental Hygienists

- Reduce practice experience required in lieu of residency requirement as a condition of licensure from five years to three years.
- Eliminate provision in Delaware code pertaining to experience as a dental officer in the armed forces in lieu of 1-year residency requirement.
- Enforce existing law\(^2\) granting reciprocity to qualified dental hygienists licensed in other states.
- Eliminate current law requirement that dental hygienists complete an internship as a condition of licensure.
- Permit dental hygienists to practice under the general supervision of the state dental director in select environments – i.e., schools, Federally Qualified Health Centers, nursing homes.
- Take action on agreed upon strategies. If, after an appropriate period of time (3 years) improvements in access are not achieved, revisit Delaware licensure issues related to the Delaware clinical examination.
- Continue administering Delaware clinical exam for dentists 2 times a year.
- Administer dental hygiene exam 2 times a year.

\(^2\) Title 24 Delaware Code Annotated, Chapter 11, Section 1153.
Recommendations Requiring Legislation

Amend DIDER legislation (Title 14, Chapter 88) to:

- As recommended by the DIDER Board, place the administration of the Delaware Institute of Dental Education and Research within the offices of the Delaware Health Care Commission to allow it to function in a manner that serves its broad public purpose and functions in concert with DIMER and other state health care policy activities.

- Examine overall Board composition to ensure its structure reflects Delaware’s broad dental care needs. In particular, create a position on the DIDER Board of Trustees for the state dental director.

- Amend statutory purposes to “support, encourage and promote
  1) Accredited general practice residencies in dentistry at any general hospital in the State that will provide a comprehensive post graduate training program pursuant to the requirements of Chapter 11 of Title 24.”
  2) Expansion of opportunities for Delaware residents to obtain dental education and training at all levels.
  3) A strengthening of the factors favoring the decision of qualified dental personnel to practice in Delaware (e.g., economic incentives such as loan repayments).
  4) Dental needs of the community at large and particularly those who do not have ready access to dental care.

Amend Delaware Dental and dental hygienists licensure law (Chapter 11, Delaware Code, Dentistry and Dental Hygiene):

- Reduce practice experience required in lieu of residency requirement as a condition of licensure for dentists from five years to three years.

- Encourage preceptorships and reciprocity for dentists who practice in underserved areas in lieu of hospital-based residency training as a condition of licensure.

- Eliminate provision in Delaware code pertaining to experience as a dental officer in the armed forces in lieu of hospital-based residency requirement.

- Eliminate current requirement that dental hygienists complete an internship as condition of licensure.

- Permit dental hygienists to practice under the general supervision of the state dental director.
FINDINGS AND RECOMMENDATIONS
Findings and Recommendations

DIDER’s Purposes

The findings and recommendations that follow address each the following policy questions:

1. Does the purpose continue to be a legitimate purpose of DIDER?
2. How is DIDER accomplishing this purpose?
3. Are there shortcomings in the purpose or strategy for meeting it?
4. Are there additional activities DIDER could undertake to meet this purpose?

DIDER Purpose #1:
Support, encourage and promote “accredited general practice residencies in dentistry at any general hospital in the State that will provide a comprehensive post graduate training program pursuant to the requirements of Chapter 11 of Title 24.”

Findings
This continues to be a legitimate purpose of DIDER. Delaware requires one-year of post graduate training in a general practice residency program as a condition of licensure. The program at Christiana Care Health System, which is partially funded by DIDER, increases the opportunity for graduate dentists to receive that training. DIDER accomplishes this by providing financial support to the accredited general practice dental residency program at Wilmington Hospital, Christiana Care Health System (CCHS).

Although the purpose is sound, there are shortcomings in DIDER’s current strategy for meeting this purpose. There is only one residency program and it is based at Wilmington Hospital, which is located in urban Wilmington, New Castle County. At times, residents do rotate out to Delaware Psychiatric Center and the dental clinic at DelTech’s campus in Wilmington Campus. However, residents are not exposed to the practice of dentistry in southern Delaware, nor are they exposed to the practice of dentistry in non-institutional settings where most general and preventive dental care is provided. It is well recognized that residents tend to establish their practices near the site of their residency training. There is no opportunity for the residents at the CCHS program to gain exposure to the dental community and lifestyle of southern Delaware, where the most severe shortages of dentists exist.

Additional activities DIDER could undertake to meet this purpose include, but are not limited to:
• Developing satellite training programs. In particular, explore opportunities for partnerships among local dental schools and hospitals.
• Recommending clinical rotations of the residents at CCHS with preceptors and/or public health clinics in Kent and Sussex Counties or Federally Qualified Health Centers.
• Development of preceptorships in which a new dentist can practice in underserved areas under the supervision of a licensed dentist in lieu of hospital based residency training.

In developing such programs the following factors are important to keep in mind:
• Program accreditation – Bona fide graduate training programs must be accredited by the Commission on Dental Accreditation, American Dental Association.
• Costs and manpower requirements associated with residency training are significant; the cost issue will be exacerbated by the impact of the federal Balanced Budget Act on graduate medical education.

Recommendations, Purpose #1:
1. DIDER Purpose No. 1 is a legitimate purpose and should be retained.
2. Explore expanded opportunities to obtain residency training. Specifically, DIDER should explore the feasibility of developing residency programs at satellite sites.
3. Explore development of preceptorships and reciprocity under which a new dentist can practice in underserved areas under the supervision of a licensed dentist in lieu of hospital-based residency training licensure requirement.
DIDER Purpose #2
Support, encourage and promote “opportunities for Delaware residents to obtain post-graduate dental training.”

Findings
This continues to be a legitimate purpose of DIDER because Delaware requires post graduate dental training as a condition of licensure it is appropriate for Delaware to provide an opportunity for Delawareans to receive that training. DIDER accomplishes this purpose by giving preference to qualified Delaware residents who apply to the general practice residency program over qualified applicants from other states.

However, training opportunities should not be limited to dentists or to post-doctorate training. Health care professionals often return to their home state to practice after their training. Increasing the number of Delawareans who enter dental school or train to become dental hygienists, may help improve our workforce supply – particularly if other incentives were in place.

Additional activities DIDER could undertake to meet this purpose include exploring activities in the following areas:
- Southern Regional Education Board (SREB) as a tool to provide an enhanced opportunity for Delawareans to attend dental school. SREB’s Regional Contract Program provides better access to affordable training in the field of dentistry. Under the program, states pay fees to purchase seats at public schools, and students pay lower state-resident fees.
- Relationships with dental schools in Pennsylvania that would improve opportunities for Delawareans to attend dental school
- Financial support (tuition) and other funding to support training in oral health professions

Recommendation, Purpose #2
1. The purpose is valid and should be expanded to encourage Delaware residents to pursue dental careers.
2. The purpose should be amended to read:
   Support, encourage and promote “expansion of opportunities for Delaware residents to obtain post-graduate dental education and training at all levels.”
DIDER Purpose #3
Support, encourage and promote “a strengthening of the factors favoring the decision of qualified dental personnel to practice in Delaware.”

Findings
This continues to be a legitimate purpose of DIDER. There continues to be a shortage of dentists in some areas of the state, particularly in Kent and Sussex Counties. DIDER could play a role in helping the state meet its dental workforce needs.

Overall, dentists tend to establish their practices near the site of their residency training. Residents who obtain residency training at a program in Delaware (which received financial support from DIDER) are more likely to locate in Delaware than if they received their training in another state. It is generally acknowledged, however, that a lack of resources – both financial and staff – has prevented DIDER from emphasizing activity under this statutory purpose. The current strategy does not provide incentives to practice in underserved areas. Because of resource limitations, DIDER is able to employ only one strategy to fulfill this statutory purpose. Therefore, activities are not multi-dimensional.

Subject to the provision of additional resources, there are additional activities DIDER could undertake to meet this purpose. DIDER could employ some of the more successful strategies used by other states to attract dentists, and thereby better fulfill this statutory purpose. Education loan repayments and funds to help establish practice sites (funds for capital, equipment) are tools that might strengthen factors favoring the decision of qualified dental personnel to practice in Delaware.

Recommendations, Purpose #3
1. The purpose is valid and should be retained.
2. The strategy should be expanded to attract all needed qualified dental personnel to Delaware.
3. Loan repayment programs designed to attract dental personnel to Delaware’s underserved areas should be explored.
4. Programs to provide financial assistance for capital costs associated with establishing practice sites in underserved areas should be explored.
5. Consider testing new and creative recruitment approaches for underserved areas on a pilot project or demonstration basis.
DIDER Purpose #4
Support, encourage and promote “dental needs of the community at large and particularly those who do not have ready access to dental programs.”

Findings
This continues to be a legitimate purpose of DIDER. There are unmet dental care needs in Delaware and underserved areas.

DIDER has been somewhat successful in meeting this purpose through funds provided support to the general practice residency program at CCHS. Part of the residents’ training involves caring for patients at the hospital clinics, about 80 percent of whom are uninsured. The residents also provide services to patients at the dental clinic at DelTech’s Wilmington Campus, established to train dental hygienists, and at Delaware Psychiatric Center. Both sites care for many uninsured patients and Medicaid recipients.

However, this strategy is inadequate to fully meet the purpose:
- Access is not improved in Kent or Sussex County.
- Funding for the dental clinic at Del Tech in Wilmington is inadequate to allow the clinic to operate to its fullest potential – even though it has adequate staff, supplies and patients.
- The primary purpose of the residency program at CCHS and of the dental clinics are to provide training. The provision of services is to some extent an extension of that, or secondary purpose.

There are however additional activities DIDER could undertake to meet this purpose. DIDER should explore building on existing opportunities to provide dental care along with testing new strategies on a pilot basis.

Recommendation, Purpose #4
Amend the purpose to read:
Support, encourage and promote dental needs of the community at large and particularly those who do not have ready access to dental care programs.
DIDER Administration and Structure

Findings
Currently, DIDER funds consist of a passthrough to CCHS to provide financial assistance to the facility to support its general practice residency program. DIDER has no staff, office space or funding for supplies. DIDER has the official status of a state agency, but has no state agency “home.” These factors hamper the ability of DIDER to do more than provide financial support to the general practice residency program at CCHS. The current structure of DIDER and lack of resources hampers its ability to accomplish its statutory purposes and prohibits it from accomplishing its new purposes recommended in this report.

An elevated presence within state government is essential if DIDER is to have a more positive impact on dental care. The Committee recommends that the administration of DIDER be moved to the offices of the Delaware Health Care Commission. The Commission is viewed as serving a broad public purpose and as being able to enhance DIDER’s visibility and assure that DIDER functions in a way that meets Delaware’s needs. Placing the administration within the Commission will allow it to function in concert with DIMER and other state health care policy activities.

The composition of the DIDER Board of Trustees should reflect its responsibilities related to helping Delaware meet its statewide dental care needs. One identified need is to increase the number of dental care providers in Kent and Sussex Counties. Another purpose of DIDER is to enhance opportunities for Delawareans obtain dental education and training in order to pursue dental careers. However current statute does not provide for appointments of Board members representative of these concerns. Similarly, the Committee clearly recognized that facilitating DIDER’s ability to help meet the states health care needs requires including the Division of Public Health in DIDER activities. The Committee, therefore, specifically recommended that the state dental director be added to the DIDER Board of Trustees.

Recommendations:
• Place the administration of the Delaware Institute of Dental Education and Research within the offices of the Delaware Health Care Commission to allow it to function in a manner that serves its broad public purposes and function in concert with DIMER and other state health care policy activities to help Delaware meet its health care needs.
• Examine overall Board composition to ensure its structure reflects Delaware’s broad dental care needs. In particular, create a position on the DIDER Board of Trustees for the state dental director.
• Provide resources to enable DIDER to achieve its purposes.
General Issues

Recruitment
Finding
Although dental school enrollment and the number of graduates has been on the rise since 1990 to 1998, states throughout the nation continue to experience shortages of dental care providers in rural and economically disadvantaged areas. Likewise, disparities in dental care access and oral health status exist among patient populations, with those at the lower end of the income scale being at the greatest disadvantage.

An inadequate number of dentists in some areas of Delaware is preventing some populations in the state from being served, particularly in the inner city of Wilmington, some areas of Kent County and some areas of Sussex County. Attracting dentists to Delaware, and especially to Delaware’s underserved areas, will require an aggressive, coordinated and targeted recruitment campaign. Delaware is in competition with other states for dentists which have established such programs.

The opportunity exists in Delaware -- perhaps through DIDER as the coordinator -- to develop a coordinated campaign involving communities, colleges, state and local government and business organizations, hospitals and other groups to promote the underserved areas of the state. Financial incentives, such as loan repayments, scholarships and low-interest loans are a critical part to this plan being successful.

Recommendation:
Develop comprehensive recruitment campaign -- possibly coordinated through DIDER -- to market benefits and opportunities of practicing in DE.

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3 Richard Weaver, DDS, Education and Policy Analyst, American Association of Dental Schools. Specific dental school enrollment and graduation statistics appear in Chapter Three.
Dental Hygiene

Reciprocity for Dental Hygienists
Finding: Title 24, Chapter 11, Section 1153 of the Delaware Code, entitled “Reciprocity,” permits licensure without further examination of dental hygienists who are licensed for at least two years in another state (or territory of the United States) with an equal standard of laws to that regulating the practice of dental hygiene as has Delaware.

However, the Delaware Board of Dental Examiners has never issued a license based on reciprocity. Standard practice has been to require dental hygienists licensed in other states who are seeking Delaware licensure to pass the Delaware clinical examination.

Recommendation
Enforce reciprocity provision as set forth in current Delaware law.

Internship Requirement
Finding: Title 24, Chapter 11, Section 1152, Examination and Certificate, specifies that an applicants, after passing the Delaware dental hygiene practical clinical demonstrations and written examinations, and “after completion of 1 year of practical work in an institution, school or public clinic” shall be issued a certificate of registration by the Board and signed by its members. This certificate shall be conclusive evidence of the applicant’s right to practice as a dental hygienist in Delaware.

In actual practice, the Delaware Board of Dental Examiners permits dental hygienists to practice in Delaware (after passage of the examinations and satisfying all other requirements of the law) without requiring them to complete the 1 year internship.

Recommendation
Change code to reflect current practice of not requiring internships for dental hygienists.

Supervision of Dental Hygienists

Findings: Title 24, Chapter 11, Section 1157 of the Delaware Code requires a registered dental hygienist to operate under the “general direction or supervision of a licensed dentist, in the dentist’s office or in any public school or other institution.”
The Rules and Regulations of the Delaware State Board of Dental Examiners states that under "General Supervision" a dentist may or may not be present in the office while the work is performed.

Enhancing opportunities for dental hygienists to provide basic services such as cleanings and dental sealants in under served areas or in certain settings such as public schools, public clinics, the mobile health vans, and nursing homes could expand access to these basic, preventive dental services for vulnerable populations.

Recommendation
Allow dental hygienists to practice under general supervision of the state dental director in select environments – i.e., schools, mobile health vans, Federally Qualified Health Centers, nursing homes.
Public Health Clinics

Dental care providers in public health clinics
The most effective and efficient approach to dentistry relies on dentists and dental hygienists working together as a team. Delaware relies on the services of part time contractual dental hygienists. There is no state personnel position for this occupation. The number of patients seen in public health clinics could increase by increasing the number of dental hygienists.

It is very difficult to recruit dentists to work in public health clinics. One factor that contributes to the difficulty of recruiting public health dentists is the relatively low salary they earn compared to dentists in private practice. A significant number of Delaware’s public health dentists are reaching retirement age. Assuring the viability of the public health clinics will require adequate staffing. Comparable levels of compensation are necessary for recruitment efforts to be successful.

Recommendations
- Encourage the state personnel system to review public dental health care providers’ salaries to make them competitive with the private market.
- Increase the number of dental hygienists in public health clinics.

Hours of Operation
Finding
Clients of the public health and other state-supported dental clinics in Delaware are primarily school age children and the working poor. Visits to the clinic during “regular hours” interferes with school work and employment, and exacerbates transportation problems for those who must rely on relatives and friends to deliver them to and from their appointments. Providing for after hours care would improve patient accessibility.

Recommendation
- Explore extending hours of operations for public health and other dental clinics (Wilmington Hospital) or staggering hours to provide evening and weekend care.
Licensure

General Practice Residency Requirement for Dentists
Finding: Delaware is the only state that has as condition of licensure successful completion of a 1 year general practice residency (or its equivalency).

In lieu of the residency requirement, the Board of Dental Examiners will accept 5 years of active dental practice in another state.

