A Report of
The ADEA Presidential
Task Force on the Cost of Higher
Education and Student Borrowing

March 2013
Acknowledgments

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Contents

Acknowledgments ....................................................................................................................... ii
Contents .................................................................................................................................... iii
List of Tables and Figures .......................................................................................................... iv
Foreword.................................................................................................................................... v
Presidential Task Force Members .............................................................................................. vi
Executive Summary ................................................................................................................... 1
Introduction ................................................................................................................................ 3
Task Force Activities .................................................................................................................. 4
  Review and Evaluate the Recommendations from the 1999 AADS Report .................... 4
  Review of the Relevant Literature and Investigative Reports ....................................... 4
  Review of Dental Education Costs and Dental School Deans’ Perceptions .............. 9
  A Conceptual Model of Dental Education Costs and Student Borrowing Pressures ........ 13
  Borrowing Characteristics of Students in Dental Education Programs .................. 17
  Review Legislative and Regulatory Environment Affecting Dental Student Debt .......... 20
Summary .................................................................................................................................. 22
Current ADEA Initiatives and New Recommendations for Lowering Dental Education Costs and Reducing Student Borrowing .............................................................................. 23
  Current ADEA Initiatives ................................................................................................. 23
  New Recommendations ................................................................................................. 24
  1. Promote financial literacy and ensure that the highest quality financial aid services and counseling are available to prospective and current students, residents, and fellows ...................................................................................................................... 24
  2. Continue to pursue funding for scholarships from stakeholder communities ....... 25
  3. Continue to promote mission alignment with resource management in academic dental institutions ................................................................................................................. 25
  4. Explore alternative dental education models ........................................................... 25
  5. Enhance advocacy partnerships with other dental organizations ........................... 25
  6. Continue to take a leadership role in representing the interests of ADEA’s membership on issues related to the cost of dental education and student borrowing ........................................................... 26
Suggestions for Future Research .............................................................................................. 27
  1. Conduct more extensive trend analyses of available cost and borrowing data .......... 27
  2. Establish data sharing agreements among various stakeholders ........................... 27
  3. Refine ADEA and CODA surveys so they provide information that supports planning, policy, and decisionmaking associated with the cost of dental education and dental student borrowing .................................................................................................................. 27
  4. Encourage both local and national qualitative research that examines the status of students’ educational loans ................................................................................................. 28
  5. Conduct a national study to identify the costs of implementing alternative educational models, especially IPE ................................................................. 28
  6. Examine implications of rising debt among allied dental students ........................... 28
Conclusion ................................................................................................................................ 28
  Why does dental school cost so much? ............................................................................ 29
  Can dental educators reduce the costs without sacrificing quality? ........................... 29
  Does the high level of student debt influence career decisions? ................................. 29
  Do high dental education costs influence who applies and attends dental school? ..... 30
Endnotes................................................................................................................................... 31
List of Tables and Figures

Table 1: 1999 Report of the AADS President’s Commission on the Cost of Education............. 5
Figure 1: Complexity of Dental Education Finances ................................................................. 9
Figure 2: Deans’ Survey on Cost and Borrowing Perceptions .............................................. 11
Figure 3: Dental School Revenue Sources (in 1973 constant dollars) ................................. 12
Figure 4: Conceptual Model of Cost and Borrowing Pressures ......................................... 14
Figure 5: Average Total Resident and Nonresident Costs for All Four Years, 2001-02 to
  2010-11 ................................................................................................................................... 18
Foreword

The cost of higher education has been in the national headlines like never before. The economic downturn, decreases in state and federal higher education funding, and plummeting university and college endowments have all contributed to financial burdens and budget cuts that have forced college and university administrators to make difficult decisions. Over the decade from 1999 to 2009, state appropriations as a share of institutional revenues per student dropped from 49% to 34% in public research institutions. Academic dental institutions have not been immune to these issues, leading to what some view as exponential increases in tuition and student fees. The average cost of attending dental school is up nearly 50% since 2000, and similar increases have been noted in allied and advanced dental education programs. During this time, statistics also show substantial increases in student debt. Today, the average debt load for all dental students is more than $200,000, an increase of 66% in the past 10 years. Leaders in dental education and organized dentistry are concerned that these higher debt loads are beginning to impact post-graduation decisions—such as the ability of dental school graduates to choose solo private practices, for others to seek gainful employment, and for all graduates to enter academic careers or to devote time providing care to underserved populations—and that ultimately these decisions will have a negative impact on the professions.

In April 2012, I appointed a special Task Force to study the cost of dental education and student borrowing to better understand dental, advanced dental, and allied dental education in the context of the changing economics of higher education. Over the past year, the Task Force and ADEA staff have worked diligently and methodically to understand the borrowing patterns of predoctoral, advanced dental, and allied dental students, and the unintended consequences of student debt in the broader context of student loan debt and the U.S. economy. The Task Force evaluated the relationship between missions of academic dental institutions, education models and costs, student debt loads, and career choices. The ultimate goal was to determine what role ADEA and its members can play in improving the financial position of academic dental institutions in the United States, and to ensure that the future of the professions is not negatively impacted by the economic factors facing students and academic dental institutions. In this report, the Task Force seeks to develop recommendations that will lead to national and local actions to address the increasing costs and debt management.

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Executive Summary

In the past decade, the cost of higher education has risen, resulting in record levels of student debt. For many policy makers, the dramatic increase in student debt raises two concerns. The first concern is that in the near term, new graduates who hold substantial debt may choose not to see low-income patients because of low reimbursement rates from such public assistance programs as Medicaid. A second concern is that the rising costs of education and of student indebtedness may make a dental career appear so unaffordable for future dental school and allied dental program applicants—especially those who are economically disadvantaged—that the entire profession becomes unattractive. To ensure that negative economic factors—facing schools, programs, students, residents, and fellows—do not impact the profession’s future, the following challenge has gone out to dental education stakeholders: to take steps to improve the financial position of dental education programs and contain student debt.

With this backdrop, this report outlines the complex financial issues facing dental education programs and the resulting impact on students, residents and fellows, especially in terms of possible implications for decisions upon graduation. Through analysis of recent trends and emerging models, the report explores policies to improve the financial position of academic dental institutions, as well as tools and methods for providing students with information that will allow them to properly prepare for the possible financial challenges of their education and practice.

Dental school leaders surveyed report that tuition and fees keep rising in response to revenue reductions (such as decreases in state appropriations for public institutions), the need to invest in new information technologies, increases in salary and benefits, and increases in parent institution support expenditures. These financial pressures moderate the ability of these dental education leaders to control costs and stabilize an ever expanding system. This report attempts to better explain the costs of a dental education and resulting student debt in the broader context of higher education and provides recommendations for the American Dental Education Association (ADEA) leadership, its members, and other dental education stakeholders on how to improve the financial position of allied dental education, dental schools and advanced dental education programs. To that end, the report presents:

1. A review and evaluation of the recommendations from the 1999 Report of the AADS President’s Commission on the Cost of Education,
2. A review of relevant literature and investigative reports,
3. A review of dental education costs and dental school deans’ perceptions,
4. The creation of a conceptual model that describes cost and borrowing pressures,
5. A review of borrowing characteristics of students, and
6. A review of the legislative and regulatory environment affecting dental student debt.

The report culminates in recommendations to the dental education community and organized dentistry highlighting the dual need to contain dental educational cost increases and reduce growth in student borrowing. The future attraction of the dental professions and the continued improvement in oral health may greatly depend upon affirming and carrying out the following six recommendations:

1. Promote financial literacy and ensure that the highest quality financial aid service and counseling is available to prospective and current students, residents, and fellows;
2. Continue to pursue funding for scholarships from stakeholder communities;
3. Continue to promote mission alignment with resource management in academic dental institutions;
4. Explore alternative dental education models;
5. Enhance advocacy partnerships with other dental organizations; and
6. Continue to take a leadership role in representing the interests of ADEA’s membership on issues related to the cost of dental education and student borrowing by focusing on the following critical issues:
   o Link federal and state advocacy work to loan repayment/forgiveness programs for new dentists who practice in underserved areas or serve underserved populations;
   o Revise Graduate Medical Education (GME) and Teaching Health Center Graduate Medical Education (THCGME) funding criteria payments biases that favor hospital-based services;
   o Amend the federal rules governing Federally Qualified Health Centers (FQHCs) to acknowledge dental schools as part of the health care safety net.
Introduction

The two headlines about rising higher education costs and about record student borrowing levels have pierced the consciousness of many policy makers and stakeholders, especially in the past decade. The 2007-09 recession drastically reduced state and federal higher education funding. The recession also had a significant impact on university and college endowments at private and public colleges. These factors forced college and university administrators to make difficult decisions. At four-year public colleges and universities, for example, revenue from tuition and fees per full-time equivalent student increased nearly 15% in inflation-adjusted value from 2004-05 to 2009-10. Concomitantly, dental education programs have not escaped these pressures, leading to what some view as exponential increases in tuition and student fees to cope with lost or reduced revenue streams.

This is not the first time dental education has formally faced the questions of educational cost and student borrowing. In 1998, amid a similar concern related to what some viewed as the spiraling cost of dental education, the President of the American Association of Dental Schools (AADS)—now the American Dental Education Association (ADEA)—appointed a group to study educational costs and student debt related to dental education. The group also developed strategies to address the cost of dental education and debt management and laid them out in the Report of the AADS President’s Commission on the Cost of Education (AADS President’s Commission Report). This 1999 report raised important questions:

- Does dental education provide an adequate return on investment (ROI)?
- Does educational debt affect career choices?
- Does education debt affect access to care?

