

The Necessity for Major Reform in Dental Education
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**The “Pipeline, Profession & Practice:
Community-Based Dental Education” Program
And
The Social Engagement of the Dental Education System**

A Topic Paper and Presentation

By

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Background and Philosophy

The Flexner and Gies^(1,2) reports have guided the education of physicians and dentists for the better part of the 20th Century. These reports provided a blueprint for an educational system grounded in the biomedical science and based in not-for-profit research universities. For most of the first half of the century and up until the late 1960s, medical and dental schools followed these recommendations and the supporting guidelines from their respective accrediting agencies. Dentistry evolved as a separate profession from medicine, but one closely aligned educationally (e.g., college preparation and the basic medical sciences).

Beginning in the 1960's, the National Institutes of Health and the federal government began to influence the development of health professional schools. A "golden age" of science and the emergence of Great Society programs increased the research efforts of schools and their engagement with the wider societal problems associated with providing care to diverse populations, respectively. At the 75th Anniversary of the Flexner Report (1987) Pellegrino correctly pointed out that only half of the Flexner legacy had been achieved, and "what lagged is the reconciliation of medical science with and its modulation by, humanism and the humanities"⁽³⁾.

During the latter half of the 20th century, all health professions were challenged by the growing complexity of their patient care responsibilities. As a consequence, the missions of health science schools were altered. Balancing the schools' education, research and patient care missions has never been an easy task⁽⁴⁾ and is even more daunting now.

Pipeline Program

The *Pipeline, Profession & Practice: Community-Based Dental Education*⁽⁵⁾ program (Pipeline) is a major initiative to provide care to vulnerable populations and to increase the diversity of the dental profession. The intellectual foundation for engaging dental education in these issues comes from Boyer ("*Scholarship Reconsidered: Priorities of the Professoriate*") who reminded higher education that the "work of the academy must relate to the world beyond the campus" and that a "new generation of scholars, one that is more intellectually vibrant and more responsive to society's shifting needs" is required⁽⁶⁾. "*Oral Health in America: A Report of the Surgeon General*"⁽⁷⁾ provided strategies for addressing oral health disparities and speaks to the societal responsibilities of the profession and dental education, bringing real world problems to our doorstep.

The Robert Wood Johnson Foundation (RWJF) recognized that to address the "silent epidemic" of oral disease identified in the Surgeon General's Report, dental education had to be part of the solution. The next generation of dentists needed more knowledge and experience in providing care to all segments of society. Further, dental education needed to be more responsive to societal needs and an increasingly diverse

student body and faculty. Based on this rationale, the major goals of the Pipeline program are:

- Increase the time that senior students and residents spend providing care to underserved patients in patient-centered community clinics and practices;
- Revise the dental school curricula to support community-based education programs; and,
- Increase recruitment and retention of underrepresented minority and low-income students.

Traditionally, most dental education occurs within the confines of the dental school building, and the curriculum is divided into the basic and clinical sciences. Part I and Part II of the National Boards and the regional licensing examinations reflect these two curriculum components.

To achieve the goals of the Pipeline program, schools had to re-prioritize current policies and practices from admissions to curriculum content and from finances to faculty beliefs and traditions. Examples of the challenges faced by schools in achieving the first two goals include:

1. In 2001/02 only 250 hours of students' patient care experiences occurred at extramural sites, while 2,000 hours took place in intramural facilities. Properly planned and executed, extramural experiences can broaden students' perspectives and ability to deal with community wide issues⁽⁸⁾.
2. In the already overcrowded 5,000-hour curriculum, approximately 1,700 hours are devoted to clinical didactic and laboratory instruction, but only 157 hours to community dentistry/dental public health and 43 hours to the behavioral sciences⁽⁸⁾.

The Pipeline program's third goal is to increase the representation of underrepresented minorities in the dental profession. Improving the diversity of the student body benefits all students, as they strive to understand the cultural implications of disease. Out of the 150,000 practicing dentists in the U. S., only 5,201 are African-American, and a similar number are Hispanic (5,178). There are only 194 practicing American-Indians**. Oral health problems are disproportionately seen in these groups, and this requires us to attract more underrepresented minority students into dental schools. The reports of the Surgeon General and the Institute of Medicine ("Unequal Treatment")⁽⁹⁾ have clearly linked the lack of minority practitioners to health disparities. Greater diversity is now a goal of both the American Dental Association⁽¹⁰⁾ and the American Dental Education Association⁽¹¹⁾.