There is general agreement within the dental community that 3 years of dental practice is sufficient to demonstrate competency, although there has been some discussion of reducing it to two years.

There also is agreement that any barrier that the 5-year active service requirement may pose to the recruitment of dentists to Delaware would be at least partially alleviated if the number of years of active service required were reduced.

The Delaware Code includes a provision to permit 1 year of active service as a dental officer with the armed forces in lieu of the general practice residency. Most individuals today enter the armed services as a career move or to receive financial support for education. If they have received funding through the military to pay for dental school, they have a service obligation that ends after 7 years. The service they perform as a dentist would satisfy the 3-year practice requirement, making the point of the provision in the Code related to service in the armed forces moot.

Recommendation
- Reduce practice experience required in lieu of residency requirement from five years to three years.
- Eliminate provision in Delaware code pertaining to experience as a dental officer in the armed forces in lieu of 1-year residency training requirement

Delaware Clinical Exam versus Regional Examination
Findings: The Committee spent considerable time exploring whether requiring passage of the Delaware clinical exam as a condition of licensure, rather than permitting passage of a regional examination, is a barrier to the recruitment of dentists to Delaware. The Committee also examined whether accepting the regional exam would help Delaware attract dentists to its underserved areas.

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4 One example of this discussion can be referenced by reviewing material presented to the Committee which appears in the appendix, and is entitled “Access to Care – The Viewpoint of the Delaware State Dental Society”.

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The Committee was unable to reach consensus on these issues. There is no independent, objective data to support either assertion. The Committee did, however, agree that further discussion on this topic could derail progress on the workable strategies for which there is agreement.

**Recommendation**
Delaware should take action on the agreed-upon strategies. Then, after the strategies have been given a reasonable amount of time to take hold, if no improvements are observed, consideration should be given to revisiting the issue of the clinical exam.

**Frequency of Clinical Examinations for Dentists and Dental Hygienists**

**Finding:** The Delaware clinical examinations for dentists and dental hygienists traditionally have been offered once each year, in June. Recognition that the infrequency of these exams can delay the licensure of qualified dentists by up to almost a year, coupled with an intensified focus on the need for additional dentists in Delaware, led the Delaware Board of Dental Examiners in 1999 to hold a second round of clinical examinations. The additional exam was held in January, and five dentists were awarded Delaware licensure. There is widespread agreement that the practice of offering the exams to dentists more often should be continued -- and that the same should be applied to dental hygienists.

**Recommendations**
- Continue administering Delaware clinical exam for dentists 2 times a year.
- Administer dental hygiene exam 2 times a year.
DELAWARE HEALTH CARE COMMISSION
DENTAL CARE: ACCESS IMPROVEMENT PROJECT
DELAWARE HEALTH CARE COMMISSION
DENTAL CARE: ACCESS IMPROVEMENT PROJECT

Introduction
Research shows that many Delawareans must forego going to the dentist. This is particularly true among segments of the population with modest or low incomes. Some individuals may be forced to go without care because they cannot afford it on their own and do not have insurance. Others must forego care because they cannot find a dentist who accepts their insurance. One particularly vulnerable population is Medicaid.

Factors that appear to contribute to poor access to dental services include:
- A shortage and maldistribution of dentists in Delaware, particularly in Sussex County, Southbridge-Wilmington and in Kent County.
- The low number of dentists who traditionally have treated Medicaid patients on a routine basis
- Understaffed public health dental clinics
- Transportation difficulties which make keeping scheduled appointments difficult

Prior to the Commission beginning this project, several individuals, community organizations and state agencies had been working on these access issues for some time.

This project brought those efforts together so that concerned individuals and groups could collaboratively gain alignment on solutions.

This project also included a review of the Delaware Institute of Dental Education and Research (DIDER). Conducted at the request of the Delaware General Assembly, it marks the first review since the DIDER’s creation in 1980.

Background
Several legislative and community activities have focused on dental care issues for some time.

One notable event was a public hearing held by the Senate Health and Social Services Committee, chaired by Senator Patricia M. Blevins (D-Elsmere), in the spring of 1997.

The hearing was prompted by heightened community concern about the supply of dentists in downstate Delaware and inadequate access to services, particularly among the poor.
The Committee found that access to dental care for the poor in Delaware was inadequate. It highlighted the fact that many children do not have access to a dentist. Those who do have access must wait an unreasonable length of time for an appointment. In addition, the state was unable to provide dental care to all children eligible for the service under Medicaid or include it as a benefit for adults.

On January 8, 1998, Senator Blevins requested the Delaware Health Care Commission (henceforth, the Commission) to conduct a review of the Delaware Institute of Dental Education and Research (DIDER) to determine its role in the provision of dental care to Delawareans.

As stated in the statute\(^1\), the purposes of DIDER are to support, encourage, and promote:
1. Accredited general practice residencies in dentistry at any general hospital in the state
2. Expansion of opportunities for Delaware residents to obtain post graduate dental training
3. A strengthening of factors favoring the decision of qualified dental personnel to practice in Delaware
4. Dental needs of the community at large, and particularly those who do not have access to dental programs

This review would complement work then underway within the Department of Health and Social Services, which had retained Dental Health Administrative and Consulting Services (DHACS), Inc. to study access to dental care for Medicaid and other recipients of health services provided by the state.

The DHACS report,\(^2\) released to the public January 23, 1998, included a number of recommendations associated with licensure, the use of ancillary dental resources, and the integration of facility services for special population.

General recommendations included:
1. Grant full licensure to the dentists serving in the public health dental clinics.

2. Fluoridate the water supply of all towns with a population of over 1000. In those areas where access to water is only available through public wells, establish a school based fluoride program.

3. Increase the number of dentists licensed to practice in the State of Delaware, noting that there is a definite shortage of dentists in Delaware, especially in Sussex County but in Kent County as well.

\(^1\) Title 14, Chapter 88, Delaware Code Annotated.

4. Appoint a State Dental Director to provide the State of Delaware with guidance on issues regarding dental policy.

The report also recommended:
- Establishing community based preventive dentistry teams to provide care at schools or in mobile dental offices
- Actively recruiting private dentists in Delaware and neighboring states to serve Medicaid clients
- Hiring dental hygienists to provide care in state-run facilities
- Expanding dental coverage to uninsured children living at up to 200 percent of the federal poverty level
- Exploring the feasibility of providing dental coverage to adult Medicaid recipients

Progress has been made on some of the recommendations, while work on others continues to be addressed.

For example:
- The Delaware State Board of Dental Examiners agreed to allow the public health dentists to apply for licensure and take the Delaware clinical examination. All six public health dentists took the exam. Two passed.

- The president of the Delaware Dental Society wrote a letter to the organization’s members urging them to sign onto the Medicaid program. More than 70 dentists are now accepting Medicaid.

- Legislation passed requiring fluoridation of all municipal water supplies, and it included funds to help towns get started. First year funding for fluoridation allocated as follows: Delmar (system in place), Dover, New Castle, Seaford, Smyrna.

- Medicaid rates were raised to 85 percent of usual and customary charges, and the development of standardized insurance claims forms are underway.

- Three dental hygienists have been retained on a contractual basis to work in the public health clinics.

- A state dental director has been hired.

Nevertheless, access remains a serious problem:
- Delaware’s dentist to population ratio exceeds the national average and is expected to worsen. Almost 20% of Delaware’s dentists will not be, or are uncertain if they will be active in five years. Many are reaching retirement age.
• The low number of dentists in Sussex County is such that the county is considered underserved according federal guidelines. Kent County also has far fewer dentists than are needed.
• School nurses report severe access problems for children, particularly for those in families with low incomes.
• Children seeking care at the public health clinics must wait inordinately long periods of time for appointments to receive that care, and most of that care is to fix problems rather than prevent them.
• Wait times for appointments in private dental practices in Kent County average more than 20 days.
• Delaware is not able to provide dental care to many Medicaid eligible children, even though it is a federal requirement.
• Delaware dental access problems precluded the state from including dental benefits in the Delaware Healthy Children Program, even though the federal government would have helped fund that benefit under the federal Child Health Insurance Program.
• Delaware’s access problems have precluded the state from providing a dental benefit for low income adults.

Recognizing the seriousness of the problems in both the Medicaid and general populations, and the need to bring all parties together to develop workable solutions, the Commission in the fall of 1998 included this project in its multifaceted strategic plan designed to promote accessible, affordable, quality health care for all Delawareans.

To conduct the project, the Commission asked that a committee be formed that would reflect a balance of perspectives and include representation from groups already examining the wide array of factors impacting dental care access in Delaware.

Commission Chairman, Gregg C. Sylvester, MD, asked Commissioner Lois M. Studte, R.N. to chair the committee.

The Committee conducted its work in two phases. Phase One was devoted to fact finding comprised of research and presentations. Phase Two was devoted to consensus building and developing recommendations.
Prologue

Approximately 95 percent of dental problems are preventable with decent dental care, proper personal oral hygiene, regular visits to the dentist, fluoride, sealants that form barriers against decay and other advances in dentistry.³

Within the general population, tooth decay has declined as more people drink fluoridated water, brush with fluoridated tooth paste, see a dentist regularly and adopt healthier diets. Indeed, the number of school-aged children without cavities in their permanent teeth has doubled in the past two decades, according to a study published in the March 1996 Journal of the American Dental Association.

The results of the National Oral Health Survey released in 1996 by the National Institute of Dental Research show, however, that while there have been remarkable improvements, serious problems continue to exist for certain segments of the population.

Approximately 80 percent of cavities in children between the ages of 5 and 17 are found in only 20 percent of children, according to the National Institute of Dental Research.⁴

America's youngest and poorest children (ages 2-5 and living below poverty level) have almost five times as much tooth decay as children of higher income (above 300% of poverty). And in poor children with decay, almost 80% remains untreated.⁵

These children with inadequate access to dental care are disproportionately found among minority groups and families with low levels of income and education.⁶

Of adults aged 18 and older, 94 percent have either untreated decay or fillings in of their teeth.⁷

Nevertheless, for the general population, gum disease has become the more pressing oral health concern of most private US dentists.⁸

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⁸ ADA/Colgate Oral Health Survey conducted at the 1996 ADA/FDI world Dental Congress in Orlando, Florida in October 1996.
But cavities, gum disease can be prevented with regular check ups and the services of dental care providers, provided patients brush and floss daily.

Poor oral health status — be it cavities or gum disease — translates into other problems, particularly if it affects performance at work or school. This in turn affects society at large.

While there are other aspects of importance to dental care, such as consumer education, the focus of this report is access to dental care services provided by dentists and dental hygienists.
CHAPTER ONE

Access to Dental Services Among the Medicaid and General Populations
CHAPTER ONE

ACCESS TO DENTAL SERVICES AMONG THE MEDICAID AND GENERAL POPULATIONS

Medicaid Population

Under Federal Medicaid statute, states are required to provide dental services to Medicaid eligible children. In Delaware, very few Medicaid children receive dental services on a routine basis.

Public Health Dental Clinics

<table>
<thead>
<tr>
<th>COUNTY</th>
<th>NUMBER OF CHILDREN WITH MEDICAID AGE 3 – 21</th>
<th>NUMBER OF MEDICAID CHILDREN SEEN DPH DENTAL CLINICS</th>
<th>PERCENT OF MEDICAID CHILDREN SERVED</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Castle</td>
<td>19,492</td>
<td>5,556</td>
<td>29%</td>
</tr>
<tr>
<td>Kent</td>
<td>7,744</td>
<td>1,384</td>
<td>18%</td>
</tr>
<tr>
<td>Sussex</td>
<td>8,139</td>
<td>2,052</td>
<td>25%</td>
</tr>
</tbody>
</table>

*Unduplicated count of children.

Most dental care provided to Medicaid recipients under the age of 21 has been provided in the dental clinics located in 8 of the state service centers. The four sites in Kent and Sussex Counties employ two full-time dentists, contractual dentists equal to one full time equivalent, and three part-time dental hygienists. The four sites in New Castle County employ four full-time dentists.

If all the under age 21 eligible population were to be served by the clinics, the ratio of dentists to patients would be over 1:5,000. The high patient to dentist ratio has contributed to an average wait time for appointments for therapeutic services after initial diagnosis to be five to six months.  

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9 Information provided by Division of Public Health, Delaware Department of Health and Social Services.
In Kent and Sussex County, the problem is even more severe, as there are only 3 public health dentists to care for the nearly 15,000 children.\textsuperscript{11}

As noted in the DHACS report, if Delaware were to provide Medicaid dental benefits to the adult population the ratio would jump to 1:9,500. DHACS notes that the dentist-to-population ratio in the Delaware Medicaid program is inordinately low when compared to other states’ programs.\textsuperscript{12}

Reliance on the public health clinics for almost all dental care provided to those with low incomes has been necessary because so few dentists have accepted Medicaid. In FY 1999, Medicaid patients were served by 20 percent of the general private practice dentists.\textsuperscript{13}

Efforts to increase the number of private dentists participating in Medicaid, and thereby expand access for the Medicaid population, are improving.

**Private Practice**

Division of Public Health records show that as of August 1999, the numbers of dentists participating in Medicaid totaled 74. For the state’s three counties, the geographic breakdown was as follows:

- New Castle County: 58 dentists -- 50 general practice and 8 specialists
- Kent County: 9 dentists -- 6 general practice and 3 specialists
- Sussex County: 7 dentists -- 5 general practice and 2 specialists

Division of Public Health records show that as of February 2000, the numbers of dentists participating in Medicaid totaled 78. For the state’s three counties, the geographic breakdown was as follows:

- New Castle County: 60 dentists -- 52 general practice and 8 specialists
- Kent County: 11 dentists -- 8 general practice and 3 specialists
- Sussex County: 7 dentists -- 5 general practice and 2 specialists

With regard to utilization, the Division of Public Health reports that for FY 1999 (ending June 30, 1999):

- 34 New Castle County dentists treated 1522 unduplicated clients
- 6 Kent County dentists treated 25 unduplicated clients
- 63 Sussex County dentists treated 528 unduplicated clients

\textsuperscript{11} Presentation to the DHCC Committee on Dental Care Access Improvement by Joseph G. Liefbroer, Western Sussex Health Coalition, June 1999.

\textsuperscript{12} Study of Dental Health Services for Delaware Health & Social Services. Dental Health Administrative and Consulting Services., Inc. (DHACS), November 21, 1997. DHACS, page 45.

\textsuperscript{13} Dentists in Delaware 1998. Center for Applied Demography & Survey Research, University of Delaware, Newark, DE.
(There is some slight duplication across dental providers)

While this is a significant improvement over participation rates in the past years, a significant shortfall in the number of Medicaid children being cared for remains.

There are now more than 53,000 Medicaid recipients under age 21 in Delaware. Using the numbers above, 2,028 of them were treated by private dentists in FY 1999.

General Population

As noted in the Dentists in Delaware 1998 report, one way to determine accessibility is to examine whether dentists are accepting new patients.

In 1998, 94.1 percent of general practice dentists and specialists were accepting new patients; 97.3 percent in New Castle County; 83.9 percent in Kent County and 81 percent in Sussex County. On average, the dentists saw more than 100 patients a week. Encounters in Kent and Sussex counties were almost 20 percent higher than those in New Castle County, indicating that practices in lower Delaware are operating closer to their maximum capacity for service delivery.\(^\text{14}\)

It is assumed that because less than 4 percent of private practice dentists were accepting Medicaid patients that year, those who were being seen in the private practices either had private insurance or had the resources to pay on their own.

Almost all dentists provide some level of charity care, either in their offices or outside of their offices in clinics or other similar settings. As a result, an average of about 7.5 percent of general practice dentists’ gross fees are not reimbursed.\(^\text{15}\)

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\(^{14}\) Dentists in Delaware 1998.  
\(^{15}\) Dentists in Delaware 1998.
CHAPTER TWO

Dental Care Practice Sites in Delaware
CHAPTER TWO

DENTAL CARE PRACTICE SITES

Public Health Dental Clinics
About 2.7 percent of actively practicing dentists in Delaware practice in a public health facility. There are eight Division of Public Health dental clinics statewide.

New Castle County Clinics:
- Belvedere, Newport, DE
- DeLaWarr, Wilmington, DE
- Hudson, Newark, DE
- Porter, City of Wilmington, DE

Kent County Clinics
- Milford State Service Center, Milford, DE
- James Williams Service Center, DE

Sussex County Clinics
- Sussex County Health Unit, Georgetown State Service Center, DE
- Shipley State Service Center, Seaford, DE

The clinics in Kent and Sussex Counties share two full-time dentists, one full time contractual dentist and three part time contractual dental hygienists.