The report also recommended the following strategies for academic dentistry to cope with rising costs and student borrowing:

- Develop a public relations strategy to show the values of dental education.
- Encourage new efforts in debt management education.
- Determine the effect of debt on career choice and access to care.
- Ascertain capital expenditure trends for dental school physical plants and implications for the future.
- Investigate ways for dental schools to control costs and increase revenues.

In response to the contemporary cost and borrowing environment, ADEA President Dr. Gerald N. Glickman appointed the ADEA Presidential Task Force on the Cost of Higher Education and Student Borrowing in July 2012 to better understand dental education in the context of the changing economics of higher education. The Task Force worked to examine the borrowing patterns of students, residents, and fellows and the potential unintended consequences of student debt on advanced dental education plans and career choices. As part of its work, the Task Force investigated the relationship between institutional mission and the determinants of educational costs. The Task Force activities aimed to answer four critical questions:

1. Why does dental education cost so much?
2. Can dental educators reduce the costs without sacrificing quality?
3. Does the high level of student debt influence career decisions?
4. Do high dental education costs influence who applies for and attends dental education programs?

Finally, the Task Force aspired to determine what roles ADEA, its members, and other dental education stakeholders can play in improving the financial position of academic dental institutions in the United States, and to ensure that the future of the professions is not negatively impacted by the economic
challenges facing both the schools and students and academic dental institutions.

**Task Force Activities**

The Task Force reviewed materials, deliberated on various cost and borrowing topics, and consulted experts. Seven activities sum up the Task Force’s work:

- Review and evaluate the recommendations from the 1999 AADS report.
- Review the relevant literature and investigative reports.
- Review the dental education costs and dental school deans’ perceptions.
- Create a conceptual model that describes cost and student borrowing pressures.
- Review borrowing characteristics of dental students.
- Review the legislative and regulatory environment affecting dental student debt.
- Make recommendations to the dental education community and organized dentistry

The following summarizes each of these activity areas.

**Review and Evaluate the Recommendations from the 1999 AADS Report**

In retrospect, many of the 1999 recommendations have found life while some after a time were set aside in favor of other more compelling developments and initiatives. Table 1 (pp. 5 and 6) summarizes the progress made in implementing the recommendations.

**Review of the Relevant Literature and Investigative Reports**

Published work in the last two decades highlights the challenging environment in which higher education, and specifically dental education, operates. State support has declined significantly since 1980, when states provided on average 46% of operating support for public colleges and universities. Twenty-five years later, state support declined to 27%. The decline in state support also affects private colleges and universities because many states provide financial assistance to their residents to attend both public and private institutions. This and other key factors have led to significant increases in tuition. According to the American Council on Education, “tuitions are a direct function of a combination of realities including: decreased state support for public institutions; increased federal, state, and regulatory requirements; increased health care and other employee benefits costs; increased energy costs; the demand and need for up-to-date information technology; and, student and family demands for increased services and amenities.”

Over the span of three decades, from 1982-83 to 2012-13, undergraduate tuition and fees for one year (excluding other expenses) have increased from $10,901 to $29,056 at private nonprofit four-year institutions, from $2,423 to $8,655 at public four-year institutions, and from $1,111 to $3,131 at public two-year institutions (all numbers are in 2012 dollars).

The growth in the number of Americans pursuing postsecondary education and the rising cost of attending college have led to record debt levels. Various sources estimate that the total for all student loan debt (for current and past students) is nearly $1 trillion, more than the $679 billion in credit card debt among Americans. According to the Project on Student Debt at The Institute for College Access & Success, “students who borrowed for college and earned bachelor’s degrees in 2011 graduated with an average $26,600 in student loan debt.” The rise in student debt has not led to widespread efforts to increase government support of higher education; rather, the increase has caused greater scrutiny of college affordability and accountability. Instead of giving more support, the federal government is challenging higher education to do more with less and show greater accountability in
Table 1: 1999 Report of the AADS President’s Commission on the Cost of Education

<table>
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<th>Recommendation</th>
<th>1999 Action Plans</th>
<th>Status in 2013</th>
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<td></td>
<td>b. Determine the intangible benefits of the dental profession that students and practitioners value most.</td>
<td>ADEA’s ExploreHealthCareers and GoDental websites, plus the ADEA Official Guide to Dental Schools (updated and published annually), provide information about the intangible benefits of the dental profession from the point of view of students and practitioners.</td>
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<td></td>
<td>c. Publish the findings of the studies (a. and b.) in the Journal of Dental Education, the Bulletin of Dental Education, and other relevant publications read by the higher education community.</td>
<td>Various publications.</td>
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<td></td>
<td>d. Develop a promotional brochure that explains the value of dental education. Target these audiences: health professions advisors, university administrators, students (high school and college), the practicing community, and underrepresented minorities.</td>
<td>In 2011, ADEA launched the GoDental website, which, in part, explains the value of a dental education.</td>
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<td>e. Educate policy makers and government leaders about the unique contributions of the dental student to his or her education (for example, the requirement to generate clinical revenue and the payment of instrument rental fees).</td>
<td>Regular ADEA advocacy efforts continue and communication materials are updated or developed.</td>
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<td>2. Encourage new efforts in debt management education.</td>
<td>a. Develop debt management education on the AADS website. Consider developing a model similar to that used by the AAMC. Engage the AADS Financial Aid Section in this project.</td>
<td>Update debt management resources annually and make them available on the ADEA, GoDental, and ExploreHealthCareers websites. Also, materials continue to be distributed to financial aid administrators.</td>
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<td>b. Ascertaining the level and types of debt management education currently conducted at dental schools.</td>
<td>The Task Force designed a survey to obtain this information.</td>
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<td>c. Create collaborative projects at the AADS Annual Session and through involving the AADS Council of Students, the American Student Dental Association, and the AADS Section of Financial Aid Administration.</td>
<td>At the ADEA Annual Session &amp; Exhibition, host a recruitment fair aimed at providing admissions and financial information to prospective dental students.</td>
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<td>d. Develop a section on debt management for publication in the <em>AADS Admission Requirements of U.S. and Canadian Dental Schools and Opportunities for Minority Students in U.S. Dental Schools</em>.</td>
<td>The ADEA Official Guide to Dental Schools includes the chapter “Financing a Dental Education.”</td>
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ADEA collaborates with AAMC on the annual Professional Development Conference for Health Professions Financial Aid Administrators. ADEA annually produces and distributes materials for students, graduates, and financial aid officers to use in entrance and exit interviews.
### Table 1: 1999 Report of the AADS President’s Commission on the Cost of Education (Continued)

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<th>Recommendation</th>
<th>1999 Action Plans</th>
<th>Status in 2013</th>
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<tr>
<td>3. Determine the effect of debt on career choice and access to care.</td>
<td>a. Revise the AADS Survey of Dental School Seniors so that debt level can be correlated to decisions to practice in specific geographic locations.</td>
<td>ADEA Survey of Dental School Seniors collected information on debt level, and correlations to general practice locations have been made, though not to specific geographic locations.</td>
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<td>b. Utilize the AADS Survey of Dental School Seniors to determine if debt influenced students not to choose particular career paths (for example, the influence of debt in choosing specialty education).</td>
<td>ADEA Survey of Dental School Seniors data have been analyzed. Correlation of debt to students’ choosing specific career paths has yet to be established.</td>
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<td>c. Explore with HRSA* and others the expansion of existing loan repayment options and the creation of new repayment options associated with service to underserved populations.</td>
<td>In 2005, HRSA released Financing Dental Education: Public Policy Interests, Issues and Strategic Considerations. This report recommends loan-forgiveness programs for graduates who practice in underserved areas or treat underserved populations. There was no ADEA involvement in this report.</td>
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<td>b. Engaging the Association of Higher Education Facilities Officers, develop a model to help individual dental schools determine appropriate levels of spending for facility maintenance and improvement.</td>
<td>Not started. No plans at this time to pursue this recommendation.</td>
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<td>5. Investigate ways for dental schools to control costs and increase revenues.</td>
<td>a. Explore alternative ways of teaching, including delivery of educational programming through regional centers of excellence and distance education.</td>
<td>Examples of pursuing alternative ways of teaching include creating partnerships with AAMC for MedEdPortal and developing curriculum materials as part of the ADEA Curriculum Resource Center and the ADEA Online Library.</td>
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<td>b. Develop specific strategies for dental schools to pass on cost savings to students.</td>
<td>ADEA, through media such as the Bulletin of Dental Education, has highlighted specific strategies dental schools have taken that have resulted in substantial cost savings but to date has not encouraged schools to pass on these savings to students. Work on this recommendation is not planned at this time.</td>
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* Health Resources and Services Administration
† Journal of Dental Education
metrics, such as student learning, job placement, and earnings. These same issues directly affect dental education and have some unique impacts on the various parts of dental education. The profession of dental education exists at all higher education levels, including certificate programs and associate’s, bachelor’s, master’s, and doctoral degree programs. Dental education programs can be found at institutions ranging from the nation’s smallest community colleges to the largest research universities. The challenge of undergraduate student debt described above affects both allied dental students at the certificate, associate, and baccalaureate levels and students in the pipeline to enter predoctoral dental education programs.