Given the enormous problems that must be solved to improve access and reduce oral health disparities, the current emphasis in the socio-medical sciences and public

** Surgeon General's Report Table 9.8

health must be intensified in order to graduate students who have a greater appreciation for and interest in helping to solve the problems of the underserved. Likewise, dentistry must have a diverse workforce that understands the powerful cultural and socio-economic influences that lead to disparities in access and oral health. Without an adequately prepared workforce, the broader oral health problems in the United States can not be solved. Thus, strengthening the socio-medical sciences in the pre-doctoral program and recruiting more minorities into dentistry are logical and important steps in responding to the “silent” epidemic of oral disease noted in the Surgeon General’s Report.

In their report “*Health America: Practitioners for 2005*,”⁽¹²⁾ the Pew Health Professions Commission identified three core competencies for all health practitioners:

- Care for the community’s health
- Participate in a racially and culturally diverse society
- Expand access to effective care

The Pipeline program goals are in line with educating students with these competencies.

Dental Pipeline Reforms and Future Directions

The Pipeline program has required participating schools to put into place a number of reforms. Viewed in their totality, the reforms can be characterized as broadening the education of students and altering the content, format and setting for dental education. These reforms have significant implications for the future of dental education.

To date, the 15 funded schools have risen to the occasion and have planned and implemented many basic changes in their programs. To assess the impact of these changes on the future of dental education, it is important to ask three basic questions:

1. Are dental schools, organized dentistry and others interested in health professions education ready for major changes in dental education?
2. Do dental schools have the capacity to plan and implement major changes?
3. Does the Pipeline program provide a blue print for some of the future directions of dental education in the United States?

Before answering these questions, it should be understood that the 15 schools have only completed the second year of this five year program. Also, an independent evaluation group headed by Ron Andersen from the UCLA School of Public Health is formally assessing the impact of the Pipeline program. The following comments reflect the personal views of the program co-directors and are based on reviewing the original grant proposals, site visiting schools, staying in touch with the Project Directors, and reviewing data collected to monitor program progress at each school.

With respect to the first question, three observations suggest that dental education is ready for major change. First is the wide interest displayed by dental schools in the Pipeline project. Forty-two (75%) of the nation’s 56 dental schools sent in Letters of

Intent to the Call for Proposals. Second is the continuing support for the program by major dental organizations including the ADEA, ADA, NDA, HDA and SAID. This support has ranged from working on the program's National Advisory Committee to participation in national program meetings and formal Pipeline staff presentations to the boards of these organizations. Third, three of the nation's major health foundations have collaborated to fund different aspects of the project. The Robert Wood Johnson Foundation is supporting 11 of schools, The California Endowment is supporting four additional California schools and the W. K. Kellogg Foundation is providing two collateral grants to the ADEA for student scholarship/grant support and for the recruitment of underrepresented minority faculty.

On the second question, the capacity of dental schools to plan and implement major change, the 15 schools showed an amazing ability in their planning year to move from general ideas to specific implementation plans. After one year of planning and one year of operations, the schools have made excellent progress in implementing the plans. The schools have employed classic change strategies including formal environmental scans, coalitions with the wider university, organized dentistry, community groups and public health agencies, and faculty and staff support for the changes. Every school is making progress, and a few have already achieved Pipeline program objectives.

Finally, on the third question, the future direction of dental education, Pipeline program does provide a blue print for several key areas. Perhaps, more importantly, this program demonstrates that dental schools have the capacity and the will to plan and implement significant curricular changes. The schools are now more engaged with the problems of society; students are better prepared with the knowledge and skills to address the problems of diverse patients and the larger community; and progress is being made in building the infrastructure needed to recruit and retain more disadvantaged students. We believe that the Pipeline program is moving the "ball" in the right direction.

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