New Castle County clinics have 4 full time dentists.

Services include prophylaxis, screening and education, x-rays, sealants, fillings, crowns and extractions.

Ninety five percent of the patients treated in the public dental clinics are Medicaid recipients.

Waiting times for appointments vary from one to five months.\textsuperscript{16}

Federally Qualified Health Centers
Henrietta Johnson Medical Center, which serves the southeast community of Wilmington at two locations, recently recruited a dentist from the National Health Service Corps (NHSC). The NHSC is a program of the Federal Health Resources and Services Administration's Bureau of Primary Health Care.

\textsuperscript{16} Edward Ratledge. Summary Presentation on Dentists in Delaware 1998 before the DHCC Committee on Dental Access Improvement. March 18, 1999.
Private Practices\textsuperscript{17}

The majority of dentists operate in private practitioner's offices. In Delaware, 97.3 percent of the 302 actively practicing dentists practice in a private office.

Established practices have an average wait time of 10.4 days for dentists in general practice and 9.8 days for dental specialists. In Kent County, the average wait time for established patients for general practice dentists is 21.9 days. In Sussex County it is 5.4 days and in New Castle County it is 9 days.\textsuperscript{18}

Hospitals\textsuperscript{19}

The primary practice site of 4.3 percent of actively practicing dentists is hospitals.

Nursing Homes\textsuperscript{20}

Very few dentists practice in nursing homes. No dentists practice in nursing homes in Sussex County, 2.6 percent of practicing dentists in Kent County practice in a nursing home, and 3 percent of practicing dentists in New Castle County practice in a nursing home.

There is a mobile van in Kent County that services nursing homes.\textsuperscript{21}

Community Colleges\textsuperscript{22}

\textit{Wilmington Campus, Delaware Technical and Community College}
Dental Hygiene students see approximately 1740 patients per year.

\textit{Terry Campus, Delaware Technical and Community College}
Dental Hygiene students provide services at the Dover Air Force Base to individuals active in the military

Technical High Schools\textsuperscript{23}

Four technical high schools in Delaware have dental assistant training programs, under which the students chair-side assist dentist providing services primarily to uninsured low-income children, identified by their eligibility for the free/reduced lunch program.

The dentists are paid through funding provided under a federal Carl Perkins grant.

\textsuperscript{17} Dentists in Delaware 1998.
\textsuperscript{18} Dentists in Delaware 1998.
\textsuperscript{19} Dentists in Delaware 1998.
\textsuperscript{20} Dentists in Delaware 1998.
\textsuperscript{21} Lois Studte.
\textsuperscript{22} Kathern Friel. Presentation to DHCC Committee on Dental Access Improvement. July 1999.
\textsuperscript{23} Per conversations with Tina Boch, Jan Dill and Rebecca Lykins, dental assistant teachers at 3 of the 4 programs.
The purpose of the program is two-fold: to provide clinical training and to demonstrate that the student's career path need not end with dental assisting. It can be a stepping stone toward becoming a dental hygienist or a dentist. Most dental assistants are female, and the sexual equity portion of the Carl Perkins grant requires the dentist to be a female.

Services provided by the dentist at the high schools includes procedures more commonly provided in private practice settings, such as cleanings, fluoride treatments and applying sealants, as well as those normally provided by dentists related to cavities and extractions.

Each of the three technical high schools in New Castle County and the one in Kent County have full dental clinics with two chairs, x-ray equipment, x-ray developer, laboratory, reception area and computer.

In New Castle County, elementary school children eligible for treatment are identified by the Christiana School District dental hygienist. Clinical services are provided to nearby elementary school children by a dentist one day a week for two hours per week. Appointments are generally 30 minutes per child.

In Kent County, patients are seen at PolyTech High School for two hours a day, two days a week. Four to six children are seen each day. Students at the high school, and on, occasion children attending a nearby elementary school are seen.
CHAPTER THREE

Dental Care Workforce in Delaware
CHAPTER THREE

DENTAL WORKFORCE

The dentist and the dental hygienist work together as a team to meet the oral health needs of patients.

Dental Hygienists

A dental hygienist is that member of the dental team who is responsible for providing treatment that helps to prevent oral disease such as dental caries (cavities) and periodontal disease (gum disease) and for educating patients about how to maintain optimal oral health. The dental hygienist is especially knowledgeable about the preventive aspects of dental disease.\textsuperscript{24} There are approximately 530 dental hygienists licensed in Delaware.\textsuperscript{25}

Scope of Practice

Each state has its own specific regulations regarding dental hygienists responsibilities. Services provided by dental hygienists may include

\begin{itemize}
  \item Patient screening procedures; such as assessment of oral health conditions, review of the health history, oral cancer screening, head and neck inspection, dental charting and taking blood pressure and pulse
  \item Taking and developing dental radiographs
  \item Removing calculus and plaque from all surfaces of the teeth
  \item Applying preventive material to the teeth (e.g. sealants and fluorides)
  \item Teaching patients appropriate oral hygiene strategies (e.g. tooth brushing, flossing)
  \item Counseling patients regarding good nutrition and its impact on oral health
  \item Making impressions of patients' teeth for study casts (models of teeth used by dentists to evaluate treatment needs)
  \item Performing documentation and office management activities\textsuperscript{26}
\end{itemize}

In Delaware, any licensed dentist, public institution or school authority may employ dental hygienists.

In Delaware, dental hygienists may remove calculus deposits, plaque, accretions and stains from the surfaces of the teeth. They may examine the teeth for cavities and assemble the necessary information for use by the dentist in diagnosis and treatment planning. They may perform prophylactic or preventive

\textsuperscript{24} Kathern Friel, RDH, MS, Instructional Director for Allied Health, DelTech Wilmington Campus. Presentation to DHCC Committee on Dental Access Improvement. July 15, 1999.
\textsuperscript{25} Dentists in Delaware 1998
\textsuperscript{26} Dental Hygiene, ADA Fact Sheet. June 1999.
measures, including the application of chemicals designed for the prevention of caries.

Dental hygienists in Delaware are required to work under the general direction or supervision of a licensed dentist, in the dentist's office or in any public school or other institution. General supervision means that a dentist may or may not be present in the office while the work is performed. The dentist authorizes the work to be performed.

According to the Rules and Regulations of the Delaware State Board of Dental Examiners, under general supervision:

- Patients must be notified as soon as it is known that the dentist will not be present; the patient is given the option to reschedule to a time when the dentist will be present.
- The dentist is to review the treatment records of each patient prior to and following the patient treatment.
- Patients who are medically or dentally contraindicated will not be scheduled when the dentist is not present.
- Full responsibility for the work done by auxiliary personnel is placed directly upon the dentist.27

Education
Dental hygienists receive their education through academic programs at community colleges, technical colleges, dental schools or universities.

The majority of programs take at least two years to complete, with graduates receiving associate degrees. Receipt of this degree allows a dental hygienist to take licensure examinations (national and state or regional).

University-based programs may offer baccalaureate and master's degrees, which generally require at least two years of further schooling. This additional schooling may be necessary to pursue a career in teaching or research.28

Dental hygiene programs in Delaware are available at Delaware Technical and Community College. There is space available for 32 students in the program at the Wilmington Campus and 14 students in the program at the Terry Campus. This includes first year and second year students.

Salaries of Dental Hygienists
According to the American Dental Association's 1997 Survey of Dental Practice, Employment of Dental Practice Personnel, dental hygienists working for a general practitioner average $24.80 per hour, with salaries for dental hygienists

27 Chapter 11, Delaware Code, Dentistry and Dental Hygiene and Rules and Regulations, Delaware State Board of Dental Examiners.
working full time averaging $21.70 per hour, and salaries for dental hygienists working part time averaging $26.90 per hour.

Salaries of dental hygienists working for a specialist (periodontist, pediatric dentist or orthodontist) average $24.70 per hour. Dental hygienists working full time for specialists average $21.90. Dental hygienists working part time for specialists average $26.70 per hour.

License to Practice Dental Hygiene in Delaware
To practice dental hygiene in Delaware, candidates must:
• Show proof of graduation from high school and a dental hygiene academic program of at least 2 years duration which has been approved by the Board (or 1 year duration if graduation prior to 1953). 29
• Pass a examination consisting of practical clinical demonstrations and a written examination, the written portion which is prepared by the Delaware State Board of Dental Examiners in conjunction with the Board’s Dental Hygiene Advisory Committee 30
• Pass the written examination administered by the National Board of Dental Examiners at a 77 percent competency level 31
• Pass a written jurisprudence examination showing knowledge of Delaware’s laws pertaining to dentistry 32
• Complete 1 year of practical work in an institution, school or public clinic approved by the Board 33
• Be a person of good moral character 34

With regard to reciprocity, dental hygienists licensed for at least two years in another state -- that maintains equal standards of laws for dental hygiene -- can be licensed to practice in Delaware without further examination. They must pay a fee of $25. 35

Dental hygienists licensed for at least two years in another state -- that does not maintain equal standards of laws for dental hygiene -- can be licensed to practice in Delaware by passing further examination as the Board deems necessary and paying the $25 fee.

29 Title 24, Chapter 11, Delaware Code Annotated, Section 1151.
30 Title 24, Chapter 11, Delaware Code Annotated, Section 1152.
31 "Requirements for Dental Licensure," Delaware Division of Professional Regulation.
32 Title 24, Chapter 11, Delaware Code Annotated, Section 1105, (5)
33 Title 24, Chapter 11, Delaware Code Annotated, Section 1152.
34 Title 24, Chapter 11, Delaware Code Annotated, Sections 1151 and 1152.
35 It appears a license to practice dental hygiene based on reciprocity to date has never been granted. However, the availability of the reciprocity provision was recently brought to the attention of the Board and is under review with regard to an application for licensure. Meeting Minutes, Delaware State Board of Dental Examiners.
Comparison of DE Dental Hygiene Licensure Laws to Other States' Laws\textsuperscript{36}

Delaware is not among the 16 states that require a supervising dentist to be physically present in the office when patient care is provided by a dental hygienist.

Delaware is among the 33 states and the District of Columbia that permit general supervision of dental hygienists in dental offices.\textsuperscript{37} The distinguishing feature of general supervision is that the dentist need not be present when patient care is provided.\textsuperscript{38}

Delaware is not among the 2 states that do not require the supervision of dental hygienists when performing basic prophylaxis functions: California (Registered Dental Hygienists in Alternative Practice in underserved areas) and Colorado.\textsuperscript{39}

Delaware is not among the 5 states that permit limited unsupervised practice in institutions.

Delaware is not among the 2 state that permit Public Health supervision in public or private schools, hospitals or institutions.

Delaware is the only state with the 1 year internship requirement and one of a minority of states that does not use a regional testing board for the clinical examination.\textsuperscript{40} Ten states, including Delaware, administer a clinical licensure exam, along with Puerto Rico and the U.S. Virgin Islands.\textsuperscript{41}

\textsuperscript{36} Information provide by American Dental Association: Supervision of Dental Hygienists in Dental Offices; Supervision of Dental Hygienists in Nursing Homes and Other Institutional Settings; Administration of Local Anesthesia/Nitrous Oxide by Dental Hygienists; and ADA 1995 Survey of Legal Provisions for Delegating Expanded Functions to Dental Assistants and Dental Hygienists.

\textsuperscript{37} Note that the number of states does not add up to 50 because some states are listed in more than one category (indirect and general supervision categories).

\textsuperscript{38} A number of states require, as a condition of general supervision, that the supervising dentist examine the patient first, develop a treatment plan, issue a written work order and/or evaluate the dental hygienist's work within a fixed period of time. Other restrictions may also apply. As noted above in the section of Scope of Practice, Delaware, like most other states, has certain restrictions related to practice under general supervision.

\textsuperscript{39} Rules require the patient be informed that the dentist will not be in the office during treatment by the dental hygienist.

\textsuperscript{40} Jon Holtzee, Legislative Liaison, State Government Affairs, American Dental Association. Phone conversation. August 1999.

\textsuperscript{41} American Student Dental Association, Guide to Licensure, pages 28-33.
Dentists

Delaware's 1998 population of 744,000 was served by approximately 243 private dentists working in general/family practice or pediatric dentistry. In addition, there were 59 dentists practicing in one of the nine specialties.\textsuperscript{42,43}

**Ratio of Dentists to Population**
There are about 2,600 persons served by each full time dentist (pediatrics or general/family practice) in Delaware.\textsuperscript{44}

The national rate of dentists in 1997 was 60 dentists per 100,000 population, according to "Morgan and Morgan, Health Care State Rankings 1999: Health Care in the 50 United States." Delaware ranked 41\textsuperscript{45} with 41 dentists per 100,000.\textsuperscript{45}

By comparison, Delaware ranked 33\textsuperscript{46}d, with 42 dentists per 100,000 in 1996.\textsuperscript{46}

The Dental Health Administrative and Consulting Services (DHACS) report to the Delaware Health and Social Services, noted that the dentist ratio commonly accepted as standard by the dental profession is 1 dentist per 2,000 people.\textsuperscript{47}

According to the American Dental Association, the dentist ratio in 1996 nationally was approximately 1 actively practicing dentist to 1,892 people.\textsuperscript{48}

The American Dental Association cautions, however, that there is no "ideal ratio" of dentists to people for a variety of reasons, including differences between patient wants and needs, local demographics, fluoridation, and other factors.\textsuperscript{49}

\textsuperscript{42} Dentists in Delaware, 1998, prepared for Delaware Department of Health and Social Services, Division of Public Health, by Center for Applied Demography & Survey Research, College of Human Resources, Education and Public Policy, University of Delaware. Survey methodology based on that used by federal Department of Health and Human Services. Delaware Health Care Commission Dental Care Access Improvement Committee recognizes that other organizations may use different survey methodology.

\textsuperscript{43} Specialty areas of dental practice recognized by the ADA Council on Dental Education and used for this survey: dental public health, endodontics, oral and maxillofacial pathology, oral and maxillofacial surgery, orthodontics and dentofacial orthopedics, pediatric dentistry, periodontics, and prosthodontics.

\textsuperscript{44} Dentists in Delaware 1998w.

\textsuperscript{45} Health Care State Rankings 1999: Health Care in the 50 United States, Morgan Quinto Press, 1999. Source: American Dental Association (Chicago, IL): "1997 ADA Dentist Masterfile." Rank order is highest to lowest ratio of dentists to population with the state with the highest ratio ranked as 1. information


\textsuperscript{48} ADA Survey Center, August 25, 1999.

\textsuperscript{49} Presentation to DHCC Committee on Dental Care Access Improvement by Lou Rafetto, DMD, president, Delaware State Dental Society. July 15, 1999.
Age and Geographic Distribution of Dentists

The county estimates of persons for each full time dentists in general/family or pediatric practice:
- 5,400 persons to each dentist in Sussex County
- 3,400 persons to each dentist in Kent County
- 1,900 persons to each dentist in New Castle County

New Castle County is the only county in Delaware that meets the criteria of the federal government of one dentist for 5,000 persons and the industry standard (cited by DHAC) of one dentist for 2,000 patients. The Southbridge-Wilmington area and entirety of Sussex County are federally designated Health Professional Shortage Areas.

While New Castle County has a disproportionate share of younger dentists, an indicator that they will continue to practice for some years, the county also has a significant number nearing retirement age. The shortage of dentists in New Castle county is particularly acute in the Southbridge-Wilmington area which is a federally designated dental Health Professional Shortage Area.

<table>
<thead>
<tr>
<th>New Castle County</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Under age 35</td>
<td>33 dentists</td>
</tr>
<tr>
<td>35-44</td>
<td>62 dentists</td>
</tr>
<tr>
<td>45-54</td>
<td>56 dentists</td>
</tr>
<tr>
<td>55-64</td>
<td>39 dentists</td>
</tr>
<tr>
<td>65 and older</td>
<td>37 dentists</td>
</tr>
</tbody>
</table>

Sussex County -- the fastest growing county in the state -- does not meet the federal criteria or the industry standard and is a federally designated dental Health Professional Shortage Area.

Much of the Sussex County population is elderly, indicating a need for more specialized services, in addition to the primary and preventive care needed by all ages of people.

<table>
<thead>
<tr>
<th>Sussex County</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Under age 35</td>
<td>2 dentists</td>
</tr>
<tr>
<td>35-44</td>
<td>6 dentists</td>
</tr>
<tr>
<td>45-54</td>
<td>9 dentists</td>
</tr>
<tr>
<td>55-64</td>
<td>4 dentists</td>
</tr>
<tr>
<td>65 and older</td>
<td>3 dentists</td>
</tr>
</tbody>
</table>

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50 Dentists in Delaware 1998.
51 Dentists in Delaware 1998.
52 Dentists in Delaware 1998.
53 Dentists in Delaware 1998.
Kent County meets the federal but not the industry standard. Kent County is growing rapidly, and has the most difficulty attracting younger dentists. Almost one third of the dentists in the county will reach retirement age within the next ten years.