Most of the remainder of this report will focus both on the rise in cost at the predoctoral dental education level and on the resulting impact on current and prospective students. Further research is needed to understand the impact undergraduate debt has on current and prospective students in allied dental education fields, such as dental assisting, dental hygiene, and dental laboratory technology.

Nearly 20 years ago, in 1995, the Institute of Medicine (IOM) conducted a major study, Dental Education at the Crossroads: Challenges and Change, which documented the turbulent environment in which dental schools found themselves during the early 1990s. According to the report, in the 1960s and 1970s, federal and state funding supported new dental schools and the expansion of existing schools. By the 1990s, however, in response to a slow and uneven recovery from a prolonged recession, federal and state funding for many health care programs either stopped keeping pace with inflation or was in decline. Additionally, a majority of dental schools cut enrollments, and seven schools closed from 1986 to 2001. According to the IOM study and other sources, in a time of financial strain, several universities re-examined their missions, as well as the match between their missions and activities. As a result of this re-examination, these universities restructured, consolidated, and eliminated dental education programs. The IOM report did not explain why dental schools cut enrollments, but some have speculated that the positive oral health effects of fluoride and other factors decreased the demand for dental services and, in turn, the need for dental practitioners.

Dental Education at the Crossroads also takes a comprehensive look at key facets of dental education. The report examines the nation’s oral health, the dental school and its multiple missions within the university, and the oral health care workforce. The study notes, among other challenges, the difficulty in determining the true education costs per student. The total expenditure per student reported in 1992, according to the report, was nearly $53,000; however, the total expenditures per student varied dramatically from institution to institution—from $39,100 at private schools to $60,400 at public schools. The report explains most of the difference between public and private schools as stemming from state appropriations.

As part of its work, the IOM conducted a survey of dental school deans that finds among them two major sources of concern—general funding problems and problems related to an overreliance on tuition—as the dental school revenue streams rely more on tuition and fees and less on faculty practice income.

Dental Education at the Crossroads issues a set of 22 recommendations to position dental education for the future. One recommendation calls for dental schools to develop accurate cost and revenue data for their educational, research, and patient care programs, and another recommendation calls for the schools to implement a mix of actions to reduce costs and increase revenues.
Following the IOM report, the Surgeon General, in 2005, issued the first and only Surgeon General's report on oral health. Entitled *Oral Health in America: A Report of the Surgeon General*, this document describes not only the great strides made in improving the nation's oral health during the twentieth century, but also the important connection oral health has to overall health. The Surgeon General's report also calls attention to stark disparities in oral health and access to oral health care. The report highlights the fact that limited access to oral health care providers forms one of the major barriers to adequate oral health. This issue—limited access to oral health care providers—underlines the importance of understanding the connections between student indebtedness, the national oral health delivery system, and the individual practitioner. According to the Surgeon General's report, any strategy to improve oral health care access must consider that underserved areas are the very communities that dental education graduates with high debt levels are likely to find less financially attractive.

In 2005, the National Conference of State Legislatures prepared a report, *Financing Dental Education: Public Policy Interests, Issues and Strategic Considerations*, for the U.S. Department of Health and Human Services (HHS) Health Resources and Services Administration (HRSA). Recognizing that there is a public interest in an adequate supply and distribution of dental care providers, the report seeks to inform state and federal policy makers about dental education. Affirming that oral health is integral to overall health and that there are significant portions of the U.S. population with limited access to oral health care, the report draws attention to the issues surrounding the supply and education of dentists. The report points out numerous factors that contribute to the high cost of dental education and indicates dental schools’ reliance on three main financing sources: student tuition and fees, income from school-based clinics, and state appropriations (for public schools).

The HRSA report also notes that the high costs of dental education are mainly attributed to the model (adopted after the 1926 publication of the Gies Report, *Dental Education in the United States and Canada*) that calls for didactic and clinical education to occur entirely within the dental school itself. Unlike medical schools—whose hospitals and clinics share the financial responsibility for clinical education—the dental school contains most of the clinical education component of the dental education curriculum, a factor that creates a primary cost driver. Moreover, the HRSA report notes that the national fiscal environment limits expectations of growth in state appropriations, leading HRSA to focus concern on increasing program costs, which, in turn, drive escalating student cost and resulting indebtedness. HRSA urges dental education and government at the state and federal levels to work together to position dental education as a national resource.

The challenge laid out in 1995 by *Dental Education at the Crossroads*, to identify and implement strategies to reduce costs and increase revenues, is even more critical today. As the U.S. economy continues its slow recovery from the 2007-09 recession, the resulting economic challenges facing states and the federal government make it unlikely that in the near future there will be a major increase in the investment in dental education by public sources. Although HRSA's *Financing Dental Education* makes a strong case that it is in the public's interest to have access to dental services and that dental education should be considered an essential national resource, there has been little to no increase in public funding for dental education since the 2005 report’s release.
Review of Dental Education Costs and Dental School Deans’ Perceptions

Characteristics of Dental Education Costs

Understanding dental education costs requires the analysis of multiple expenditures and revenues in a complex context of a higher education institution and a health care provider. Furthermore, the entire enterprise has become more complex over the past 40 years, with changes to accounting systems and more pressures on diversifying revenue streams. Figure 1 illustrates the complexity.

As illustrated in Figure 1, there are typically seven different revenue streams into a dental school. These seven are tuition and fees, patient services, grants and contracts, philanthropy, continuing education, intellectual property, and state appropriations. The proportion that each contributes to the total enterprise varies by school mission and within a school over time. For example, as state appropriations or philanthropy diminishes, tuition and fees may rise to make up the difference. The ever increasing expenditure side of dental education usually has just as many categories as the revenue stream side and includes salaries and benefits, information technologies, maintenance, equipment, capital, depreciation, supplies, and student financial aid. In addition to the expenses for dental school operations noted in Figure 1, it is not unusual for dental schools to contribute to the parent university’s budget.27

The interconnectedness of dental education to the parent university is also important to understand. Although some dental schools operate independently with no support from their parent universities, some must
contribute to their parent universities’ budgets. In the context of a large university, dental education is one of many graduate professional programs. At many universities, the overall budget is structured so that more financially lucrative programs and schools help subsidize less financially viable programs. One of the great challenges dental school deans face is balancing budgets for dental schools with increasingly limited resources that are at the same time part of large universities faced with the same challenges of balancing overall budgets with limited state and federal support. In this context, dental schools and programs may appear more financially viable than other areas with less student demand.

**Challenges for U.S. Dental Schools**

As described above, dental schools are operating in an environment fraught with challenges, especially the substantial decline of public funding. To better understand the pressures facing dental school deans, ADEA fielded a survey to capture deans’ professional perceptions regarding the driving forces on dental education costs and student borrowing. The survey was administered online in January 2013 to the deans of the 63 Commission on Dental Accreditation (CODA) approved ADEA member dental schools in the United States. Email solicitations were sent to deans to request participation, and 42 deans responded, for a response rate of 67%.

For the survey, the Task Force drafted several fixed-choice and open-ended questions to explore the perceptions of deans regarding the driving forces on dental education costs and student borrowing. Because the limited purpose of this survey was to capture the deans’ professional opinions on the cost and borrowing topic, the Task Force used only descriptive statistics to analyze and describe the data. Figure 2 (next page) provides a snapshot of survey results, focusing on deans’ perceptions of factors that are driving up and keeping down tuition and/or fees, steps that schools have taken to control student borrowing, and level of concern for student indebtedness.

Deans were asked to what extent several possible factors were driving up tuition and/or fees at their dental school. Overall, respondents most often report that decreases in state appropriations drive up tuition and/or fees at their dental schools to a great extent (46%). Deans most often indicate that the need to invest in new clinical technologies, increases in information system costs, and increases in central university taxes (contributions to the parent institution’s budget for overall operating expenses) drive up tuition and/or fees at their schools. Fifty-five percent of deans report that expanded clinical revenue keep tuition and/or fees down at their institutions. Deans also say development (38%) and hiring of faculty with foreign/international dental degrees (38%) keep tuition and/or fees down at their institutions, but not as much as expanded clinical revenue.

All responding deans report being concerned about student indebtedness, with 61% of deans reporting being very concerned and 39% being somewhat concerned. When comparing all students and disadvantaged students specifically, deans report that they think their dental schools’ tuition and/or fees are most impacting all students’ ability to buy a practice (83%) and disadvantaged students’ choosing dentistry as a career (88%). Deans also say that tuition and/or fees impact the decision of all students—especially those who are from disadvantaged backgrounds—to practice in an underserved community.
Figure 2: Deans’ Survey on Cost and Borrowing Perceptions

Question: To what extent is each of the following driving up tuition and/or fees for your dental school? Responses (in graph): Increases in new clinical technologies; increases in information systems (e.g., digital radiography, implants, CAD/CAM, lasers); increases in central university taxes; decreases in state appropriations.

Question: To what extent is each of the following keeping down tuition and/or fees for your dental school? Responses (in graph): Expanded clinical revenues; development (e.g., fundraising); hiring of faculty with foreign/international dental degrees.

Question: Have you, and/or your central financial aid office, taken any of the following steps to control student borrowing? Responses (in graph): Advertise student scholarship opportunities; hold seminars on loan forgiveness/loan redemption opportunities; advocate for loan forgiveness/loan redemption in your state if the student practices in an underserved community upon graduation; review with students income-based repayment options.

Question: How concerned are you about student indebtedness? Response options: Very concerned; Somewhat concerned; Not concerned.
According to the respondents, most schools (68%) provide scholarships to offset the cost of tuition and/or fees specifically for disadvantaged students but not for students identifying a desire to practice in underserved communities. Dental schools and/or their central financial aid offices are using the following strategies, among others, to control student borrowing: advertising scholarships (93%), holding loan forgiveness/redemption seminars (91%), and encouraging loan forgiveness/redemption programs for practicing in an underserved community (79%). In addition to these efforts, about half of deans (45%) have implemented or are planning to implement a six- or seven-year articulation program (undergraduate and dental school combined) that would reduce the number of years of dental school and/or require additional prerequisites (51%) to minimize the time to completion of the dental degree. However, no deans are planning to follow the lead of the University of Pacific Arthur A. Dugoni School of Dentistry and implement a three-year curriculum.

State Funding
As nearly half (46%) of deans responding to the survey note that decreases in state appropriations drive up tuition and/or fees at their dental schools to a great extent, the Task Force has further investigated this topic. As seen in Figure 3, and as previously noted in this report, over the past two decades, state funding for dental education has steadily declined. Current funding levels are in stark contrast to the 1960s, when public funding increased in response to a federally mandated expansion of dental education. Figure 3 shows that after the 1960s, there was a flattening in public funding during the early 1970s, followed by some increases and decreases during the latter part of the decade. The modest funding changes during the 1970s were followed by large increases in the 1980s and substantial decreases since 1990.

Unfortunately, there has been little recognition that the lack of public funding for dental education has a negative impact not only on dental students but also on local communities. Dental schools provide

Figure 3: Dental School Revenue Sources (in 1973 constant dollars)
the necessary resources for their own daily activities and for extramural programs providing safety nets by treating—with little or no reimbursement—patients in the general population. Given dental schools’ safety net role, any reduction in funding can have devastating effects on providing services at reduced fees and on training students to work in underserved communities.

Dental schools in the United States have always provided dental care at reduced cost and with extended payment plans for populations without the financial means or insurance to be treated by private practitioners. As public funding has decreased, some dental programs have attempted to gain revenue by various means, such as increasing clinical fees. Raising clinical fees, however, can negatively impact the many dental school patients who cannot afford increased fees. The ability to increase clinical fees jeopardizes the capability of some dental schools to continue functioning as safety nets for underserved populations. It also may jeopardize the ability of the dental school to ensure a well-balanced comprehensive clinical experience for students.

Decreased public support also has important consequences for dental schools’ research functions. It is essential that U.S. dental schools operate as laboratories of new knowledge, producing innovative and cutting-edge research. Dental schools should especially conduct basic, translational, and clinical science research. Research is so essential to the education of dental students that CODA’s research standard emphasizes the importance of faculty’s generating dental research and students’ being exposed thereto. Regrettably, costs are associated with research programs, and research funding structure is sensitive to funding from the federal government, private industry, and private foundations. Some believe that removing research from the dental school would help to decrease the cost of dental education. Such a step is probably not a practical direction, since programs seeking accreditation will have to respond to the CODA standard on research, and many must also meet the expectations of their parent universities’ research goals and missions. Dental school mission alignment and resource management are critical in the context of the parent university mission and goals. Concomitantly, reducing the research mission of dental school would be devastating to the dental profession and ultimately to the health and well-being of the citizenry.

The decline in public funding continues to pose a serious challenge. In the ADEA survey for this report, respondents noted a state appropriations decrease more often (46%) than any other possible factor driving up tuition and/or fees at dental schools. Concern exists among the wider dental education environment that decreases in state and other public funding threatens dental education’s innovation, capital improvement, and technological upgrades and innovations, not to mention its ability to provide quality oral health services in the United States and to recruit and retain faculty.

### A Conceptual Model of Dental Education Costs and Student Borrowing Pressures

Throughout the Task Force’s work, a substantial amount of time involved understanding the complex forces that drive the costs of dental education and levels of student borrowing. While the literature describes some of the factors affecting dental education revenues and dental education costs, there is no literature that places these revenues and costs into the context of an entire dental education system.

The dental education system is multifaceted, with many factors influencing the financial positions of academic dental institutions and, ultimately, the price charged to students for their attendance. To capture the committee’s combined thinking, explain trends, and provide context for developing recommendations, the Task Force developed the graphic shown in Figure 4 (next page) illustrating the various cost and systematic pressures on the system.
Figure 4: Conceptual Model of Cost and Borrowing Pressures
Pathway from Applicant to Dentist: The center of Figure 4 shows the pathway to becoming a dentist. Applicants from diverse backgrounds enter the system via the application process. With about two-thirds of bachelor’s degree recipients borrowing money for college, many applicants enter with debt incurred for their undergraduate education.

Approximately 90% of dental students use student loans to finance their dental educations. Individual dental student debt levels are driven by many factors, including socioeconomic status, family resources, dental school attended, general financial aid, and institutional grant or scholarship opportunities.

In most states, dental school graduates may enter practice immediately upon completing the D.D.S. or D.M.D. degree (and successfully passing licensure examinations). Approximately 49% of dental graduates opt to pursue advanced education programs, for degrees either in general dentistry or in the dental specialties. These degrees can occur in programs that provide stipend-paying settings and do not charge tuition, such as hospital-based programs supported by GME funding, or they can occur in tuition-charging programs, frequently found in many dental schools. Residents in tuition-charging programs are usually considered students (for financial aid purposes), and they frequently acquire additional student loan debt.

Dental Services Market: Some speculate that student loan debt levels have an impact on career choices; however, very few studies have examined the impact of debt on practice choice (e.g., private practice, underserved communities, etc.), practice location, or consideration of alternative careers (e.g., academic dentistry, the military, public health, and community service). The intention of dental students—before they have accumulated significant amounts of debt—must be considered. According to surveys of graduating students, the top reasons (listed as “very important”) for pursuing a career in dentistry are: to control time (61%), to serve others (58%), and to be self-employed (51%). Only 23% listed “providing care to underserved” as a top reason for pursuing dentistry. Regardless of the variables that affect dental graduates’ career choices, career choices do affect a dentist’s income potential.

The ROI for a dental education is of critical importance. For dentistry to have a vibrant future, there must be a positive economic return on students’ time and money investment. Generally, students should be willing to pay a higher price for their education and engage in a higher borrowing level in exchange for entering a higher paying profession. ROI affects the demand—as reflected in the annual dental applicant numbers—for dental education.

Higher Education Market: Most dental schools exist in larger university systems. The cost structure, therefore, is partly driven by (1) the university’s mission (i.e., at a research-intensive parent institution, the dental school must help support a vibrant research infrastructure), (2) the university’s expectations (i.e., the dental school must contribute toward overall infrastructure expenses), (3) the university’s strategic initiatives (i.e., the dental school must make required contributions), and (4) the university’s financial health. If the dental school is located in an academic health center, the latter’s financial well-being may also drive the former’s cost structure.

Lending Market Factors: Students’ ability to cover dental school attendance costs depends on the availability of financial capital. This capital can come from several sources, including family savings, federal loans, family and private loans, institutional scholarships, and other forms of institutional financial aid. Nearly 90% of students attending dental school today must finance at least part, if not all, of their education. Loans are obtained through a number of loan programs, with the various lenders including the federal government, state
government, and private lenders. Additional details about current and proposed loan and loan repayment programs are provided later in this report.

**Personal and Family Demographics and Preferences:** The majority of dental school graduates come from families with higher socio-economic backgrounds. High levels of student debt pose a threat to many—especially to individuals from lower socio-economic backgrounds—so that they do not even consider a career in dentistry. Dental education costs drive decisions about choosing dental school.

**The General Economy:** Just as supply and demand behaviors drive the U.S. economy, so they are key in driving the dental service economy. In a growing economy, as discretionary income rises, the demand for dental services increases—thereby increasing dentist salaries—and the demand for dental education increases. In a recession economy, the reverse is generally true: Discretionary income decreases, the demand for services decreases, dentists’ salaries decrease, and, ultimately, the demand for dental education decreases. Market forces, therefore, have a significant impact on the number of applicants to dental schools, along with the revenue raised by dental schools’ clinical enterprises.

There is no evidence that the demand for dental education drives the price thereof; rather, the demand is driven by the perceived benefits of becoming a dentist. The price of dental education is driven by program cost, university expectations, external support (including federal, state, and philanthropic support), and dental reimbursement levels for delivered oral health care services.

General economic conditions also affect the cost of dental education. During good economic times, state support for dental education can increase, while during bad economic times, state support can dramatically decrease resulting in costs being shifted to dental students via tuition and fee increases.

**Federal, State, and Local Government Influences:** Other environmental factors have a confounding effect on these market forces. For example, health care reform has the potential to dramatically influence the funding mechanisms for health care services, thereby affecting the demand for services. The introduction of new allied dental professionals can positively impact the efficiency of dental practice, while new technologies can affect the range of services provided, as well as the cost of those services.

**Generational Values:** Generational values impact lifestyle and career choices. Living above one’s means and making decisions with little consideration of future implications result in higher levels of borrowing. Similarly, career choices, including work hours and professional drive, impact a dentist’s income level and ability to pay off a graduate’s debt.