The population growth in Kent County is predominately among those under age 65, many of whom are middle aged individuals or families with children. This may indicate an increasing need for primary and preventive care.

<table>
<thead>
<tr>
<th>Kent County</th>
<th>Under age 35</th>
<th>1 dentist</th>
</tr>
</thead>
<tbody>
<tr>
<td>35-44</td>
<td>12 dentists</td>
<td></td>
</tr>
<tr>
<td>45-54</td>
<td>12 dentists</td>
<td></td>
</tr>
<tr>
<td>55-64</td>
<td>10 dentists</td>
<td></td>
</tr>
<tr>
<td>65 and older</td>
<td>4 dentists</td>
<td></td>
</tr>
</tbody>
</table>

Race and Hispanic Origin of Dentists by County
African Americans comprise approximately 17 percent of Delaware’s population, but only 2.4 percent of Delaware’s dentists are African American.

<table>
<thead>
<tr>
<th>Race of Dentists by County</th>
<th>Kent County</th>
<th>New Castle</th>
<th>Sussex</th>
<th>Delaware</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caucasian</td>
<td>94.7</td>
<td>95.6</td>
<td>95.7</td>
<td>95.5</td>
</tr>
<tr>
<td>African American</td>
<td>2.6</td>
<td>2.6</td>
<td>0</td>
<td>2.4</td>
</tr>
<tr>
<td>Other</td>
<td>2.7</td>
<td>1.8</td>
<td>4.3</td>
<td>2.1</td>
</tr>
</tbody>
</table>

55 Dentists in Delaware, page 7.
56 Dentists in Delaware, page 5-7
57 Dentists in Delaware, page 5-7
The Hispanic population in Delaware is growing rapidly, particularly in Sussex County. In 1998, Delaware’s population was approximately 4 percent Hispanic, and the dentist Hispanic population was about 1 percent.

<table>
<thead>
<tr>
<th>Hispanic Origin of Dentists by County58</th>
<th>Kent County</th>
<th>New Castle</th>
<th>Sussex</th>
<th>Delaware</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hispanic</td>
<td>0</td>
<td>1</td>
<td>4.2</td>
<td>1.2</td>
</tr>
<tr>
<td>Non-Hispanic</td>
<td>100</td>
<td>99</td>
<td>95.8</td>
<td>98.8</td>
</tr>
</tbody>
</table>

There is evidence to indicate that a dentist’s decision about where to practice is influenced by a number of factors including family and spouse considerations, opportunities for professional growth and quality of practice, quality of life in a particular area and financial considerations, including the cost of starting a dental practice and ability to repay student loans.59

**Education**

**Education of Dentists**

A dental education usually requires a minimum of two years of college and four years of dental school. Going into one of the recognized specialties,60 requires a minimum of two years of additional schooling. The curriculum can be divided into three broad areas:

- Basic health sciences, including anatomy, biochemistry, histology, microbiology, pathology, pharmacology and physiology, with emphasis on dental aspects
- Application of those sciences, providing patient care in dental school clinics
- Practice management, including talking with patients, the use and management of dental office staff, business management, professional ethics and community health.

There are two types of degrees awarded upon graduation from dental school to become a general dentist:

**DDS -- doctor of dental surgery**

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58 Dentists in Delaware, page 5-7  
60 Specialties approved by Council on Dental Education, American Dental Association include: Dental Public Health, Endodontics, Oral and Maxillofacial Pathology, Oral and Maxillofacial Surgery, Orthodontics and Dentofacial Orthopedics, Pediatric Dentistry, Periodontics and Prosthodontics
DMD -- doctor of dental medicine.

According to the American Dental Association, "there is no difference between the two degrees: dentist who have a DMD or DDS have the same education. Universities have the prerogative to determine what degree is awarded. Both degrees use the same curriculum requirements set by the American Dental Association's Commission on Dental Accreditation." The ADA states that "state licensing board accept either degree as equivalent, and both degrees allow licensed individuals to practice the same scope of general dentistry."

Applying to Dental School
Students take the Dental Admission Test a year before they anticipate entering dental school. The DAT is one measure of a person's potential for success in dental school. It is usually administered to students who have completed at least one year of college level courses in biology and chemistry. Most college students apply for dental school during their junior year. Most schools require personal interviews with candidates to assess attributes such as desire to help people, ability to get along with others, self-confidence, etc. Most dental schools participate in the American Association of Dental Schools Application Service (AADSAS). This simplifies the application process and generally only one application for admission needs to be completed.\textsuperscript{61}

Cost of Dental School
According to the 1996-1997 Survey of Pre-Doctoral Dental Educational Institutions conducted by the American Dental Association, first year tuition rates increased an average of 6 percent each year between the 1989-90 and 1996-97 academic years.

<table>
<thead>
<tr>
<th>Average 1996 Dental School Tuition and Fees for state residents\textsuperscript{62}</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Dental Schools</td>
</tr>
<tr>
<td>Public Schools</td>
</tr>
<tr>
<td>Private/State-Related (private schools receiving some level of state funds)</td>
</tr>
<tr>
<td>Private Schools</td>
</tr>
</tbody>
</table>

Information on the average cost of tuition and fees for out-of-state residents was not captured by the study. Delaware does not have a state dental school. Almost (58.1) 60 percent of dentists practicing in Delaware graduated from a dental school in Pennsylvania.\textsuperscript{63}

\textsuperscript{61} American Dental Association Carriers Brochures (ADA Web Site), June 1999.
\textsuperscript{62} Information provided by Richard Weaver, DDS, Education and Policy Analyst, American Association of Dental Schools. August 18, 1999.
\textsuperscript{63} Dentists in Delaware 1998.
For the three dental schools in Pennsylvania, out-of-state tuition and fees are currently set at the following levels:

<table>
<thead>
<tr>
<th>Pennsylvania Dental Schools: 1999-2000 Tuition &amp; Fees</th>
<th>PA Residents: $20,594</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temple University, School of Dentistry, Philadelphia (public school)</td>
<td>Out-of-State: $28,458</td>
</tr>
<tr>
<td>University of Pennsylvania, School of Dental Medicine, Philadelphia (Private school; no difference in tuition/fees for in-state and out-of-state residents)</td>
<td>$35,960</td>
</tr>
<tr>
<td>University of Pittsburgh, School of Dental Medicine, Pittsburgh (Private school; no difference in tuition/fees for in-state and out-of-state residents)</td>
<td>$35,960</td>
</tr>
</tbody>
</table>

Another 13 percent of Delaware dentists attended dental school in Maryland. The only dental school in Maryland is the University of Maryland, Baltimore College of Dental Surgery. Tuition and fees for out-of-state residents at this public school for the 1999-2000 academic year are set at $29,314. Tuition and fees for Maryland resident tuition are set at $17,083.

Student Debt
New dentists report that high levels of student debt prevents them from starting or buying their own practice, opting instead for associate or employee positions. In a 1998 ADA survey, of those who said their levels of student debt affected their practice options, 71 percent said they could not afford to start their own practice and 61 percent said they could not afford to purchase a practice. 65

According to the American Association of Dental Schools, the average debt of at the time of graduation from dental school in 1998 was $84,089, an increase of 2.9 percent from 1997.

<table>
<thead>
<tr>
<th>Graduating Indebtedness</th>
<th>1996</th>
<th>1998</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of School</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public School</td>
<td>$60,441</td>
<td>$70,752</td>
</tr>
<tr>
<td>Private/State Related School</td>
<td>$91,137</td>
<td>$97,684</td>
</tr>
<tr>
<td>Private School</td>
<td>$105,661</td>
<td>$108,256</td>
</tr>
</tbody>
</table>

64 Figures obtained from the admissions offices of each dental school. August 1999.
More than 96 percent of dental students rely on student loans to help pay for school. Sixty eight percent of graduates report debt of more than $100,000.

Dental School Enrollments and the Future Demand for Services
Currently, there are 55 dental schools in the United States. Six dental schools – all private – have closed since the mid-1980s and one is scheduled to close next year. One new dental school opened in Florida in 1997 and another in Nevada is scheduled to open in 2001.  

In general, dental school enrollments and number of students graduating has been trending upwards since 1989. For the years 1989 through 1997 enrollments increased by about 9 percent. Enrollment rose by about 7 percent in 1998. The decline in the increase that year is attributed to the closure of a dental school in Chicago, Illinois.  

Dental School Enrollments  
1989 – 3,995  
1997 – 4,347 (peak year)  
1998 – 4,236

Dental School Gradates  
1990 – 4,233  
1993 – 3,778 (low point)  
1997 – 3,930  
1998 – 4,041  
1999 – 4,050 – 4,100 (projected)

With regard to whether dental school enrollments are sufficient, the Institute of Medicine in its study of the future of dental education, found no compelling evidence that would allow it to predict either a future shortage or an oversupply of dentists with sufficient confidence to warrant recommendations that dental school enrollments be increased or decreased. This is probably because the dental community itself is characterized by disagreement about whether the nation faces a future shortage or oversupply of dental services. As stated by the IOM report:

"On the one hand, the ratio of dentist to the general population is declining and the coverage of dental services under expanded public or private health insurance could substantially increase the demand for such services, especially if additional efforts are made to reach people with significant unmet needs. On the other hand, scientific and technological developments could increase or reduce overall need and demand for

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66 American Association of Dental Schools, August 1999. (Phone conversation)  
67 Richard Weaver, DDS, American Association of Dental Schools, February 9, 2000.  
68 Richard Weaver, DDS, American Association of Dental Schools, February 9, 2000.  
69 Richard Weaver, DDS, American Association of Dental Schools, February 9, 2000.
dental services depending on whether they promote prevention or expensive treatment. In addition, the current dental work force appears to have reserve capacity that could be mobilized through better use of allied dental personnel, improved identification and elimination of care with little or no demonstrative health benefit and more efficient delivery systems."

The IOM noted that two persistent work force problems do present themselves however:
(1) parts of the country in which dental services are in short supply
(2) minority representation
*
Dentists in Delaware 1998 report shows evidence of these two problems in Delaware, as well.

The opening of the two new schools, the one in Florida and the one in Nevada, appear in part to be a response to an identified need for additional dentists in certain geographic areas.

These states, along with others, recognize that it is easier to attract dentists who go to school in-state rather than to try to recruit beyond state lines. In Nevada, the school is planning to establish a system of dental clinics that will serve as training grounds for students and provide care to the underserved populations.

The Advanced Education in General Dentistry (AEGD) program at the University of Florida, College of Dentistry, also places trainees in clinics proving care to the state’s underserved dental population. The dental school at Lutheran Medical Center in New York also has a program that places trainees in community health centers.

Advanced Education and Residency Training
Twenty five percent of dental school graduates immediately pursue post doctoral education, such as through a General Practice Residency (hospital based) or Advanced Education in General Dentistry (non-hospital based) program. Nevertheless, the demand for AEGD or GPR positions exceeds supply. The demand is cited by some as evidence that students to do not feel adequately prepared to practice. There is an average of 2,000 applicants per 1,200 residency slots nationwide. Delaware averages 50 applications for its 6 slots.

Hospital based general practice residency programs have been accredited since the late 1940s. The programs themselves date back to the 1920s. In 1977, the

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71 American Association of Dental Schools, August 1999. (Phone conversation)
72 Richard Weaver, DDS, American Association of Dental Schools. August 1997.
73 Dr. Richard Weaver, American Association of Dental Schools. August 1999.
74 Robert Arm, DMD, chairman, Department of Dentistry and Program Director, General Practice Residency Program, Christiana Care Health Systems, June 14, 1999, before to the DHCC Committee on Dental Access Improvement.
American Association of Dental Schools urged advanced education programs for dentistry be approved for non-hospital sites, so as to be consistent with the focus of comprehensive care and care outside the inpatient setting. In 1979, the ADA authorized this step.  

Supporters of residency training relate that the pre-doctoral curriculum is so filled with coursework and the acquisition of technical skills that students have little time to integrate their skills and knowledge into the delivery of comprehensive care. A year of post-graduate training is considered an opportunity for students to gain confidence in performing procedures, improve their patient management skills to cover more complex problems and enhance their knowledge of the non-technical aspects of patient care.

The problem is similar to that in medicine before graduate medical education was universally accepted. In medicine, a residency is required in every state and screening mechanisms are in place to review the quality of practitioners. These public safeguards do not exist in dentistry.

The Institute of Medicine in its 1995 report on the future of dentistry recommended increased opportunities for postdoctoral education in general dentistry. The IOM stopped short of recommending requiring residency training, recognizing that increasing financial pressures on hospitals, the need for every state to revise their statutes to make this a requirement and student resistance made a mandate impractical.

Nevertheless, it is worth noting that similar recommendations in support of post doctoral training have been issued over the years by a Pew commission (1993), the ADA (1983) and the W.H. Kellog Foundation study (1980). The American Association of Dental Schools has not taken a formal position but has stated that efforts should be made to ensure there are enough post doctoral training positions to meet demand.

The Commission on Dental Accreditation (which is administered at arms length by ADA) accredits two types of post-doctoral training programs

- Advanced Education in General Dentistry (AEGD) for non-hospital sites, and
- Hospital-based General Practice Residency (GPR) programs

Funding is available from U.S. Public Health Service Bureau of Health Professions for start up and expansion of AEGD programs.

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75 Dental Education at the Crossroads. Institute of Medicine. 1995.
76 Dental Education at the Crossroads. Institute of Medicine. 1995.
77 As noted by Louis Rafetto, DMD, president of the Delaware State Dental Society in presentation to DHCC Committee on Dental Care Access Improvement. July 15, 1999.
78 Dr. Richard Weaver, American Association of Dental Schools. August 1999
79 Richard Weaver, American Association of Dental Schools. August 1999.
The University of Pennsylvania School of Dental Medicine, Philadelphia, PA, in a May 26, 1999 letter to Dr. Richard Sklut, President, Delaware State Board of Dental Examiners, suggested exploring the feasibility of developing dental externships and/or internships with their predoctoral dental students or possibly as part of the school's AEGD Graduate Program as a means to bring dental care to underserved areas in Delaware. The feasibility of expanding the general practice residency program at Christiana Health System to include clinical rotations in the state’s underserved areas also could be explored, potentially within the context of the U.S. Public Health Service Bureau of Health Professions program.

Salaries of Private Dentists
Per the 1997 Survey of Dental Practices, Income from the Private Practice of Dentistry, the mean net income in 1996 was $124,960 for a general practitioner and $196,670 for a specialist.

Salaries of Public Health Dentists
The salaries of dentists in Public Health are significantly lower than dentists in private practice. Public Health dentists are a pay grade 16. However, effective July, 1998, the dentist classification was covered under selective market variation. Starting salary for a public health dentist under selective market is $68,936. At 100% of midpoint, the salary is $91,915.

There is currently one vacancy for a dentist in public health. The process for applying is the same as for any state position.

Because of the low salary, even under selective market, the state has had difficulty contracting with licensed dentists to help fill gaps in service in Kent/Sussex. Under contract, dentists are paid $60 per hour.

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80 Letter presented to DHCC Committee on Dental Access Improvement by Dr. Richard Sklut at July 15, 1999 meeting.
81 Richard Weaver, DDS, American Association of Dental Schools and Dr. Kathy Hayes, Bureau of Health Professional, Health Resources and Services Administration. August 1999.
82 Breakdown of salary not included because most recent ADA survey report with this information is dated 1993 (1992 data).
83 Selective market allows the state in special cases to pay higher salaries that would normally occur under a given pay grade for professionals in short supply and/or who can demand much higher salaries in the private sector and therefore are unwilling to work for state government.
84 Information provided by Division of Public Health. August 24, 1999.
Licensure

Licensure of Private Dentists\textsuperscript{85}  
All states require that an individual obtain a license to practice dentistry. State boards of dental examiners typically oversee this process. All applicants must meet the following requirements:

1. Graduation from a dental program accredited by the ADA Commission on Dental Accreditation or the Commission on Dental Accreditation of Canada. (Some states also accept candidates who have graduated from a non-accredited program but require the candidate receive additional education in an accredited program. This may apply to graduates of foreign dental schools.)\textsuperscript{86}

2. Successful completion of the National Board Dental Examination Part I and Part II.\textsuperscript{87}

3. Successful completion of a state or a regional clinical examination.

In addition, some states require additional criteria be met, such as a successful completion of a jurisprudence examination.