**Society Values:** Societal expectations and values impact the nation’s health care programs and ultimately the career choices and income levels of health care providers. Over the years, salaries of primary care physicians and medical specialists have dramatically changed due in part to changes in our health care system and health care financing. Dentistry may be at a crossroads, as the financing of dental care, particularly for our safety net service providers, depends more on our public health care system than ever before. Because reimbursement for these services has dramatically decreased, safety net providers’ income levels are in danger. Equally important is the perceived appropriate income level of health care providers. Since many believe that dentist incomes are already high, state or federal support for dental students may be of little or no concern to the public.
Borrowing Characteristics of Students in Dental Education Programs

The rise in postsecondary tuition has affected dental education students in all programs. The average dental hygiene program’s tuition and fee costs in 2010-11 ranged from $20,571 (in-state student) to nearly $30,000 (out-of-state student). These costs come in addition to the cost of the postsecondary prerequisites required for admission to 69% of accredited dental hygiene programs. Nearly 19% require less than one year of college coursework; 30% require one year of college; 12% require two years of college; and 8% require “other,” a term that is defined most commonly as specific courses. The financial challenge facing allied dental students can be substantial because of (1) the total number of years required, even for an associate’s degree, and (2) the difficulties encountered by some at community colleges receiving financial aid. According to a report by the Project on Student Debt, “about nine percent of community college students nationally—more than one million students in 31 states—are enrolled in colleges that summarily block their students’ access to federal student loans” because these schools have opted out of the federal loan program.

Further research is needed to determine the education debt among allied dental students in the context of their employment opportunities. The U.S. News & World Report ranks dental hygiene tenth in its list, “100 Best Jobs of 2013,” and notes a low unemployment rate of 2.8%. However, according to data collected by CODA, dental hygienists in some regions are struggling to find adequate work, and the national unemployment rate is 8.6% among 2010 graduates. That said, while some dental hygienists are finding it difficult to find adequate employment, recent dental hygiene graduates are faring better than others. Last year, about 1.5 million (53.6%) of bachelor’s degree holders under the age of 25 were jobless or underemployed, the highest share in at least 11 years.

Among dental students, first-year resident tuition and fees at public dental schools rose by an annual average of 10.3% over the past decade, increasing from $10,642 to $25,618, while at private dental schools the amount increased by an annual rate of 6.2%, rising from $30,955 to $52,697. Furthermore, these increases show the acceleration in the total cost of attendance as illustrated in Figure 5 (next page) from the American Dental Association (ADA) report. Among all U.S. dental schools, total cost of attendance over the past 10 years for four years of dental school rose dramatically—by 93% for in-state residents (from about $89,000 to $171,000) and by 82% for out-of-state residents (from $128,000 to $234,000).

This rising cost of education requires most dental students to carry large debt burdens after graduation. The ADEA Survey of Dental School Seniors reports that the graduating class of 2012 had an average combined undergraduate and dental school debt of $221,713, up from $105,969 in 2000, an increase of 109% in more than 10 years. Not surprisingly, student debt rises at nearly the same rate as the cost of attendance.

Although the total average indebtedness for graduating dental students in 2012 was a little more than $200,000, the distribution of this debt across the graduating class varies significantly and is dramatically different by type of school attended. In 2012, nearly one in five graduates (18%) had little (under $50,000) to no debt. However, another one in five graduates (22%) had debt above $300,000. Among graduates from private dental schools, nearly 38% had debt above $250,000, compared to 11% of graduates from public dental schools. The question driving much of the dental community’s concern about the rising debt is the belief by some that high student indebtedness—because it may negatively impact graduates’ ability to choose from among...
starting a private practice, entering the public sector, joining academic dentistry, or serving low-income patients—could either discourage talented individuals from considering a career in dentistry or limit the career options of graduates.

In spite of the cost increases of attending dental school and the resulting student debt, individuals still pursue careers in dentistry, although class composition may be less economically diverse than previously. The number of students applying to dental school has stayed at about 12,000 annually from 2008 to 2012. Rising tuition and fees could potentially change dental class profiles by attracting more students from higher socioeconomic backgrounds, who can afford the tuition increases and who may be less concerned about paying back student loans, and fewer students from lower socioeconomic backgrounds, who may be intimidated by the high cost of tuition. This hypothesis is supported by Walker et al., who reported that from 1998 to 2006, the number of dental students who come from families with incomes of $100,000 or more increased, while the number of students whose families have incomes lower than $50,000 declined. Additionally, the ADEA Survey of Dental School Seniors shows that less than 20% of graduating seniors in 2012 reported parental income of less than $50,000, while 50% reported parental income of more than $100,000. In today’s dental classes, a higher percentage of dental students come from more affluent families with incomes to support increased tuition and fees.

There is a concern that the cost of attending dental school negatively impacts low-income students’ educational access and choice. Anderson et al. used data from the ADEA Survey of Dental School Seniors, 2007 Graduating Class, and found that students with a lower parental income (less than or equal to $50,000) are more likely to plan to practice in public service (community clinics or government service) than students Figure 5: Average Total Resident and Nonresident Costs for All Four Years, 2001-02 to 2010-11

![Graph showing average total resident and nonresident costs for all four years, 2001-02 to 2010-11.](source: American Dental Association, Survey Center, Surveys of Dental Education (Group II, Question 15a).)
with higher parental income (more than $50,000). This finding suggests that recruiting more low-income students may lead to improved access to dental care for underserved individuals, who receive dental care in community clinics or via government services.

The dental profession is committed to improving access to health care for underserved populations. Consequently, most dental programs, seeking to inculcate the value of service into their curricula, have incorporated into their programs externships, partnerships with community health clinics, community oral cancer screenings, health fairs, and service to Medicaid patients. These are all experiences that serve to train students to care for and treat patients from traditionally underserved populations. Graduates who have had experiences serving these populations are likely aware that reimbursement for services provided to these populations is generally low or nonexistent. As noted earlier, graduates may be inclined to pursue work opportunities that will allow them to pay down their educational debt quickly. The question driving much of the concern within the dental community about the rising debt is the belief that such large debts limit the career options of graduates, negatively impacting their ability to purchase a private practice, work in underserved urban and rural communities, enter the public sector, or become an educator. Rising debt may unfortunately mean that many graduating dentists who have been educated to treat underserved patients will not choose to serve in rural and other underserved areas, where reimbursement levels are low. Therefore, finding mechanisms that help limit the increases in debt are important so that future graduates will carry forward what they learn in dental school and seek opportunities to serve an ethnically and economically diverse patient population.

While there is anecdotal evidence that educational debt influences dental students’ plans after graduation, the evidence in the dental education literature is inconclusive. Some studies suggest that educational debt influences plans after graduation. Anderson and colleagues (2010), for example, find that “issues concerning graduation debt are importantly related to plans for public service. Students with a large debt ($168,000–$350,000) are three times less likely to plan public service than those with a low debt (less than $70,000).” A 2011 study at the University of Pennsylvania School of Dental Medicine supports the conclusions of Anderson et al. that debt influences post-graduation decisions. This study of dental students’ perceptions of dental specialties and career choices reports that students with the greatest amount of expected accrued debt plan to pursue private practice in general dentistry or postdoctoral general dentistry (i.e., enter General Practice Residency/Advanced Education in General Dentistry programs) and not a dental specialty. The authors conclude that students with the highest debt are choosing options after graduation that will allow them to pay off their debt as quickly as possible.

Other studies, however, conclude that debt has little to no influence on students’ perceived plans after graduation. A recent study (2011) by Lucas-Perry assesses the intentions of graduating dental students to work in underserved areas. The study analyzes dental education debt and determinants related to student demographics, socioeconomic factors, social beliefs and behaviors, work preferences, community-based clinical rotation experience, and dental school environment. The study uses the ADEA Survey of Dental School Seniors, 2011 Graduating Class. Results show that 31% intend to work in underserved areas, 38% are unsure, and 27% have no intention of practicing in underserved areas.

Contrary to previous research findings, the study does not find a relationship between debt and intention to work in underserved areas. Students planning to work in underserved areas do not consistently have
lower debt. For example, although 40% of low-income students have plans to work in underserved areas, they report a significantly higher average debt ($198,567). This level of debt compares to 26% of their high-income counterparts, who report an average debt of $172,536. Ultimately, the author notes that the relationship between debt and intention to work with underserved populations is inconclusive in the current literature, thus warranting further research.61

Another concern is the effect high debt loads will have on interest in advanced dental education programs. According to the ADEA Survey of Dental School Seniors, 2011 Graduating Class, half of all seniors applied or planned to apply for dental postdoctoral or advanced education programs. Despite higher average debt than 25 years ago, this is slightly higher than the 47.5% in 1986. The financial cost and benefits of attending an advanced dental education program vary considerably. Some of these programs, such as hospital-based programs supported by GME funding, provide a stipend and do not charge tuition. Others can occur in tuition-charging programs, frequently found in many dental schools. Residents in tuition-charging programs are usually considered students for financial aid purposes and frequently acquire additional student loan debt. While exact figures are not available, students graduating from advanced dental education programs may have about the same or higher debt than predoctoral graduates. However, there is a significant increase in earnings that clearly compensates for any increase in debt and additional years of deferred income. In 2009, the average net income of independent (i.e., owner) general practitioners was about $193,000 compared to about $306,000 average net income among independent specialists.62 If that gap were to persist for a decade, the difference in earnings would be more than $1 million.

Review Legislative and Regulatory Environment Affecting Dental Student Debt

Students in all types of dental education programs depend greatly on the availability of financial aid, mostly in the form of student loans. It is important to examine the current financial aid landscape at the federal level to better understand financing and repayment options currently available or being proposed. Summarized below are the most relevant proposed legislation and federal regulations (at the time of this report) with the potential to affect dental student borrowers.