Sixteen states and the District of Columbia) accept applications from graduates of unaccredited dental schools (applies to graduates of foreign dental schools) that have obtained some additional training in a ADA Commission on Dental Accreditation accredited program.

Dental boards in 34 states plus the District of Columbia grant licenses to dentists currently licensed and practicing for a period of time in another jurisdiction, without further theoretical and clinical examination.

\textit{(According to the American Dental Association, the licensure recognition system is usually referred to as licensure by credentials, and sometimes referred to as licensure by endorsement or by criteria. In such situations, the state's board of dentistry determines that the applicant is licensed in a state that has equivalent licensure standards. Licensure by reciprocity refers to cases in which a jurisdiction has statutory authority to grant licensure recognition only to licensees of states that grant similar recognition to licensees from the receiving jurisdiction. These decisions may be based on agreements between state boards.)}

\textsuperscript{85} ADA, Division of Education, Council on Dental Education and Licensure, Facts on Dental Licensure, December 1998.
\textsuperscript{86} Per Richard Sklut, DDS, president, Delaware Board of Dental Examiners, the Board has made one exception and waived the accreditation requirement for an applicant who attended dental school in England.
\textsuperscript{87} Part I tests knowledge of the basic biomedical sciences; Part II tests knowledge of dental sciences. To take Part II, a candidate must have passed Part I. Source: Dental Education and the Crossroads, Challenges and Change, Institute of Medicine, page 238, National Academy Press. 1995.
Almost all states (49 and the District of Columbia) require dentists to earn continuing education credits as a condition of licensure. The requirements range from 20 credits to 60 credits for a 2 year cycle.

**Licensure of Private Dentists in Delaware**

In addition to successful completion of the National Board Dental Examination, applicants must have:

- Successfully completed the state’s clinical examination (successful completion of the ADA sanctioned regional examination is not acceptable)
- Attended a Board approved college for two years prior to matriculating to a Board approved dental college and have maintained a scholastic standing in all the Board prescribed course of such rank as the Board may from time to time prescribe. Delaware requires the dental schools attended by applicants for licensure be approved by the Delaware State Board of Dental Examiners.
- Successfully completed Delaware’s dental jurisprudence examination.
- Spent 1 year as a dental intern or resident in a facility approved by the Board, or, in lieu thereof, 1 year of active service as a dental officer with the armed forces of the United State, or 5 years active dental practice in some other state or US territory.

The minimum acceptable passing score for the practical examination is set by the Delaware State Board of Dental Examiners. Currently, a score of 75 percent or above is required by the Delaware State Board of Dental Examiners.

In accordance with state code, the test and its methods must be validated as to its appropriateness and fairness by a member of the faculty from an accredited school of dentistry. This faculty member may not be licensed to practice dentistry in Delaware and shall be agreed to by the Division of Professional Regulation and the DE State Board of Dental Examiners. Harold S. Baumgarten, DMD, of the dental firm Amsterdam, Weisgold, Baumgarten, Ingber, P.C., Philadelphia, Pennsylvania, has been validating the Delaware exam annually.

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88 Title 24, Chapter 11, Delaware Code.
89 The Delaware State Board of Dental Examiners approves all colleges accepted by ADA approved dental schools. Information provided by Richard Sklut, DDS, president, Delaware State Board of Dental Examiners. August 24, 1999.
90 All dental schools in the United States are accredited by the ADA Commission on Dental Accreditation. All ADA accredited schools have the Delaware Board’s approval. Information provided by Richard Sklut, DDS, president, Delaware State Board of Dental Examiners. August 24, 1999.
91 The Delaware Board of Dental Examiners supports legislation to reduce the required number of years of practice necessary to waive the residency requirement from five years to three years. Per Dr. Richard Sklut, Board President, July 1999 meeting of DHCC Dental Care Access Improvement Project.
92 Presentation to DHCC Committee on Dental Care Access Improvement by Richard Sklut, DDS, President of the Delaware State Board of Dental Examiners. July 15, 1999.
since the venue was moved to Temple University, Philadelphia, PA.\textsuperscript{93} in 1994\textsuperscript{94} from the Dover Air Force Base.

Applicants for licensure in Delaware must complete the National Board examination with a score of at least 80.\textsuperscript{95}

Each applicant for licensure must submit proof of current certification in cardiopulmonary resuscitation technique, in accordance with regulations adopted by the Board of Dental Examiners.\textsuperscript{96}

**Delaware's Dentistry Licensure Laws Compared to Other States' Laws**

Delaware is one of 30 states that require graduation from accredited or approved dental schools.\textsuperscript{97}

Delaware is 1 of 41 states that requires successful completion of a jurisprudence examination demonstrating the applicants knowledge of state laws pertaining to dentistry.\textsuperscript{98}

Delaware is the only state that requires one-year of post graduate training in a general practice residency program.\textsuperscript{99}

Delaware is not among the 35 jurisdictions (34 states plus the District of Columbia) that grants licensure by recognition, either by licensure by credentials or by licensure reciprocity.\textsuperscript{100}

Since 1990, Delaware has required 50 hours of continuing education credits every two years. This is similar to the requirements of the other 49 states that require continuing education.\textsuperscript{101}

Delaware is not among the 41 jurisdictions (40 states plus the District of Columbia) that use a regional testing agency for the clinical examination. One state (Utah) accepts any of the four regional clinical examinations. Ten states, including Delaware, administer a state clinical examination, along with Puerto Rico and the U.S. Virgin Islands.\textsuperscript{102}

\textsuperscript{93} Harold S. Baumgarten, DMD, August 23, 1999.
\textsuperscript{94} Carol Ellis, Director, Division of Health Professions. August 25, 1999.
\textsuperscript{95} Title 24, Chapter 11, Delaware Code Annotated.
\textsuperscript{96} Title 24, Chapter 11, Delaware Code Annotated.
\textsuperscript{97} ADA Facts on Dental Licensure, December 1998.
\textsuperscript{98} American Student Dental Association Guide to Dental Licensure, 1999.
\textsuperscript{99} ADA Department of State Government Affairs, May 1998.
\textsuperscript{100} ADA Facts on Dental Licensure, December 1998.
\textsuperscript{101} ADA Facts on Dental Licensure, December 1998.
\textsuperscript{102} American Student Dental Association Guide to Dental Licensure, 1999. The 10 states are Alabama, California, Delaware, Florida, Hawaii, Indiana, Louisiana, Mississippi, Nevada and North Carolina.
Delaware Licensure Laws Compared to Those in **Surrounding States**

<table>
<thead>
<tr>
<th>Requirements</th>
<th>DE</th>
<th>MD</th>
<th>VA</th>
<th>PA</th>
<th>NJ</th>
<th>ADA Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>DDS or DMD Degree</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Pass National Boards</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Pass Regional Practical</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes, or other equivalent exam and waive if already licensed in another state</td>
</tr>
<tr>
<td>Pass State Practical</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Accept other recognized exam (i.e. regional practical) and waive if already licensed in another state</td>
</tr>
<tr>
<td>Complete General Practice Residency or Equivalency</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Does not recommend residency requirement; instead encourages development of enough post graduate educational slots to meet demand</td>
</tr>
</tbody>
</table>

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103 Presented by Joseph Liefbroer to the DHCC Committee on Dental Access Improvement. June 14, 1999.
Delaware is the only state in the region that does not accept the North East Regional Board of Dental Examiners clinical examination. The 15 states in the region accepting the North East Regional Board clinical examination are: Connecticut; District of Columbia; Illinois; Maine; Maryland; Massachusetts; Michigan; New Hampshire; New Jersey; New York; Ohio; Pennsylvania; Rhode Island; Vermont and West Virginia.\textsuperscript{104}

To practice in Delaware, dentists or recent dental school graduates from any other state in the region or nation must successfully complete the Delaware clinical examination, even if they have passed a regional examination.

Differences between NERB and Delaware Clinical Examinations
The Delaware State Board of Dental Examiners reports that two primary differences between the Delaware clinical examination and the NERB clinical examination are:

- Some portions of the NERB examination are conducted on mannequins (root canal and crown exercises). Under the Delaware clinical examination, all procedures are performed on human subjects.
- Three examiners administer the NERB exam. Five examiners administer the Delaware examination.\textsuperscript{105}

Another difference may be the pass rate. According to the Delaware State Board of Dental Examiners, the pass rate for the Delaware dental clinical examination is about 60 percent and the pass rate for the North East Regional Board examination is about 60 percent.\textsuperscript{106} The average pass rate for the North East Regional Board dental examination from the Spring of 1996 to the Spring of 1999 was 58.5 percent.\textsuperscript{107}

According to the Delaware Board of Dental Examiners\textsuperscript{108} the average pass rate for the Delaware dental hygiene examination was for the years 1996 through 1999 was 89.9 percent. The North East Regional Board of Dental Examiners dental hygiene examination average pass rate for the period running from the Spring of 1996 to the Spring of 1999 was 86.5 percent.

\textsuperscript{104} NERB Chairman Dr. Charles B. Cartwright, DDS, MS. August 19, 1999.
\textsuperscript{105} Per Richard Sklut, DDS, President of the Delaware State Board of Dental Examiners. Presentation to the DHCC Committee on Dental Care Access Improvement. July 15, 1999.
\textsuperscript{106} Richard Sklut, DDS, President of the Delaware State Board of Dental Examiners. Presentation to the DHCC Committee on Dental Care Access Improvement. April 15, 1999.
\textsuperscript{108} Gail Franzolino, Board of Dental Examiners, Delaware Division of Professional Regulation.
<table>
<thead>
<tr>
<th></th>
<th>NERB Clinical</th>
<th>DE Clinical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Passing Grade</td>
<td>&gt;75%</td>
<td>&gt;75%</td>
</tr>
<tr>
<td>Grading Curves</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Scores shared with State Boards</td>
<td>Yes</td>
<td>Yes (upon request)</td>
</tr>
<tr>
<td>Use of Human Subjects</td>
<td>Operative procedures (Amalgam, Composites, Periodontal Section (1 day))</td>
<td>All procedures</td>
</tr>
<tr>
<td>Simulated (mannequin)</td>
<td>Bridge Work Root Canal (endodontics) (1 day)</td>
<td>None</td>
</tr>
<tr>
<td>Computer</td>
<td>Diagnosis, Oral Pathology, Radiology (6 hours)</td>
<td>Diagnosis, Oral Pathology, Radiology</td>
</tr>
<tr>
<td>Prior to the exam</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Delaware Clinical Examination: Scoring/Grading System

Weighting
Full Mouth Radiographs  5%
Periodontal Section  20%
Restorative – 60%
  Class II Amalgam  20%
  Class II, III, IV Composites  20%
  Casting Exercise  20%
Diagnosis, Oral Pathology, Radiology  10%
Professionalism  5%

NERB Clinical Examination Scoring/Grading System\textsuperscript{109}

Dental Simulated Clinical Exercise – 100 points
Consists of three sections: Diagnosis, Oral Medicine and Radiology (DOR); Comprehensive Treatment Planning (CTP) and Case Based Examination (CBE). The score for the exercise is an average of the three section scores. In order to pass, no two section scores may be below 75 and no individual section score may be below 62. If so, a 20 point penalty is deducted from the exercise grade. A grade of 75 or higher is passing.

Simulated Patient Treatment Clinical Exercise – 100 points

<table>
<thead>
<tr>
<th>Task</th>
<th>Weighted Point Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Porcelain Fused to Metal Crown Preparation</td>
<td>17</td>
</tr>
<tr>
<td>Cast Full Crown Preparation</td>
<td>17</td>
</tr>
<tr>
<td>3-Unit Physiologic Interim Restoration (FPD)</td>
<td>33</td>
</tr>
<tr>
<td>Endodontic Therapy</td>
<td>33</td>
</tr>
</tbody>
</table>

The candidate must demonstrate acceptable performance, a score of 75 or higher to receive the assigned weighted point values.

Restorative Clinical Exercise – 100 points

<table>
<thead>
<tr>
<th>Task</th>
<th>Weighted Point Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amalgam Cavity Preparation</td>
<td>25</td>
</tr>
<tr>
<td>Amalgam Restoration</td>
<td>25</td>
</tr>
<tr>
<td>Composite Cavity Preparation</td>
<td>25</td>
</tr>
<tr>
<td>Composite Restoration</td>
<td>25</td>
</tr>
</tbody>
</table>

\textsuperscript{109} North East Regional Board of Dental Examiners, Inc., Manual for the Examination in Dentistry, Summer 1999.
The candidate must demonstrate acceptable performance, a score of 75 or higher to receive the assigned weighted point values.

*Periodontal Exercise – 100 points*

### Weighted Point Values for Level I Evaluation

<table>
<thead>
<tr>
<th>Sections</th>
<th>Weighted Point Value</th>
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</thead>
<tbody>
<tr>
<td>Patient Selection</td>
<td>30</td>
</tr>
<tr>
<td>Subgingival Calculus Detection</td>
<td>20</td>
</tr>
<tr>
<td>Subgingival Calculus Removal</td>
<td>20</td>
</tr>
<tr>
<td>Plaque/Stain Removal</td>
<td>10</td>
</tr>
<tr>
<td>Sulcus/Pocket Depth Measurements</td>
<td>10</td>
</tr>
<tr>
<td>Treatment Management</td>
<td>10</td>
</tr>
</tbody>
</table>

There are four levels of performance which are determined by the published criteria. Based in the level of evaluation of the performance, a lesser point is assigned for levels II, III, and IV. If a candidate receives a level IV evaluation, no points are assigned toward the Exercise grade and the additional deduction penalty is made to the Exercise grade for specific sections: in Patient Selection (-30), the Subgingival Calculus Removal (-20), and Treatment Management (-10). An exercise grade of 75 or more is passing. Levels of evaluation correspond with the published criteria.

**Licensure Authority: Regional and Boards**

The function of a regional board is limited to administering a common clinical examination throughout the region. A steering committee develops the content and criteria for the examination. The North East Regional Board’s steering committee is comprised on 3 representatives from each member state, regardless of the state’s size. Candidates for licensure who have successfully completed the NERB examination must still meet states’ other requirements -- such as passage of jurisprudence examination or post-doctoral education requirements -- and be granted a license by the state’s dental board. NERB does not issue licenses to dentists. \(^{110}\)

**Licensure of Public Health Dentists in Delaware\(^{111}\)**

During the 1960-1970s, the Delaware Board of Health opened a number of dental clinics across the state. Insufficient funds precluded the Division of Public Health from hiring American trained dentists and foreign trained dentists were hired.

At the request of the Board of Health (now the Department of Health and Social Services) these dentists were granted "limited registration."

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\(^{110}\) Charles B. Cartwright, DDS, MS, Chair, NERB Examination Committee

\(^{111}\) Information in this section, unless otherwise footnoted, was obtained through conversations with various individuals familiar with the history. A significant amount of the information was provided by the Delaware Division of Professional Regulation, which oversees the licensure process.
Per the state dental code, a limited registration is to be made available to dental interns in a hospital or other institution maintained by the state, county or municipality for a period of 1 year. The intern is permitted to work only in the institution designated on the registration and only on bona fide patients of that institution.

Each year thereafter, the Board of Dental Examiners has renewed the limited licensures of these public health dentists, negating the need for the public health dentists to obtain full licensure in order to continue to work in the public health dental clinics.

During the Joint Sunset Committee’s review of the Board of Dental Examiners in 1995, concerns were raised that the discrepancy in licensure requirements for public versus private dentists had resulted in a two-tiered system under which poor children receive care by less qualified individuals.

Concerns also were raised, however, that prohibiting these public health dentists from continuing to practice in the clinics would result in Medicaid children receiving no care at all, because private dentists were not treating them in their offices.

In 1996, Sen. Patricia M. Blevins, introduced legislation to grant full licensure to the public health dentists without the necessity of passing the Delaware clinical examination or approval from the Board of Dental Examiners. In 1997, DHACS issued its report recommending that the state grant full licensure to these dentists. In 1999, the six public health dentists took the Delaware clinical examination. Two passed. The remaining four continue to work under limited registration.

Under an agreement made years ago between the Division of Public Health and the Board of Dental Examiners, there is an understanding that the Board of Dental Practice will not issue additional limited registrations except to dental interns, as prescribed in the code.

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112 Title 24, Chapter 11, §1128, Delaware Code Annotated.
114 Information provided by Division of Public Health. August 1999.
115 Information obtained through various documents and discussions with Carol Ellis, director, Division of Professional Regulation. August 1999.
Scope of Practice for Public Health Dentists

The scope of practice for public health dentists has historically been defined based on the capabilities of the provisionally licensed dentists, physical facilities, and population to be served. The scope of practice is stated in the job description.

Because of the physical layout of Delaware’s public health clinics, there are some procedures which are not done in the clinics, and are instead referred out to private dentists. These include procedures which would require general anesthesia, all orthodontic procedures, and procedures usually performed by a specialist (periodontics, for example).

The basic difference between public health dentists and dentists in private practice is that private practice dentists generally serve populations across the life span (not just children). Public health dentists also are not permitted to administer general anesthesia in their offices. However, they, too, usually refer out for orthodontic and other specialty care.

Licensure Reform

Licensure reform has been a key issue for some time within the dental community at both the national and state levels.

To facilitate dialogue and generate consensus on how the process of dental licensure can be improved, the American Dental Association since 1996 has convened “invitational conferences” once or twice each year. The conferences are attended by dentists from various states, representatives from state public health departments and representatives from the American Dental Association and the American Student Dental Association, the American Association of Dental School, the American Student Dental Association, the American Association of Dental Examiners, and regional testing agencies.

Some of the major issues addressed during the Invitational Conferences for Dental Clinical Testing Agencies center on the:

- Use of live patients in clinical licensure examination
- Variations in the content and relevance of examinations
- Unreasonable barriers to the movement of dentists and dental hygienists across state lines
- Practice acts that unreasonably restrict the use of appropriately trained allied dental personnel, and the
- Creation of more candidate-friendly examinations

---

A key outcome of the effort is a set of licensure objectives that have become known as the "Agenda for Change in the Clinical Licensure Examination Process." It calls for:

- More uniform content and methodology in clinical licensure examinations
- Minimizing the use of human subjects in clinical licensure examinations
- Administration of a common content clinical examination and standardized examiner calibration
- Better communication to candidates of information about clinical examination logistics
- Minimizing the time needed to notify candidates about examination results
- Acceptance of the National Board Dental Examination in lieu of a separate written exam on oral diagnosis and treatment planning
- Addressing concerns about the failure rates on clinical examinations, by collecting statistical data within the limits imposed by the need to protect confidentiality

The ADA also supports licensure by credentials.  

The American Student Dental Association and its Task Force on Dental Licensure Reform has embraced licensure goals which include:

- Creation and acceptance of one content-uniform clinical licensure examination
- Creation of a more candidate-friendly examination
- Substitution of successful completion of the National Board Dental Examination Part II for all written examinations covering clinical topics
- Minimizing the use of human subjects
- Making state jurisprudence exams available via the Internet

Licensure Issues Receiving the Most Attention in Delaware

The licensure issues receiving the most attention in Delaware are the:

- State versus Regional Clinical Examination
- Licensure by Recognition
- Post-graduate residency requirement

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117 ADAONLINE, August 1999.
CHAPTER FOUR

Delaware Institute of Dental Education and Research
CHAPTER FOUR
DELAWARE INSTITUTE OF DENTAL EDUCATION AND RESEARCH

History
Over 50 years ago, the Dental Code of the State of Delaware was amended to require one year of general practice residency training in a hospital before being admitted to practice dentistry in the State of Delaware. The requirement was, and still is, unique among the states. Delaware is the only state with this requirement.

Traditionally, the supervision and education of the dental resident had been rendered by a voluntary staff of attending dentists in the hospital. Eventually, however, requirements of the Commission on Dental Accreditation and the Joint Commission on Hospital Accreditation (now called the Joint Commission on the Accreditation of Healthcare Organizations) necessitated the employment of a full-time salaried dental director.

In 1979, the Robert Wood Johnson Foundation, began a $10.5 million program to provide dental care to the underserved segments of the community by using hospital general practice residents to provide the care. The Wilmington Medical Center Department of Dentistry received a $400,000 grant over four years, which was used to fund the salaries and benefits of 3 general practice residents and a full-time director of the Department of Dentistry. Five general practice residents were funded by Blue Cross & Blue Shield of Delaware.

In 1983, the RWJF funding and the funding from the insurer ended.

In the meantime, James Harding, who was the president of the Medical Center of Delaware, made known his desire to close the dental residency department, primarily because it was so costly. To prevent the closure, George A. Zurkow, DDS forwarded legislation to establish the Board of Trustees of the Delaware Institute of Dental Education and Research (DIDER). The emphasis on retaining the residency program was important because of Delaware’s requirement of a one year of general practice residency as a condition of licensure to practice dentistry in Delaware. The bill was signed into law in 1981.

Dr. Zurkow named DIDER after the program established to improve access to a medical education for Delaware residents, the Delaware Institute for Medical Education and Research, or DIMER.

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120 The general practice dental residency program at Christiana Care Health Systems is the only accredited general practice residency in Delaware -- and always has been.
121 George A. Zurkow, president, DIDER. April 18, 1999. Presentation to DHCC Committee on Dental Access Improvement
The decision to fund residents rather than students was based on the following reasons:122

- Residents, who are close to their time of practice, tend to stay in the state where they train. Students may not return to their home state or stay in the state of their school.
- Resident dentists in the state provide patient care to Delawareans. Students in dental school in another state would not.
- Resident dentists provide services to special need patients and the medically compromised.

The Delaware General Assembly began providing funding for DIDER in Fiscal Year 1983-1984. That year the funding level was established based on the salaries and benefits of 1.5 general practice residents at the Medical Center of Delaware. The funding level did not and still does not reflect the additional costs to the hospital associated with the residency program, such as the full-time salary of the director of the dental department, classrooms, laboratories, and a fully equipped and staffed dental clinic.123

The Delaware General Assembly more recently has provided the funding reflective of the salaries and benefits of 3 residents.

The general practice dental residency program at Wilmington Hospital, Christiana Care Health Systems is the only general practice dental residency program in the State of Delaware.124

State Agency Home
For budget purposes, DIDER resides within the Higher Education Commission, which resides in the Executive Office of the Governor. DIDER has no offices and receives no funding for staff and supplies.

Board of Trustees
The statute calls for the Board to be comprised of 5 trustees:

<table>
<thead>
<tr>
<th>Member</th>
<th>Appointment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Layman</td>
<td>Governor</td>
</tr>
<tr>
<td>1 Member, Board of Dental Examiners</td>
<td>Board of Dental Examiners</td>
</tr>
<tr>
<td>2 Members, Delaware State Dental Society</td>
<td>Dental Society</td>
</tr>
<tr>
<td>1 Member, Board of Director of the Medical Center of Delaware</td>
<td>Board, Medical Center of Delaware (now Christiana Care Health Systems)</td>
</tr>
</tbody>
</table>

---

122 Governors Recommended Budget, FY 98
123 Information above was submitted by the DIDER Board to the Delaware General Assembly associated with budget requests for the budget for Fiscal Years 1985-1986.
124 In the early 1980s, Bissel Hospital and Delaware State Hospital had programs but those have been discontinued. The Veterans Administration hospital in the state also had one at one time, but it also has been discontinued.
The DIDER statute calls for staggered terms; one member appointed for 1 year, 2 members for two years, and 2 members for 3 years. Thereafter the members, in accordance with the statute, are to be appointed for 3-year terms subject to 1 consecutive appointment. The Board’s chairman is elected from among its membership at the first annual meeting each year.

George A. Zurkow, DDS, has been chairman/president of the DIDER Board since its creation.

No members of the Board are permitted to receive any compensation for their duties or expenses.

**Board Purposes**
The purposes of DIDER as set out in state law are to support, encourage, and promote:

1. Accredited general practice residencies in dentistry at any general hospital in the State that will provide a comprehensive post-graduate training program pursuant to the requirements of Chapter 11 of title 24.
2. Expansion of opportunities for Delaware residents to obtain post-graduate dental training.
3. A strengthening of the factors favoring the decision of qualified dental personnel to practice in Delaware.
4. Dental needs of the community at large and particularly those who do not have ready access to dental programs. (63 Del. Laws, c.125, § 1.)

**Fiscal and property powers**
The Board may pay or contribute to the cost of any accredited general practice residency in dentistry at any general hospital in the state; may contribute financially to the post-graduate dental education of qualified residents of Delaware and make such other payments as are required for the furtherance of the purposes of the institute and the performance of the duties of the Board; may receive, hold, invest, reinvest, and use on behalf of the Institute and for any of its purposes real property, personal property, and moneys, or any interest therein, and income therefrom, either absolutely or in trust. The Board may acquire such property or moneys for such purposes by the acceptance of the gifts, grants, appropriations, bequests and devices from any source, either public or private. (63 Del. Laws c. 125, § 1.)

**Education and research responsibilities**
The Board may foster and support educational opportunities for Delaware residents in dentistry and dental related fields; may promote curricular and program studies designed to meet needs in the field of Dentistry and oral hygiene; may pursue these and other similar aims through contracts or other appropriate means, in cooperation with the federal government, the state government, and political divisions thereof, educational institutions, health
services, nonprofit institutions and organizations, business enterprises and other persons concerned with the dental health of the citizenry and with scientific and technological research, development and education. (63 Del. Laws, c. 125, § 1.)

Selection of residents
The DIDER Board does not participate in the selection of the residents who are accepted into the general practice residency program at Wilmington Hospital. This is done by a committee of the hospital. DIDER Board members, however, are often on that Committee, by virtue of their employment at the hospital.125

Students and recent dental school graduates from around the nation apply to the residency program. A committee of the hospital interviews approximately 15 applicants, who are selected based on their scores on the national board examinations, whether or not they are a Delaware resident and referrals. If there are sufficient number of qualified applicants from Delaware, three of the six residency positions are given to Delaware residents. The remaining three slots are given to the most qualified applicants, regardless of their state of residence.126

The residency program averages 50 applications each year for the 6 slots.127

Location of Residency Programs Attended by Dentists Practicing in Delaware
About 43.5 percent of dentists practicing in Delaware completed their residency training in Delaware.128 The breakdown by county of Delaware dentists who did their residency in Delaware is as follows:
12.1 percent: Kent County
48.7 percent: New Castle County
38.6 percent: Sussex County

Almost 12 percent of dentists in Delaware did their residency in Pennsylvania.

Thirty-four (34) percent did their residency in states outside the immediate region.129

Retention of Residents
Approximately 55 percent of the dental and oral surgery residents that matriculate through Christiana Care Health System establish practice in Delaware.130

125 Information provided by Robert Arm, DMD, chairman, Department of Dentistry and Program Director, General Practice Residency Program, Christiana Care Health Systems.
126 Information provided by Robert Arm, DMD, chairman, Department of Dentistry and Program Director, General Practice Residency Program, Christiana Care Health Systems.
127 Robert Arm, DMD, chairman, Department of Dentistry and Program Director, General Practice Residency Program, Christiana Care Health Systems, June 14, 1999, before the DHCC Committee on Dental Access Improvement.
128 Dentists in Delaware 1998.
129 Dentists in Delaware 1998
Budget
DIDER’s FY 1999 budget is $143,300. The amount DIDER receives is based on the amount needed to cover the salaries for 3 general practice dental residents plus employment costs (FICA, health insurance, workers’ compensation, Medicare, pension), $1000 per person for malpractice insurance and $500 per person for education and travel expenses. The hospital bills the state budget office two times a year and the state budget office disburses the funds from an account established for DIDER.  

The hospital deposits the funds into the hospital’s general fund. The department uses the funds to cover the costs of the residency program, dental assistants, attending staff, equipment and sending a 1.6 full time equivalent resident to provide care at the state’s psychiatric hospital. The funds do not flow directly to the residents in the hospital residency program, but helps funds them.  

Per information provided by Wilmington Hospital Department of Dentistry, 1997-1998 salary and benefits for general Dental residents at Wilmington Hospital Department of Dentistry were as follows:

| Salary of general dental residents: | $35,152 |
| Benefits (30%)                  | $10,545 |
| Total:                          | $47,045 |

Benefits include:
- Medical and Dental Insurance
- Paid time off (vacation)
- Disability & Life Insurance
- Pension with matching contributions

Not included in the 30% benefit package, but the hospital does pay for
- Continuing Education (paid by the dental department and $1,000 from academic affairs department)
- Professional Liability Insurance
- Licensure

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130 Dental and oral surgery resident records review for 1979-1997, submitted to Committee staff.
132 Information provided by Robert Arm, DDS, chair, Wilmington Hospital Department of Dentistry. June 1999.
### DIDER Budget History

<table>
<thead>
<tr>
<th>Year</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1982-1984</td>
<td>No funding</td>
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<tr>
<td>FY 1985</td>
<td>DIDER Board receives $40,000 to fund 1.5 general practice residents at the Medical Center of Delaware. ($21,944 salary plus fringe benefits of $4,826 to total $26,770)</td>
</tr>
<tr>
<td>FY 86</td>
<td>$86,700</td>
</tr>
<tr>
<td>FY 87</td>
<td>$91,700</td>
</tr>
<tr>
<td>FY 88</td>
<td>$93,500</td>
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<td>FY 89</td>
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<tr>
<td>FY 99</td>
<td>$143,300</td>
</tr>
<tr>
<td>FY 00</td>
<td>$143,300</td>
</tr>
</tbody>
</table>

### What Would Happen if DIDER No Longer Existed?

According to Dr. George Zurkov, DIDER’s Chair and Dr. Robert Arm, chairman, Department of Dentistry and Program Director, General Practice Residency Program, Christiana Care Health Systems, if DIDER funding were not available, it is likely that the number of general practice residency positions would be reduced and that residents would no longer be made available to provide care to patients at the Delaware Psychiatric Hospitals. If financial pressures on the hospital became so severe that the hospital was forced to make a decision about whether to close the general practice residency program or the oral surgery program, Christiana Care Health Systems would be forced to close the general practice residency program. As a Level 1 trauma hospital, Christiana Care Health Systems is required to have the oral surgery program.

### Types of Services Provided

General practice residents provide a full range of comprehensive general dental care. Examples would include those procedures related to the treatment of prosthetics (dentures and crowns), cavities, periodontics, endodontics and simple extractions. There is a review list that the residents follow.

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133 State Budget Office.

134 Robert Arm, DMD, Chairman, Department of Dentistry and Program Director, General Practice Dental Residency Program, Christiana Care Health System. August 1999.
informed of all the procedures that need to be done and informed that piecemeal care will not be provided.

The residents also provide emergency care such as to relieve pain, swelling, bleeding, and to perform biopsies. Patients needing emergency care are seen the same day that they call in, or if they call after 1:00 p.m., the next available session on the following day.

The residents rotate through the hospital's oral surgery section and assist in the treatment of medically compromised patients in need of oral care to prevent further medical complications.

Sites Where Residents Perform Services
Residents perform general comprehensive dental care at the Christiana Care Wilmington Hospital Health Center Dental Office.

Care is also provide at Delaware Psychiatric Hospital and at Delaware Technical and Community College in Wilmington, in affiliation with the dental hygiene program.

Residents assist in the operating rooms at Christiana and Wilmington hospitals when needed.

After-hours emergency care is provided when needed at Wilmington and Christiana hospital emergency departments. After hours care is provided when needed at Delaware Psychiatric Hospital.

Types of Patients For Whom Residents Perform Services
Residents provide care for anyone who meets the hospital's criteria of needing comprehensive care, emergency care or surgical care. Both children and adults are treated.

Insurance Status of Patients
Examining the payer mix of the patients treated at the ambulatory care office at Wilmington Hospital the insurance status of patients is as follows:

- Uninsured (self-pay): 79%
- Medicare: 5% (Medicare does not cover dental care)
- Medicaid: 13% (Medicaid does not cover dental care for adults.)
- Other: 3%

(Note: The figures above are for the ambulatory office at Wilmington Hospital (dental and medical). The payer mix for dental care is essentially the same as that for medical care. Essentially all care provided by residents under the supervision of attending physician/dentists.)
Assuming that:
- Most of the uninsured individuals do not pay for services
- Medicare does not pay for dental services, and
- About 50% Medicaid patients at the clinic are adults
it is estimated that up to 90% of the dental care provided in the clinic is not reimbursed. This is in line with the findings of a Robert Wood Johnson Foundation study conducted in 1993 in association with the grant mentioned earlier, that found that approximately 5% of the dental care provided in the clinic was reimbursed.135

Number of Visits and Wait Time for Appointments
In Fiscal Year 1999, there were 4,700 visits for comprehensive care, 1,200 for emergency care and 6,600 for oral surgery at the Christiana Care Health System dental clinic. The waiting period is about three months for comprehensive care. Emergency cases are seen immediately or the next day.