Legislative Environment

Concerns about college affordability abound on Capitol Hill, so it is no surprise that several pieces of legislation have been recently introduced to address concerns about overall college cost and cost specifically for students in all types of dental education programs. Proposed House bills would have (1) increased the tax deduction of interest paid on qualified educational loans63 and (2) required higher education institutions both to determine whether the student had applied for and exhausted federal Title IV student aid and to inform him or her accordingly.64 The same proposed House bills would have required institutions of higher education participating in Title IV programs to take part in and provide all the data required for an individual-level integrated postsecondary education data system.65 None of these bills, however, was successful.

In the 112th Congress (2011-2013), two bills were introduced to expand access to oral health care in underserved communities, particularly through Medicare and Medicaid. Legislation entitled the Comprehensive Dental Reform Act of 2012 was introduced in both chambers. Senator Sanders filed S. 3272 and Representative Cummings filed H.R. 5909, respectively.

Recently, the Fairness for Struggling Students Act was introduced by Sen.
Richard (Dick) Durbin (D-Ill.). If successful, the Act would allow private student loans to be discharged in instances of bankruptcy. As currently stipulated by bankruptcy law, borrowers who demonstrate an “undue hardship” may have their loans discharged in bankruptcy. In March 2012 testimony provided to the Senate Subcommittee on Administrative Oversight and the Courts, Justin Draeger, President of the National Association of Financial Aid Administrators, stated that the association “does not find the ‘undue hardship’ clause to be sufficient protection for private education loan borrowers.”66 Despite the concern among some legislators about rising student debt, the current fiscal environment has created difficult choices for elected officials. In an effort to save a portion of the Federal Pell Grant Program (geared toward low-income students), The Budget Control Act of 2011 eliminated the in-school interest subsidy on Stafford Loans for graduate students, effective July 1, 2012.

During the course of its work, the Task Force examined data on private student loans. Out of the $113.4 billion in total student loan dollars awarded in 2011-12, an estimated $6.4 billion were from private lenders.67 The portion of that $6.4 billion going toward allied dental, predoctoral, and advanced dental education students is unknown. There is concern about growth in private loans among students in dental education programs because of the considerably higher interest rates and unfavorable repayment terms of most private loans. The Task Force discussed anecdotal evidence of a large increase in users of private student loans. Task Force members also discussed being aware of students at their own schools who rely on these loans and of a fall 2012 meeting of the ADEA Council of Students, Residents, and Fellows, during which student representatives discussed their use of these types of loans. The Task Force’s conversations questioned why dental students are taking out private loans, given their less-than-favorable rates and terms in comparison with federal financial aid loans, assuming the latter (e.g., federal Graduate PLUS [Grad PLUS] loans) allow students to borrow the full out-of-pocket cost of attendance. One theory discussed is that the cost of attendance for the Grad PLUS loan is calculated by the institution. Students, however, may be calculating their own cost of attendance and concluding that it is much higher and that they need more funding than that provided by the Grad PLUS loan.

Dental educators’ knowledge of how much students are borrowing is also limited. Some institutions may have agreements with lenders to process private student loans through the institutions,68 but there also exist direct-to-consumer private loans that are not certified by the school.69 A school, therefore, may never know about this additional educational debt that students are incurring. The ADEA Survey of Dental School Seniors, 2012 Graduating Class reports the percentage of students who use the following types of loans: personal bank loans (9%), family/relative loans (6%) and “other” loans (9%). It is not known, however, why students are taking out these loans or how much they are borrowing. The ADA also collects data on student loans, but it does not ask students to differentiate between types of loans. Additional data is needed to determine if dental education has an accurate understanding of students’ borrowing patterns.

Regulatory Environment

In December 2012, the U.S. Department of Education (ED) announced new rules to amend federal loan programs to implement a new Income Contingent Repayment (ICR) plan and amend the Income-Based Repayment Plan (IBR) pursuant to President Obama’s “Pay as You Earn” repayment initiative.70 The ICR and IBR plans are repayment methods for federal student loans (except Parent PLUS Loans). These methods are designed to enable borrowers to limit their monthly student loan repayment amounts based on the
relationship between their federal student loan payments and what might be considered their “discretionary” income or the portion of their adjusted gross income exceeding 150% of the poverty line applicable to their family size.

HRSA administers loan repayment programs to meet the anticipated demand for health care providers, including dentists and registered dental hygienists, in underserved areas across the United States. Increased demand is anticipated as the federal government implements the Patient Protection and Affordable Care Act (ACA) and more Americans receive health care, both in health insurance marketplaces and in states deciding to expand their Medicaid program under the ACA.

Specifically, HRSA administers the federal National Health Service Corps (NHSC) Loan Repayment Program (LRP) and provides grant funding for state agencies to administer the State Loan Repayment Program (SLRP).

The federal NHSC LRP offers dentists and registered dental hygienists the opportunity to have their student loans repaid in exchange for providing health care in urban, rural, or frontier communities with limited access to care. These health care providers may earn up to $60,000 for a two-year full-time or four-year part-time commitment to serve at a NHSC-approved site located within a Health Professional Shortage Area (HPSA).

The SLRP is administered by state agencies receiving grant funding from HRSA. As state legislatures grapple with state budget concerns, some states are unable to offer the SLRP. Under the SLRP, states must obtain funding to support a dollar-for-dollar match requirement. The SLRP offers states flexibility in the loan repayment amounts offered, the eligibility requirements (although most states include dentists and registered dental hygienists as eligible health care providers), and the minimum service commitment.

In FY 2012, NHSC made nearly 4,600 loan repayment and scholarship awards, totaling $229.4 million in funding from ACA. During FY 2012, the NHSC loan repayment program made 4,267 awards (2,342 new and 1,925 continuation contracts), totaling $169 million. Additionally, during FY 2012, 32 grants were made to states operating SLRPs, totaling $9.8 million.

Summary

As outlined in the introduction, this report builds on the 1999 President’s Commission Report and examines the continuing issue of access to allied dental, dental, and advanced dental education programs. The report also explores the challenge of access to dental care for select populations, with a great deal of the inequity attributable to monetary concerns. To meet the access to oral health care challenge, more allied dental professionals and dentists must be willing to work in underserved areas (either in private practices or public clinics) or to accept an increasing number of patients using government aid, such as Medicaid.

While many believe that career choices are influenced by a graduate’s debt, dental education study findings are contradictory and inconclusive. A larger barrier is formed by the practice and lifestyle expectations of the many dental students who come from upper-middle class or wealthy families. Therefore, the amount a dental student must borrow may be a significant barrier for low-income students to gain entrance to dental education. The same students most likely intend to practice in underserved communities or serve traditionally underserved populations. In a similar manner, despite the strong earnings potential, the cost of earning a degree in dental hygiene may discourage underrepresented minority and low-income students.

Clearly, increasing public funding for all types of dental education programs would be a way to decrease the cost of a degree. Increased public funding may also alleviate student indebtedness and the
maldistribution of allied dental and dental practitioners. Unfortunately, public funding at the local, state, and federal levels for dental education programs has steadily declined for several decades. Instead of an increase, dental education has been “deprived of financial support analogous to that given to medical education,” a concern put forward as far back as the 1926 Gies report, *Dental Education in the United States and Canada*. Reductions in federal and state funding for dental education—combined with weak economic conditions—have contributed to the closure of seven dental schools in the last two decades.

Given limited expectations of growth in the public funding of dental education, many schools raise tuition to maintain educational, research, and patient care programs. Yet, there is a growing concern about the effect of an increased reliance on tuition and fees on the affordability of dental education for potential applicants. Dental schools have also attempted to increase their revenues by raising clinical fees, given that the primary driver of dental schools’ costs today is the clinical education component of the dental education curriculum. However, clinical fees can have a negative impact on the large portion of dental school patients who do not have the financial means to afford a continual increase in fees.

Thus, the goals of lowering the cost of dental education and student borrowing continue to challenge leaders of allied, predoctoral, and advanced dental education programs. At a time when a federal health care law—ACA—includes provisions related to access to care and health disparities reduction, considerable gaps exist between the United States’ estimated underserved population in terms of dental care and the number of additional dentists needed to increase the population-to-dentist ratio in underserved areas. Given the rising costs of dental education programs and student debt, these gaps will continue to increase unless the public and policy makers take an interest in and support dental education and the access to dental services it provides.

As the dental professions look toward the implementation of the ACA, a critical issue is whether dental education programs can increase public and governmental support for reducing the cost to students. Notwithstanding that dental education programs and students should contribute considerably to the cost of education, the public policy aspects of dental education programs, including general availability of basic dental services, warrants broad, sustained support from policy makers. With both of these premises in mind, the following section highlights existing initiatives and recommends new strategies for achieving these goals: (1) containing the cost of dental education programs and student debt, and (2) making basic dental services available to all. These recommendations take into account the financing challenges and public interest of meeting the oral health care needs identified in this report.