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135 Robert Arm notes that arriving at this estimate for the RWJF study required a full time accountant who examined the records and made the calculations. A similar exercise has not been conducted for this report.
APPENDIX

Survey Information Presented to the Committee
1. Delaware Division of Public Health: 1998 Dentist Survey
2. School Nurses: Survey of Public School Nurses in Delaware
3. Delaware Dental Society: 12-state Licensure & Manpower Survey
4. DIDER: Comparison of 9 Loan Repayment/Forgiveness Programs

DIDER Statute
5. Title 14, Chapter 88, Delaware Code
The 1998 Dentist Survey

Focus on the Capacity to Provide Dental Services in Delaware

Gina Bianco Perez
Division of Public Health

Source: Center for Applied Demography and Survey Research, University of Delaware

Survey Background

- Control Point is the Dental Board License File
- Data Collected from October 1998 to February 1999
- Principle Method is the Mail Survey
- Three Mailings Conducted
- Of the 286 Dentists; 247 were Active
- Data has been Weighted for Non-Respondents Using Zip Codes

Full-Time Equivalent Criteria

- General and Pediatric Dentists
  - Age becomes of factor after 55 years
    - decreases dentist FTE
  - Number of Hygienists and Assistants
    - increases dentist FTE
  - Hours of direct patient care
- Specialists
  - Depends on hours of direct patient care

Source: Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professions
Active 5 Years from Now? by County

![Graph showing the number of people active 5 years from now by county.]

Source: Center for Applied Demography & Survey Research, University of Delaware

Active 5 Years from Now? by County

![Graph showing the percent of people active 5 years from now by county.]

Source: Center for Applied Demography & Survey Research, University of Delaware

State Graduated from High School by County

![Graph showing the percent of people who graduated from high school by county.]

Source: Center for Applied Demography & Survey Research, University of Delaware
State of Dental School by County

<table>
<thead>
<tr>
<th>County</th>
<th>Kent</th>
<th>New Castle</th>
<th>Sussex</th>
<th>Delaware</th>
</tr>
</thead>
<tbody>
<tr>
<td>MD</td>
<td>7.5</td>
<td>13.3</td>
<td>13</td>
<td>12.8</td>
</tr>
<tr>
<td>DC</td>
<td>5.3</td>
<td>7.1</td>
<td>9</td>
<td>6.3</td>
</tr>
<tr>
<td>OH</td>
<td>10.5</td>
<td>4.2</td>
<td>9</td>
<td>4.7</td>
</tr>
<tr>
<td>PA</td>
<td>55.3</td>
<td>58.8</td>
<td>56.5</td>
<td>58.1</td>
</tr>
<tr>
<td>NY</td>
<td>5.3</td>
<td>2.5</td>
<td>8.7</td>
<td>3.3</td>
</tr>
<tr>
<td>Other</td>
<td>15.7</td>
<td>14.1</td>
<td>21.8</td>
<td>18</td>
</tr>
</tbody>
</table>

Sources: Center for Applied Demography & Survey Research, University of Delaware

Dental Specialists by County

<table>
<thead>
<tr>
<th>County</th>
<th>Kent</th>
<th>New Castle</th>
<th>Sussex</th>
<th>Delaware</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kent</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>New Castle</td>
<td>1</td>
<td>5</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>Sussex</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Delaware</td>
<td>2</td>
<td>7</td>
<td>2</td>
<td>12</td>
</tr>
</tbody>
</table>

Sources: Center for Applied Demography & Survey Research, University of Delaware

Completed Dental Residency? by County

<table>
<thead>
<tr>
<th>County</th>
<th>General</th>
<th>Specialist</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kent</td>
<td>58.7</td>
<td>100</td>
</tr>
<tr>
<td>New Castle</td>
<td>94.8</td>
<td>100</td>
</tr>
<tr>
<td>Sussex</td>
<td>85.7</td>
<td>100</td>
</tr>
<tr>
<td>Delaware</td>
<td>93</td>
<td>100</td>
</tr>
</tbody>
</table>

Sources: Center for Applied Demography & Survey Research, University of Delaware
Type of Dental Residency?
by County

<table>
<thead>
<tr>
<th></th>
<th>Kent</th>
<th>New Castle</th>
<th>Sussex</th>
<th>Delaware</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>24.3</td>
<td>40.8</td>
<td>29</td>
<td>38.6</td>
</tr>
<tr>
<td>Hospital</td>
<td>23.7</td>
<td>45.6</td>
<td>42.9</td>
<td>43.3</td>
</tr>
<tr>
<td>Specialized</td>
<td>29.6</td>
<td>15.4</td>
<td>14.4</td>
<td>17.2</td>
</tr>
<tr>
<td>Military</td>
<td>27.1</td>
<td>23.1</td>
<td>23.8</td>
<td>28.9</td>
</tr>
<tr>
<td>Other</td>
<td>2.9</td>
<td>2.2</td>
<td>19</td>
<td>2.8</td>
</tr>
</tbody>
</table>

Source: Center for Applied Demography & Survey Research, University of Delaware

Serve Pediatric Patients?
by County

<table>
<thead>
<tr>
<th></th>
<th>Kent</th>
<th>New Castle</th>
<th>Sussex</th>
<th>Delaware</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>92.3</td>
<td>97.9</td>
<td>95.2</td>
<td>97.1</td>
</tr>
<tr>
<td>Specialist</td>
<td>88.9</td>
<td>84.5</td>
<td>100</td>
<td>86.2</td>
</tr>
</tbody>
</table>

Source: Center for Applied Demography & Survey Research, University of Delaware

Youngest Age of Pediatric Patients?
by County

<table>
<thead>
<tr>
<th></th>
<th>Kent</th>
<th>New Castle</th>
<th>Sussex</th>
<th>Delaware</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 3 years</td>
<td>34.3</td>
<td>28</td>
<td>34.8</td>
<td>28.1</td>
</tr>
<tr>
<td>3 years</td>
<td>40.5</td>
<td>48.0</td>
<td>56.5</td>
<td>48.2</td>
</tr>
<tr>
<td>&gt; 3 years</td>
<td>25.2</td>
<td>23.4</td>
<td>4.7</td>
<td>25.7</td>
</tr>
</tbody>
</table>

Source: Center for Applied Demography & Survey Research, University of Delaware
Private Dentists Signed Up to Accept Medicaid as of 2-28-99

- New Castle County
  - 32 General/Pediatric
  - 1 Periodontist
  - 1 Endodontist
  - 1 Oral Surgeon
- Kent County
  - 5 General
  - 1 Prosthodontist
  - 1 Oral Surgeon
- Sussex County
  - 3 General
  - 2 Oral Surgeons
- Total
  - 40 General/Pediatric
  - 7 Specialists
Average Wait Time for New and Established Patients by County

<table>
<thead>
<tr>
<th></th>
<th>Kent</th>
<th>New Castle</th>
<th>Sussex</th>
<th>Delaware</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gen. Estab.</td>
<td>21.9</td>
<td>9</td>
<td>5.4</td>
<td>10.6</td>
</tr>
<tr>
<td>Gen. New</td>
<td>29.3</td>
<td>10.5</td>
<td>10.8</td>
<td>12.7</td>
</tr>
<tr>
<td>Spec. Estab.</td>
<td>9.4</td>
<td>7.6</td>
<td>1.5</td>
<td>7.7</td>
</tr>
<tr>
<td>Spec. New</td>
<td>15.4</td>
<td>9</td>
<td>2.5</td>
<td>9.8</td>
</tr>
</tbody>
</table>

Source: Center for Applied Demography & Survey Research, University of Delaware

Use of Non-Dentist Resources by County

<table>
<thead>
<tr>
<th></th>
<th>Kent</th>
<th>New Castle</th>
<th>Sussex</th>
<th>Delaware</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gen. Hygienists</td>
<td>90</td>
<td>89.2</td>
<td>92.5</td>
<td>92.5</td>
</tr>
<tr>
<td>Gen. Assistants</td>
<td>93.3</td>
<td>94.7</td>
<td>100</td>
<td>95</td>
</tr>
<tr>
<td>Spec. Hygienists</td>
<td>93.3</td>
<td>45.7</td>
<td>33.3</td>
<td>43.1</td>
</tr>
<tr>
<td>Spec. Assistants</td>
<td>100</td>
<td>91.3</td>
<td>100</td>
<td>93.1</td>
</tr>
</tbody>
</table>

Source: Center for Applied Demography & Survey Research, University of Delaware

Participate in Dental Insurance Plans by County

<table>
<thead>
<tr>
<th></th>
<th>Kent</th>
<th>New Castle</th>
<th>Sussex</th>
<th>Delaware</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>96.7</td>
<td>80.9</td>
<td>66.7</td>
<td>81.6</td>
</tr>
<tr>
<td>Specialist</td>
<td>88.9</td>
<td>67.4</td>
<td>100</td>
<td>71.9</td>
</tr>
</tbody>
</table>

Source: Center for Applied Demography & Survey Research, University of Delaware
Saturday and/or Evening Hours
by County

![Bar chart showing the percentage of people working during Saturday and/or evening hours by county.](chart1)

<table>
<thead>
<tr>
<th></th>
<th>Kent</th>
<th>New Castle</th>
<th>Sussex</th>
<th>Delaware</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gen. Evening</td>
<td>19.4</td>
<td>38.3</td>
<td>10</td>
<td>23.6</td>
</tr>
<tr>
<td>Gen. Saturday</td>
<td>6.9</td>
<td>19</td>
<td>4.8</td>
<td>15.1</td>
</tr>
<tr>
<td>Spec. Evening</td>
<td>22.2</td>
<td>22.2</td>
<td>0</td>
<td>21.1</td>
</tr>
<tr>
<td>Spec. Saturday</td>
<td>11.1</td>
<td>2.3</td>
<td>0</td>
<td>3.6</td>
</tr>
</tbody>
</table>

Source: Center for Applied Demography & Survey Research, University of Delaware

Languages Other Than English Spoken
by County

![Bar chart showing the percentage of people speaking languages other than English.](chart2)

<table>
<thead>
<tr>
<th></th>
<th>Kent</th>
<th>New Castle</th>
<th>Sussex</th>
<th>Delaware</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>19.4</td>
<td>38.1</td>
<td>42.9</td>
<td>36.1</td>
</tr>
<tr>
<td>Specialist</td>
<td>33.3</td>
<td>30.4</td>
<td>68.7</td>
<td>32.8</td>
</tr>
</tbody>
</table>

Source: Center for Applied Demography & Survey Research, University of Delaware

Dentists at this Site
by County

![Bar chart showing the number of dentists at the site by county.](chart3)

<table>
<thead>
<tr>
<th></th>
<th>Kent</th>
<th>New Castle</th>
<th>Sussex</th>
<th>Delaware</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>1.6</td>
<td>2.1</td>
<td>1.3</td>
<td>3.3</td>
</tr>
<tr>
<td>Specialist</td>
<td>1.4</td>
<td>1.7</td>
<td>1.7</td>
<td>1.7</td>
</tr>
</tbody>
</table>

Source: Center for Applied Demography & Survey Research, University of Delaware
Weekly Patient Encounters by County

<table>
<thead>
<tr>
<th>County</th>
<th>General</th>
<th>Specialist</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kent</td>
<td>118.6</td>
<td>73.9</td>
</tr>
<tr>
<td>New Castle</td>
<td>103.6</td>
<td>141.4</td>
</tr>
<tr>
<td>Sussex</td>
<td>124.6</td>
<td>94</td>
</tr>
<tr>
<td>Delaware</td>
<td>127.2</td>
<td>128.1</td>
</tr>
</tbody>
</table>

Source: Center for Applied Demography & Survey Research, University of Delaware

Participate in Summit by County

<table>
<thead>
<tr>
<th>County</th>
<th>General</th>
<th>Specialist</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kent</td>
<td>22.2</td>
<td>59</td>
</tr>
<tr>
<td>New Castle</td>
<td>31.1</td>
<td>46.9</td>
</tr>
<tr>
<td>Sussex</td>
<td>52.6</td>
<td>100</td>
</tr>
<tr>
<td>Delaware</td>
<td>36.7</td>
<td>45.5</td>
</tr>
</tbody>
</table>

Source: Center for Applied Demography & Survey Research, University of Delaware
Public Health Dental Sites

- 7 DPH Dental Clinics Statewide
  - Kent and Sussex Counties - 3 sites
    - 2 Full-Time Dentists
      - Contractual Dentists = 1 FTE
    - 3 Part-Time Contractual Hygienists
      (40hrs/wk)
  - New Castle County - 4 sites
    - 3 Full-Time Dentists

Public Health Dental Services

- Prophylaxis
- Screening & Education
- X-rays
- Sealants
- Fillings
- Crowns
- Extractions

1998 DPH Dental Capacity

- 10,873 Patients Seen
- 15,415 Visits
- 95% of Patients Covered by Medicaid
- Waiting times vary from 1 to 5 months
- Emergency visit waiting time up to 2 months
- Same day service in NCC with referral to Wilmington Hospital for serious emergencies
School Nurses View of Dental Care Access in Delaware
Grass Roots Perspective

Surveys were mailed to all public school nurses in Delaware. It was requested that just one survey per school be completed and returned. Ninety-five surveys were returned from 160 schools, a 59% rate of return.

New Castle 56 surveys returned
Kent 13 surveys returned
Sussex 26 surveys returned

1. Dental Care Access for Medicaid Students as Perceived by School Nurses

<table>
<thead>
<tr>
<th></th>
<th>Excellent</th>
<th>Fair</th>
<th>Poor</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Castle</td>
<td>2.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kent</td>
<td>1.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sussex</td>
<td>1.6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Breakdown of service providers for Medicaid students (Schools noted more than one service provider)

<table>
<thead>
<tr>
<th>Service Provider</th>
<th>New Castle</th>
<th>Kent</th>
<th>Sussex</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinic/Private Dentist/Other</td>
<td>88%</td>
<td>62%</td>
<td>100%</td>
</tr>
<tr>
<td>New Castle</td>
<td></td>
<td></td>
<td>12%</td>
</tr>
<tr>
<td>Kent</td>
<td></td>
<td></td>
<td>0%</td>
</tr>
<tr>
<td>Sussex</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Voices from the Field

- Special Education students are seen at DuPont Children’s Hospital Dental Clinic in New Castle County
- High school students are seen in NCC at the Wilmington Hospital Dental Clinic
- Poly-Tech High School in Kent County receives funds as part of a “School to Work” grant to operate a dental clinic. A dentist provides treatment to low-income students at Polytech. The grant pays the dentist at a rate of $50.00 and hour and provides funds for dental supplies. The high school provides all dental equipment and dental assisting services. Similar programs are located at Hodgson, Howard and Delcastle Technical High Schools.

3. Percentage of Medicaid Students receiving treatment

New Castle 24%  
Kent 5.6%  
Sussex 20%

4. Common reasons Medicaid students do not receive treatment

<table>
<thead>
<tr>
<th>Parent didn’t return forms</th>
<th>No appointments available</th>
<th>Too many students for appointments</th>
<th>No transportation</th>
<th>Refused Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Castle</td>
<td>61%</td>
<td>11%</td>
<td>23%</td>
<td>4%</td>
</tr>
<tr>
<td>Kent</td>
<td>.15%</td>
<td>61%</td>
<td>34%</td>
<td>34%</td>
</tr>
<tr>
<td>Sussex (high/middle school)</td>
<td>16%</td>
<td>30%</td>
<td>88%</td>
<td>8%</td>
</tr>
</tbody>
</table>

Voices from the Field

- It takes so long to get treatment completed with once a week visits, all students are not completed.
- At one Sussex County school, 69 visits were needed for 23 students. Out of 345 Medicaid students, only 23 students were seen at the clinic.
- No Dental Clinic for several Kent County schools since 3/99
- Special Education population not seen in clinics because sedation is needed
- Students are only seen once a year, so if it has not been a year since the last visit, the clinic will not schedule the student. By the time the student is due, clinic appointments for the school are over.
- High school and middle school students will not go to the dentist in the van. If their friend decides not to go, then they aren’t going.
- In Sussex County 5 out of 24 nurses said “Dental clinic is canceled often” “Clinic days fall on ½ days or days off, so appointments can not be kept”
- Sussex county nurses noted “We just received a list of Dentists accepting Medicaid clients”
5. Oral Health Screening: Of all school nurses responding, very few perform an oral health screening as suggested in the Public Health Report to the Health Care Commission. Two school nurses in NCC, 1 in Kent and 3 nurses in Sussex perform oral health screening on all students. Common reasons given for not performing oral health screening:

- No time
- No referral source
- Not trained to perform oral health screening
- No procedure to perform screening

100% of the school nurses do screen students who present with pain or discomfort and make referrals for care.