### Current ADEA Initiatives and New Recommendations for Lowering Dental Education Costs and Reducing Student Borrowing

#### Current ADEA Initiatives

ADEA provides a number of advocacy services for its members. These services include the following: Field Advocacy Workshops, Advocacy Days on Capitol Hill, Leadership Institute Legislative Workshops, and *ADEA Washington Update* newsletters. Together, these initiatives strengthen the advocacy skills of ADEA members by informing them how laws are made, how to identify key committees in Congress, and how to interact with state and federal legislators and their staff. ADEA has been encouraged to increase the number of members involved in state and federal legislative advocacy by ensuring that they are made aware of all association resources and tools available for these efforts.
In addition to strengthening skills of ADEA members, the association’s Advocacy and Government Relations (AGR) staff actively engages members of Congress and ED. ADEA’s advocacy focus areas during 2012 included working on regulations related to IBR, Title IV Funding/Repeated Coursework Restrictions, and Gainful Employment. In addition to continuing this important work, AGR will continue linking these issues to access to care. Policy makers should know, for example, that areas with poor oral health are the same areas that attract students from less affluent backgrounds; however, these students need significant financial aid. It is also recommended that the AGR team engage with state policy makers and higher education coordinating boards to provide a workforce that supports their states’ oral health needs.

New Recommendations

There are six recommendations for addressing the challenges of the cost of dental education and student borrowing. These recommendations focus on the two core groups—academic dental leaders and students—who shoulder the major responsibility for controlling costs and slowing borrowing. The recommendations also consider actions the broader community, including organized dentistry and policy makers, can take to support dental education and future generation oral health practitioners.

1. Promote financial literacy and ensure that the highest quality financial aid services and counseling are available to prospective and current students, residents, and fellows.

Dental education program administrators must ensure that financial aid advising, counseling, and resources are available to all current and future students. Allied dental program directors, dental school academic and clinic administrators, and advanced dental education program directors must strengthen partnerships with financial aid administrators. Deans, associate deans, and program directors must become acquainted with the scope of financial aid services—including the application and awarding processes—currently provided at their institutions. They must also take opportunities to interact with current and future students’ financial literacy issues, the financial aid process, counseling, and related services. Dental education programs must develop and implement strategies to maximize the following: (1) financial literacy initiatives, including content, timing, and delivery; (2) mandatory entrance and exit counseling, whether in-person or online; and (3) financial aid counseling services, along with related initiatives and resources.

ADEA will continue to serve as a forum for dental education program financial aid administrators to share best practices, and also to promote active participation in health professions financial aid meetings. ADEA will provide—both for current and future students—timely, up-to-date resources, including the *ADEA Official Guide to Dental Schools*, GoDental.org, and ExploreHealthCareers.org. In response to feedback from financial aid administrators, ADEA will continue to offer resources such as financial aid entrance and exit interview PowerPoint presentations and the annual “Primers” series for the graduating class. ADEA will also continue not only to collaborate with other health professions associations to advocate for legislation and regulations at the state and national levels, but also to encourage dental educators and financial aid administrators to participate in such efforts.

Plans are now underway for ADEA to partner with the Association of American Medical Colleges (AAMC) to offer students, residents and fellows access to a student loan organizer and calculator. This tool helps borrowers to organize and better understand the terms of their student loans and to project various repayment scenarios based on different career and loan repayment options.
2. **Continue to pursue funding for scholarships from stakeholder communities.**

Allied dental program directors, dental school deans, and advanced dental education program directors must work with stakeholder communities to keep them informed about the levels of graduating student debt and the positive value of scholarships in dental education.

3. **Continue to promote mission alignment with resource management in academic dental institutions.**

Dental education programs need to continue to align their missions, core competencies, and revenue engines. Steps for aligning revenues and expenditures with missions and core competencies include estimating the effect of any proposed changes on revenues, discussing how changes in resources will impact human resources, and assessing the impact of proposed changes on academic quality. Among other benefits, aligning fiscal resources with mission and core competencies can increase a dental education program’s ability to balance program expansion, mission and core competencies, and financial problems. If dental education leaders review their budgets through the lens of their missions and core competencies, they may be able to reduce duplicative, redundant, or ineffective activities and redistribute funds to limit education costs and thus contain student borrowing.

4. **Explore alternative dental education models.**

A new dental education model would likely be required to create the system needed to improve the financial position of dental schools and ensure that the debt facing dental school graduates is manageable. However, not every dental school can pursue alternative models. Some must use a model that fits within an existing university structure and meets the needs of the larger university community. Dental education programs at all levels should examine the many initiatives that have the potential to change the dental education model. Additional strategies for finding ways to “do more with less” may also be found in cost containment models both inside and outside health care and the education models that have emerged with the opening of new dental schools. Dental education programs should adopt models that not only set out to mitigate increasing levels of educational debt and the rising costs of dental education, but also fit their mission and core competencies.

Key among these alternative models may be the adoption and support of Interprofessional Education (IPE) activities. An ADEA study on IPE surveyed academic deans of dental schools and concludes that “the importance of IPE in dental education is widely recognized by … schools” and that there appears “to be sufficient interest for dental schools to take on these challenges and plan and develop IPE.” At the same time, however, another finding is that a major challenge to incorporating IPE into dental school curricula is the need for funding sources. Despite this financing challenge, a number of dental schools are preparing and carrying out IPE experiences for students, either because they have adopted IPE as a fundamental principle, or in response to the new CODA standards on team-based education that will be in effect for the 2013 accrediting cycle. Given funding challenges and the new CODA standards, dental school leaders will need to seek sustained funding for IPE activities so as not to add to the cost of dental education and dental student borrowing.

5. **Enhance advocacy partnerships with other dental organizations.**

Because associations often struggle to be heard by legislators, partnerships are critical. Organized dentistry should continue working together to strengthen a shared message, even when their core goals differ. Rather than let these differences come
between them and their legislative objectives, dental associations need to become allies and advocate for legislation that will positively affect their organizations and members. Advocacy partnerships would also provide opportunities for dental organization leaders to come together to share best practices and resources and to brainstorm solutions for the common concern over rising educational costs and student borrowing.

6. **Continue to take a leadership role in representing the interests of ADEA's membership on issues related to the cost of dental education and student borrowing.**

ADEA has a long track record of advocating for its members. As the advocacy work proceeds, specific effort should be made on three critical issues: (1) linking federal and state advocacy work to loan repayment/forgiveness programs for new dentists; (2) remedying GME payment bias for hospital services, and Teaching Health Center GME funding criteria; and (3) amending the federal rules governing FQHCs to acknowledge dental schools as part of the health care safety net.

**Loan Repayment/Forgiveness Programs**

Local, state, and federal governments should adopt loan repayment/forgiveness programs such as those identified in a 2005 HRSA report, *Financing Dental Education.* This report advocates for federal loan forgiveness programs for new dentists who practice in underserved areas or treat underserved populations. Another source demonstrates that there are only 978 NHSC dental providers at a time when 6,617 dental physicians are needed to address 4,600 designated HPSAs.

ADEA and dental education institutions must (1) continue to advocate for expanded federal and state loan repayment programs that provide the financial incentives necessary for new graduates to participate and (2) link new graduates to these programs. ADEA should serve as a forum for sharing models, such as the North Carolina model, which uses state loan repayment programs to incentivize new graduates to practice in underserved areas.

**GME and THCGME**

Another focus area should be the revision of GME and THCGME payments. Most federal GME funding goes to training physicians. The reason for this is that GME payments for services have traditionally favored hospital-based residency programs. In August 2012, HRSA announced the THCGME program, which provides payments to community-based ambulatory patient care centers that operate a primary care medical or dental (general or pediatric) residency program. Under GME and THCGME funding processes, residency programs based in dental schools are not eligible for payments.

The emphasis on hospital- and community-based residency programs puts dental schools at a considerable financial disadvantage. This disadvantage should be of concern to policy makers because school-based residents largely provide dental care at a reduced cost to populations without the financial means or insurance to be treated by private practitioners. Additional federal funding would be helpful to dental schools in expanding residency programs. This expansion, in turn, could increase access to dental care for underserved populations.

**FQHCs**

Dental schools are a critical part of the U.S. health care safety net, yet they are ineligible to receive some funds available to FQHCs. Like FQHCs, many dental schools serve populations with limited access to health care; are located in or serve high-need communities; provide comprehensive primary health care services (as well as supportive/enabling services that promote access to health care); have fee structures that are generally less than private practice fees; and meet performance and
accountability requirements regarding administrative, clinical, and financial operations.

Dental schools that provide safety net functions but do not receive funding available to FQHCs represent a significant challenge for expanding, and perhaps even continuing, safety net activities. Therefore, dental schools, like FQHCs, should be granted “benefits in recognition of the challenges they face and populations they serve.” If this funding is made directly available it is likely the stress of tuition and fees could be reduced.

Suggestions for Future Research

After reviewing all of their activities, the Task Force also suggests areas of future research to promote more clarity and better understanding of this complicated topic. These suggestions are listed below.

1. Conduct more extensive trend analyses of available cost and borrowing data.

ADEA and ADA surveys have for years collected data about dental schools, students, and factors that contribute to the cost of dental education and student borrowing. While these surveys have provided reliable, objective data on an annual basis, an examination of this data over time is needed to show trends. Trend data would provide a dynamic view of dental education’s financial standing and of the revenues and expenditures that can have an impact thereon. For trend data to be most useful, these analyses must be tied to the concepts of lowering the cost of dental education and student borrowing. As a suggestion, a study of trends could reveal the overall pattern of change in cost and borrowing indicators (by comparing different time periods, geographic areas, student populations), and delve deeper into the relationship between educational debt and career choice.

2. Establish data sharing agreements among various stakeholders.

During the development of this report, it became clear that a variety of groups are collecting data on the cost of dental education and student borrowing but data sharing is limited. Because data sharing is not widely practiced, however, and given that ADEA data is limited, the Task Force could not draw firm conclusions on some questions raised in this report. Data sharing would prove the quickest and least expensive way to remedy the problem of limited data.