The Christina School District employs a Dental Hygienist who screens elementary students (k-6). The Hygienist does not see high school and middle school students but is available by phone for questions.

6. Dental Health Education is provided in the elementary schools by school nurses, teachers and visiting dental hygienists and dentists. At the high school level the teacher teaches it in health education classes. The Wellness Centers are having “Lunch and Learn” and include Dental Health Education.
7. Fluoride in the water?

<table>
<thead>
<tr>
<th>County</th>
<th>Yes</th>
<th>No</th>
<th>Do not know</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Castle County</td>
<td>50</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Kent County</td>
<td>8</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sussex County</td>
<td>12</td>
<td>11</td>
<td></td>
</tr>
</tbody>
</table>

A school nurse from Laurel noted that they had been given a grant to provide fluoride treatments.

Voices from the field

- Sussex nurse: “The Service Center can not even begin to take care of all of our needs. We are seen two times a month for 2 1/2 hours. Our school dismisses at 2:45 PM. The students don’t get picked up for the dental clinic until 12:30 PM and the State Service Center is approximately 1/2 hour away...a total of 1 hour and 10 minutes at dentist... The hygienist usually assists the dentist so 2 procedures can not be done at once.”

- Sussex nurse: “We do not have a “slot” at the Public Health Clinic. I was told our students were too young. (pre k-1). It becomes hard for me to make parents take them (students) and I can’t control appointments.”

- Sussex nurse: “Transportation continues to be a problem”

- “Parents have poor dental hygiene, therefore children suffer as well.”

- “The dental van that comes to the school would be a great idea and increase service of students”

- Sussex nurse: “We have very few dentists in the area to serve the community. I have state health benefits and I go to Maryland for my dental services”

- Sussex nurse: “Uninsured students are not being served due to few dentists and lack of insurance.”

- Kent Nurse: “Students are seen but due to lack of time they are unable to complete their care. I feel they should do like they do Medicaid and allow parents to go to [take students to] private dentists for care”
WHO IS THE D.S.D.S.

- Volunteer Organization
- Promotes Dentistry
- Provides Educational Opportunities
- Does Not Have Any Role in State Board Examination or Determining Requirements for Licensure
- Is Not Affiliated with Residency Program

PROCESS

- Identify the Issues
  - Nature (Quality)
  - Quantity
- Build Partnerships
- Focus Efforts
- “Evidence Based” Approach
- Continuous Review
CONTRIBUTING FACTORS - WHAT DO WE KNOW?

- Distribution of Practicing Dentists
- Barriers to Care (Source: ADA)
  - Economic
  - Language & Transportation
  - Education/Oral Hygiene
  - Perception/Role Models
  - Fluoridation

NATION WIDE ISSUE

NATION WIDE SOLUTIONS?
WHY IS THERE A SHORTAGE OF DENTISTS IN SUSSEY?

- Perceived Quality of Life Issues
  - Rural Environment
- Economics
- The Opportunities are Not Commonly Known

IS THE PROBLEM IN DELAWARE DIFFERENT?

Survey of 12 States including N.J., MD, PA, VA, N.Y., IL, LA, CA, FLA, R.I., N.H.
(Source - ADA Data Bank):
  - Question: Do Licensure Requirements Have an Effect on Manpower?
  - Answer: Every State Had Manpower Shortages. These shortages are the Result of a Maldistribution of Dentists and Occur Without Regard to Licensure Requirements

MANPOWER SURVEY REVIEW OF 618 COUNTIES

<table>
<thead>
<tr>
<th>STATE / COUNTIES</th>
<th>STATE / COUNTIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>California (28)</td>
<td>New Hampshire (10)</td>
</tr>
<tr>
<td>Delaware (3)</td>
<td>New Jersey (41)</td>
</tr>
<tr>
<td>Florida (67)</td>
<td>New York (61)</td>
</tr>
<tr>
<td>Illinois (102)</td>
<td>Pennsylvania (67)</td>
</tr>
<tr>
<td>Louisiana (54)</td>
<td>Rhode Island (3)</td>
</tr>
<tr>
<td>Maryland (24)</td>
<td>Virginia (136)</td>
</tr>
</tbody>
</table>
MANPOWER SURVEY
COMPARISON WITH OTHERS

- States were chosen based on a number of factors including:
  - Similarity to Delaware (size)
  - Similarity / Differences to Delaware
  - Licensure Examination (state / regional / reciprocity)
  - Proximity to Delaware:

MANPOWER SURVEY
LICENSURE EXAMINATION

- State Examination
  - California / Pa. / Delaware / Louisiana*
- Northeast Regional Examination
  - Pa. / N.Y. / N.J. / R.I.
- Southeast Regional Examination
  - Virginia
- Central Regional Examination
  - Illinois (and others)*
- * Reciprocity arrangements may be considered (varies)

MANPOWER SURVEY
DENTAL SCHOOL?

- States with Dental Schools:
  - California (4), Pa. (3), New York (3), Maryland (2), Illinois (2), New Jersey (1), Louisiana (1), Virginia (1), Florida (2)
- States without Dental Schools:
  - New Hampshire, Rhode Island, Delaware
MANPOWER SURVEY

- New Castle County
  - 1:1,900
- Kent County
  - 1:1,600
- Sussex County
  - 1:2,400* (does not include new practitioners who began in July, 1999)
- No recognized "Optimum Ratio" (needs vs. wants / demographics / etc.)

MANPOWER SURVEY

- California (58)
  - San Francisco Co: 1:953
  - Imperial Co: 1:1,948
  - 3 Counties with 0-2 Dentists
- Florida (57)
  - Broward Co: 1:1,976
  - Palm Beach Co: 1:1,427
  - 10 Counties with 0-2 Dentists
- 12 Counties ratio > 1:8,000

MANPOWER SURVEY

- Maryland (24)
  - Baltimore City: 1:2,373
  - Caroline Co. (adjacent to Sussex): 1:4,233
  - Wicomico Co. (Salisbury): 1:1,482
- New Jersey (21)
  - Bergen County: 1:878
  - Salem County (adjacent to New Castle): 1:5,615
MANPOWER SURVEY

- Pennsylvania (57)
  - Philadelphia County
    - 111,872
  - Judicial County
    - 7,979
- 14 Counties
- 0-2 dentists

- New York (61)
  - Nassau County
    - 1,932
  - Schuyler County
    - 1,636
- ≤50% of dentists participate in Medicaid

MANPOWER SURVEY

- Illinois (102)
  - Cook Co.
    - 1,431
  - Grant Co.
    - 2,758
- 16 Counties with
- 0-2 dentists

- Louisiana (61)
  - Orleans Parish
    - 12,281
  - DeSoto Parish
    - 2,296,947
- 13 Counties with
- 0-2 dentists

WHAT IS COMMON TO UNDERSERVED AREAS?

- Economic Disadvantages
- Rural or Center City Locations
- Language Barriers
- Transportation Barriers
- Different Value on Importance of Oral Health
WHO ASSUMES KEY ROLES IN THE PROCESS?
- Government
- Communities and Schools
- Families
- Dental
- Community

PARTNERSHIPS
- Multi-dimensional Problems Require the Special Efforts of Individuals & Groups
- Key Players
  - Communities and Schools
  - Families (Prevention)
  - Dental Professionals
  - Government

FOCUS & COORDINATION OF EFFORTS
ROLES - DENTISTS
- Participate in Medicaid Program
- Spearhead Recruitment Efforts
- Lend Expertise
- Continue Volunteer Efforts

ROLES - FAMILIES
- Monitoring and/or Performing Oral Hygiene
- Overcome Transportation Barriers
- Provide Good Role Model
- Seek Care in a Timely Manner

ROLES - COMMUNITY & SCHOOLS
- Recruitment of Qualified Dentists
- Centers
  - Educational Programs
  - Screening
- Ensure Access to Fluoridation
ROLES - GOVERNMENT

- Funding for Programs to Attract Dentists (DIDER)
- Better Define Scope and Nature of Problem
- Enhance Public Health Clinics
- Funding / Management of Medicaid Program
- Enforce / Monitor Fluoridation

ADVANTAGES OF PUBLIC HEALTH CLINICS

- Access
  - Transportation to limited number of locations
- Language Barrier
- Familiarity with the Problems of Young Patients

WHY DON'T SOME DENTISTS PARTICIPATE IN MEDICAID?

- Perception of Government Program (Bureaucracy)
- High No-Show Rates and Incidence of and Tardiness for Appointments
  - Particularly problematic when appointments scheduled for 30-60 minutes
- Children with Acute Problems Often Make Difficult Patients
<table>
<thead>
<tr>
<th>STATE</th>
<th>YRS OF</th>
<th>SOURCE OF FUNDS</th>
<th>SERVICE</th>
<th>ELIGIBILITY</th>
<th>REPAYMENT</th>
<th>TOTAL LOAN</th>
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<tbody>
<tr>
<td>ALABAMA</td>
<td>5</td>
<td>FEDERAL</td>
<td>2 YRS MINIMUM</td>
<td>US CITIZEN</td>
<td>25,000/yr:2 YRS</td>
<td>UP TO $120,000 + 39% FR TAXS</td>
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<td></td>
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<td></td>
<td>IN HPSA</td>
<td>STATE LICENSE</td>
<td>35,000/yr:3 YRS &amp; 4</td>
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<td>CONN.</td>
<td>4</td>
<td>FED/STATE</td>
<td>3 YRS IN HPSA</td>
<td>NO OBLIGATION WITH OTHER STATE PRGMS</td>
<td>$20,000 1ST YR</td>
<td>$75,000</td>
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<td>LOUISIANA</td>
<td>3</td>
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<td>2 YRS IN HPSA COM.HLTH,CNTR</td>
<td>US CITIZEN</td>
<td>$25,000 2ND YR</td>
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<td></td>
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<td>3 YRS MAXIMUM PUBLIC FACILTY</td>
<td>NATL. HEALTH SERV, CORPS?</td>
<td>$30,000 3RD YR</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>20% FR.TX,ESCR</td>
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<td>MAINE</td>
<td>5</td>
<td>FED/STATE</td>
<td>2 YRS MINIMUM</td>
<td>NO CURRENT LOAN</td>
<td>$20,000 PER YEAR</td>
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<td>MASS</td>
<td>9</td>
<td>FED/STATE</td>
<td>2 YRS MINIMUM</td>
<td>DEFAULTS</td>
<td>$5,000-$15,000 PER YEAR</td>
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<td>MINNESOTA</td>
<td>6</td>
<td>FEDERAL</td>
<td>2 YRS MINIMUM</td>
<td>MUST WORK IN HPSA</td>
<td>UP TO $20,000 PER YEAR</td>
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<tr>
<td>RHODE ISL.</td>
<td>6</td>
<td>FED/STATE/PVT.</td>
<td>2 YRS NONPRFT. ORGANIZATION</td>
<td>2 YRS MINIMUM</td>
<td>$10,000-$25,000 PER YEAR</td>
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<td>IN HPSA</td>
<td>MUST WORK IN SHORTAGE AREA</td>
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<tr>
<td>NEW JERSEY</td>
<td>2</td>
<td>FED/STATE</td>
<td>2 YRS MINIMUM</td>
<td>RESIDENT OF N.J. N.J. LICENSE</td>
<td>15% 1ST YEAR</td>
<td>UP TO $70,000 FOR LOANS AND EXPENSES</td>
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<td>IN HPSA OR UNSERV.AREA</td>
<td>LETTERS. OF RECOMD. GPR, OR PEDO RES</td>
<td>20% 2ND YEAR</td>
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<td>PENNA</td>
<td>7</td>
<td>FED/STATE</td>
<td>3 YRS MINIMUM</td>
<td>PENNA LICENSE LETRS. OF RECOMD. SHORTAGE AREA</td>
<td>15% 1ST YEAR</td>
<td>$64,000 NHSC $64,000 STATE</td>
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<td>SEP. STATE PRGM</td>
<td>IN HPSA</td>
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<td>20% 2ND YEAR</td>
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<td>FOR PRIVATE. PRACTICE</td>
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<td>30% 3RD YEAR</td>
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<td></td>
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<td>35% 4TH YEAR</td>
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CHAPTER 88. DELAWARE INSTITUTE OF DENTAL EDUCATION AND RESEARCH

Sec. 8801. Purposes.
8802. Definition.
8803. Board - Established.
8804. Same - Composition; appointment; term; vacancies; quorum; compensation.
8805. Same - Fiscal and property powers.
8806. Same - Education and research responsibilities.
8807. Same - Powers generally.

§ 8801. Purposes.

The purpose of this chapter shall be to support, encourage, and promote:
(1) Accredited general practice residencies in dentistry at any general hospital in the State that will provide a comprehensive post-graduate training program pursuant to the requirements of Chapter 11 of Title 24.
(2) Expansion of opportunities for Delaware residents to obtain post-graduate dental training.
(3) A strengthening of the factors favoring the decision of qualified dental personnel to practice in Delaware.
(4) Dental needs of the community at large and particularly those who do not have ready access to dental programs.

(63 Del. Laws, c. 125, § 1.)

§ 8802. Definition.

As used in this chapter:
"Board" means the Board of Trustees of the Dental Education and Research.

(63 Del. Laws, c. 125, § 1.)

§ 8803. Board - Established.

There is hereby established a Board of Trustees of the Delaware Institute of Dental Education and Research which shall be a state agency.

(63 Del. Laws, c. 125, § 1.)

§ 8804. Same - Composition; appointment; term; vacancies; quorum; compensation.

(a) The Board shall consist of 5 trustees.
The Board may foster and support educational opportunities for Delaware residents in dentistry and dental related fields; may promote curricular and program studies designed to meet needs in the field of dentistry and oral hygiene; may pursue these and other similar aims through contracts or other appropriate means, in cooperation with the federal government, the state government, and the political divisions thereof, educational institutions, health services, nonprofit institutions and organizations, business enterprises and other persons concerned with the dental health of the citizenry and with scientific and technological research, development and education.

(63 Del. Laws, c. 125, § 1.)

§ 8807. Same - Powers generally.

For the effectuation of the purposes of this chapter, the Board, in addition to the powers expressly granted to it by this chapter, shall have the following powers:
(1) To select such officers, in addition to the Chairman, as it may deem desirable from among its own membership;
(2) To adopt and use a seal;
(3) To sue and be sued;
(4) To adopt bylaws and to make and promulgate such rules and relations as are necessary and proper for the conduct of the business of the Board;
(5) To exercise all other powers not inconsistent with this chapter which may be reasonably necessary or incidental to effectuate the purposes of the Institute.

(63 Del. Laws, c. 125, § 1.)
(b) One of the trustees shall be a layman appointed by the Governor. One of the trustees shall be a member of the Board of Dental Examiners to be appointed by the Board of Dental Examiners. Two of the trustees shall be members of the Delaware State Dental Society to be appointed by the Society. One of the trustees shall be a member of the Board of Directors of the Medical Center of Delaware to be appointed by the Board of Directors.

(c) One member shall be appointed for a term of 1 year, 2 members shall be appointed for a term of 2 years and 2 members for 3 years. Thereafter members shall be appointed for 3-year terms, subject to 1 consecutive appointment. Any member appointed to fill a vacancy shall be appointed only for the unexpired term.

(d) Three members of the Board shall constitute a quorum. A majority of the members present at any meeting at which a quorum is present shall be sufficient for any action by the Board.

(e) No member of the Board shall receive any compensation for his duties or expenses in such capacity.

(f) The Board shall elect a Chairman from among its membership at the first annual meeting each year.

(63 Del. Laws, c. 125, § 1; 65 Del. Laws, c. 374, §§ 1, 2.)

§ 8805. Same - Fiscal and property powers.

The Board may pay or contribute to the cost of any accredited general practice residency in dentistry at any general hospital in the State; may contribute financially to the post-graduate dental education of qualified residents of Delaware and make such other payments as are required for the furtherance of the purposes of the Institute and the performance of the duties of the Board; may receive, hold, invest, reinvest and use on behalf of the Institute and for any of its purposes real property, personal property and moneys, or any interest therein, and income therefrom, either absolutely or in trust. The Board may acquire such property or moneys for such purposes by the acceptance of gifts, grants, appropriations, bequests and devices from any source, either public or private.

(63 Del. Laws, c. 125, § 1.)

§ 8806. Same - Education and research responsibilities.