Data sharing between dental organizations, which can be an important part of an overall plan to lower cost and student borrowing, discourages duplication of collection efforts. Sharing also generates knowledge, as other users may generate questions (and find answers) that the initial data collectors may not have considered. Sharing data, which encourages accountability and transparency and enables organizations to validate one another’s findings, provides a promising practice mechanism for building and participating in effective research partnerships.

3. Refine ADEA and CODA surveys so they provide information that supports planning, policy, and decision making associated with the cost of dental education and dental student borrowing.

First, evaluating existing surveys can be a particularly useful way to ask questions that collect accurate and informative cost and borrowing data. A recommended approach is to identify all of the cost and borrowing questions in ADEA surveys and evaluate whether they generate desired and valuable data.

Closely related to the design of survey questions is the frequency with which ADEA surveys are being implemented. Currently, instruments such as the Survey of Dental School Seniors ask graduating dental students questions about their loans and
noneducation debt only once, and then again at the conclusion of their predoctoral educational training. Understandably, a cross-sectional study design is desirable because it is less costly and quicker than other designs, but it does not provide information about what happens after the survey. For example, a student may report that he or she will participate in a loan repayment program, but there is no direct evidence that the student actually participated. Therefore, dental education and organized dentistry could coordinate efforts that contribute to longitudinal cost and borrowing research that surveys dental practitioners 5 and 10 years after graduation to more deliberately understand the impact of high debt on career choices.

4. **Encourage both local and national qualitative research that examines the status of students’ educational loans.**

Quantitative studies have already provided information regarding the educational loan repayment behaviors of new dentists. Nonetheless, qualitative methods, such as interviews, have the power to provide "a complex, detailed understanding"\(^90\) of issues affecting the status of graduates' educational loans. A qualitative research design enables graduates to reveal the reasons for their survey responses and the ways their answers are shaped by their particular circumstances. Qualitative approaches can also prove valuable in highlighting the presence or absence of the information and assistance necessary for graduates to manage education debt. Dental education programs should consider conducting in-depth interviews with their students. ADEA should include open-ended questions in its surveys and analyze survey text responses along with other survey data.

5. **Conduct a national study to identify the costs of implementing alternative educational models, especially IPE.**

The new CODA standards\(^91\) on team-based education will be in effect for the 2013 accrediting cycle. While this report urges dental school leaders to identify funding sources to help fund IPE, more research is needed to identify the costs of carrying out IPE activities. Having accurate information about the true costs of the financial resources required for IPE is essential to ascertaining the most effective ways to implement these CODA standards. Additionally, by identifying costs, appropriate recommendations can be made about the best ways to grow and sustain IPE activities.

A national study that examines the cost trends among dental education programs that have implemented IPE activities would also expand knowledge of which IPE activities have had the best results for schools. The study would use both quantitative and qualitative methods. One approach to designing this study might be to collect survey data from a large sample and select a small sample of survey respondents for in-depth interviews.

6. **Examine implications of rising debt among allied dental students.**

While much is known about dental education costs and student and graduate borrowing, the same is not true for allied dental education costs and student borrowing. These programs are typically shorter in length but often require extensive educational support, especially in the clinical component. To obtain a full picture of the true costs of dental education and student borrowing, deliberate research needs to be undertaken in the allied dental education area. Among the key topics are programmatic costs, levels of student borrowing, and career choices (including practice location and opportunities).

**Conclusion**

Over the past few months, the Task Force on the Cost of Higher Education and Student Borrowing reviewed reports and available literature, developed a conceptual model of cost and borrowing pressures on students, and reviewed the current regulatory and legislative environment. The
Task Force efforts culminate with recommendations and suggestions for future research. As stated in the introduction of this report, the members seek to answer four critical questions. In answering those questions, the Task Force comes to the conclusions below.

**Why does dental school cost so much?**

The Task Force agrees that dental education costs are driven by complex forces that involve the competing missions of teaching, research, community service, and patient care, all in a setting demanding new technology and educational methods. Moreover, changes in federal and state funding for higher education, patient care reimbursement, and accountability requirements (such as accreditation standards), put pressure on the dental education environment, driving up expenditures that current revenue streams may be ill prepared to support.

**Can dental educators reduce the costs without sacrificing quality?**

The Task Force agrees that reform is vital to prepare a workforce that meets the population’s future needs. Preparing to meet these needs involves new technologies, innovative educational practices, and support for basic science and patient research. At the same time, ADEA, through channels such as the 1999 AADS President’s Commission Report, has demonstrated its commitment to making a dental education accessible and affordable to all students. This ADEA Presidential Task Force report builds on the AADS report by reviewing and evaluating the latter’s recommendations within the context of today’s dental school environment. The Task Force report also makes updated recommendations to the dental education community and organized dentistry in light of new challenges faced by U.S. dental schools since the release of the 1999 report.

From the perspective of academic deans, decreases in state appropriations are driving up tuition and fees at dental schools to a great extent. Deans also most often indicated that the need to invest in new clinical technologies, increases in information system costs, and increases in central university taxes (parent institution support expenditures) drive up tuition and fees at their schools. The Task Force believes that the dental education community and organized dentistry can mitigate these challenges, but not without considerable commitment and resources. Implementing initiatives to increase the economic prosperity of dental schools is an investment worth making.

Moreover, dental education programs strive to provide high-quality patient care in their role as community safety-net oral-health institutions. Thus, mission alignment activities and strategic planning are key to moderating the sharp increases in cost while maintaining quality education and clinical environments. Two decades of eroding public funding have destabilized and weakened the professional education environment. Dental education programs can strive to contain cost, but maintaining quality and institutional alignment despite significant cost reductions does not appear feasible.

**Does the high level of student debt influence career decisions?**

The Task Force concludes that the available evidence was not certain or conclusive regarding the relationship of student debt to career choice. Certainly, some students voice concern about the potential impact of their indebtedness, but total lifetime earnings remain positive for dental professionals, as currently reflected in the ROI research.92 Much more research needs to be done to determine what early- and mid-career practice decisions dentists make and how these relate to specific debt levels.
Do high dental education costs influence who applies and attends dental school?

This final question is perhaps the most critical for the future of the dental profession. The most recent research provides some evidence that attracting and sustaining those students who come from lower socioeconomic background yields oral health benefits to underserved communities by providing practitioners who desire to serve traditionally underserved patients or work in these communities. Hence, more research along this line is recommended to clarify the relationship between applicants’ characteristics and actual practice decisions.

In conclusion, dental education leaders, students, organized dentistry, and policymakers must partner to find ways to slow the growth in dental education costs and contain student borrowing. Most importantly, organized dentistry must play a role in improving the financial position of U.S. dental education programs to ensure they are not negatively impacted by the economic factors facing students, and, ultimately, to guarantee the profession’s future, as well as its ability to function as a safety net for underserved populations.
Endnotes

1 U.S. Department of Health and Human Services

2 Ibid.


7 Ibid. 1

8 Ibid. 5

9 Ibid.


14 Association of American Medical Colleges

15 A cross-sectional questionnaire administered by academic dental institutions (ADIs) in the final semester of dental school.


18 Ibid. 6

19 Ibid.


22 Ibid.

23 Ibid. 1


26 American Dental Association’s 2009-10 Survey of Dental Education, Finances, Volume 5:53-55.


28 Ibid.

29 Ibid.

30 As with all self-selected samples, there may be a non-response bias among those deans who did not respond to the survey request.

31 HSRA uses the HCOP definition as “Individuals are considered ‘economically disadvantaged’ if they
come from a family with an annual income at or below low-income thresholds according to family size, as published by the U.S. Bureau of the Census, adjusted annually for changes in the Consumer Price Index, and adjusted by the Secretary for use in all health and allied health professions programs. Individuals are considered ‘educationally disadvantaged’ if they come from an environment that has inhibited the individual from obtaining the knowledge, skills, and abilities required to enroll in and graduate from a health professions school or allied health program.”


34 Ibid. 19


36 Standard 6


41 Figure 12, 2010-11 Surveys of DA, DH, and DLT Education Programs, ADA.

42 Figure 8, 2010-11 Surveys of DA, DH, and DLT Education Programs, ADA.


45 Figure 17, 2009-10 Survey of Allied Dental Education and 2010-11 Survey of Allied Dental Education.


48 American Dental Education Association unpublished tables. Note: Includes only those respondents who have debt.


51 Ibid., Table 11

52 ADA 2008 Survey of New Dentists.


54 Ibid. 19


57 Ibid. 48, Table 24.


61 Ibid.

62 ADA 2010 Survey of Dental Practice: Income from the Private Practice of Dentistry, Table 2.

63 Student Loan Interest Deduction Act of 2012 (HR 5719), introduced by Rep. Charles Rangel.

64 Know Before You Owe Private Student Loan Act of 2012 (H.R. 6273), introduced by Rep. Jared Polis (D-CO).

65 Student Right to Know Before You Go Act (H.R. 4061), Introduced by Reps. Duncan Hunter (R-CA) and Rob Andrews (D-NJ).


71 Ibid. 1, p. 17.


74 Ibid. 1


77 CODA Standards 1-9 and 2-19.

78 Interprofessional Education in U.S. and Canadian Dental Schools.


88 Ibid.


91 CODA standards 1-9 and 2-19.

92 Ibid. 35
A Report of
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