Foreword

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This special supplement to the *Journal of Dental Education* describes a remarkable evaluation of the Pipeline, Profession, and Practice: Community-Based Dental Education program, jointly supported by grants from the Robert Wood Johnson Foundation and The California Endowment. The W.K. Kellogg Foundation has also contributed support to the program. The evaluation concerns the experience of the fifteen dental schools funded in the first round of the program; an additional eight dental schools are implementing the program as this report goes to press. The study is remarkable for at least three reasons: for the insights it provides about gaining diversity in the dental profession, for insights into ways to increase access to dental care in underserved areas, and as a model for comprehensive evaluation of an education program in the health professions.

The Pipeline, Profession, and Practice program is designed to address two problems in oral health. A central problem in dentistry is access to oral health care. Many dental conditions are preventable, and they are more prevalent than many serious chronic conditions—yet poor and minority communities do not receive the care they need. A second problem is that, historically, certain groups have been underrepresented in dentistry, particularly African Americans, Latinos, and American Indians. Although students from these groups may aspire to health careers, they do not necessarily think of dentistry. In addition, their academic experiences may not have prepared them to be successful on entrance examinations, yet some accommodation of such students can still produce highly qualified dentists.

Therefore, the program has two goals:

1. *To increase recruitment and retention of students from racial and ethnic groups that are underrepresented in dentistry.* The rationale for this goal is twofold: to increase equity of educational opportunity, and to increase the number of practitioners sharing the culture and background of underserved communities. The assumptions are that a) such practitioners are more likely to provide care to underserved communities, b) there is an inherent basis of trust with patients from those communities, and c) such practitioners can communicate more effectively with such patients about oral health.
2. *To integrate community-based clinical experiences into the dental school curriculum.* The rationale for this goal is that community-based experiences, particularly in clinics located in underserved communities, give dental students, as well as residents, greater skill and confidence to interact with diverse patients, leading to better trust and more effective communication about oral health. In addition, the services that the students provide in such clinics very directly improve access to care for underserved communities.

In other words, the program addresses two important societal values: equity of educational opportunity, and access to care in underserved communities. As will be seen, the program generally achieved improvements in both areas. As with any new program, the gains are not uniform across the funded schools; how could they be? But the evaluation clearly indicates that these goals are achievable. Equally important, the variation in results helps us understand the factors that make the goals achievable. Finally, the goals appear to be achievable without harm to the quality of dentists' training or the well-being of the dental schools that participated.

We are fortunate that Dr. Ronald Andersen has led this evaluation, along with a multidisciplinary team of eminent dental educators and social scientists. Since the 1970s, Dr. Andersen's seminal writing on access to health care has forever changed the way that providers and policymakers frame the problem and its solution. He has conducted three national surveys of access to care, as well as many studies of efforts to improve access for minorities, the poor, children, women, the elderly, the homeless, and people living with HIV infections. In particular, however, he has focused on access to oral health as a critical dimension of the overall access problem. Along with his colleagues, he has studied graduate medical education. Now, the evaluation of the Pipeline program brings together his expertise in both access and health professions education.

The evaluation of the program aims at learning—not accountability for performance or for funds expended. This is an important distinction, because people do not generally understand that evaluations can serve these very different purposes. The Robert Wood Johnson Foundation (RWJF) commissions many evaluations of its national programs, with over thirty such evaluations in the field at any given time. However, the goal is to learn about, and to refine, the strategies for improving health and health care.[1] RWJF supports various strategies to increase access to care and reduce disparities; it also works to improve the preparation of the health care workforce. The goal of the Pipeline evaluation, then, is to determine the worth of the overall strategy—not the performance of any given dental school. With better information about the effects of the strategy, the participating dental schools can make informed decisions about continuing their efforts, and dental schools that did not participate can make informed decisions about joining in the strategy.

Most evaluations study only a few aspects of the overall program experience. In contrast, the Pipeline evaluation is fairly comprehensive in scope. The major evaluation questions concern:

- *Recruitment of underrepresented groups:* do schools increase their recruitment, admission, and retention of underrepresented minorities and disadvantaged individuals?
- *Curriculum revisions:* does the curriculum prepare students to provide culturally competent care to underserved and disadvantaged populations?
- *Clinical services to the underserved:* do students provide increasing amounts of treatment to community-based underserved patients? And what is the financial and clinical training effect of shifting clinical programs from traditional sites to community sites?
- *The decision to practice in settings serving disadvantaged populations:* among dental students and recent graduates, what are the major factors that influence the decision to practice in clinical settings where services are delivered to low-income and underserved populations?
- *Sustainability:* are the intervention components likely to be sustainable after the RWJF and California Endowment funding ends?

The profession will gain many insights from the answers to these questions. Some of these insights transcend dental education and are potentially useful for the education of other health professions as well. For example, in an article previously published in the *Journal of Dental Education,* the evaluation team described personal characteristics and context that affected whether graduating seniors planned to provide care to underserved populations.[2] The students most likely to provide the care were those who were from a racial/ethnic minority, were female, were older, came from lower-income backgrounds, and had a socially conscious orientation. This information ratified the program's assumptions because by recruiting and graduating underrepresented minorities, schools were also graduating the students most likely to alleviate access problems. However—notice that it is also the students from low-income backgrounds who have these plans. If dental education wants to alleviate problems with access to oral health care, it should in particular look for students from disadvantaged backgrounds; doing so may require more accommodation involving entrance requirements and tuition assistance. This point is probably relevant to other health professions education as well, to the extent that improving access is a part of their mission.

The evaluation is also a good model because it allowed for an exchange of useful information with the faculty members, students, administrators, and community clinicians associated with each of the dental schools in the program. Too often, evaluations are unidirectional enterprises that demand data but give nothing back to the programs being evaluated. Not so with the evaluation of the Pipeline program! Each dental school received annual feedback from the evaluation team about its performance in meeting program objectives. This feedback was tailored to the situation of each dental school, recognizing its challenges and opportunities to make progress on the twin goals of the program. This process also allowed the schools to correct anything in the reports that was inaccurate, and the reciprocal exchange of information clearly led to a much better final product, as seen here. The idea of providing feedback to the individual dental schools was negotiated at the planning stages between the evaluation team and the original RWJF program officer for evaluation, Dr. Mary Ann Scheirer. Dr. Scheirer is a veteran evaluation professional who should be acknowledged for helping to shape this evaluation.

The reciprocal relationship also extended to the National Program Office (NPO), directed by Dr. Allan Formicola and Dr. Howard Bailit. The lively interchange among the NPO, the evaluation team, and the dental schools offered insights that would not otherwise have emerged. Evaluation depends on such an interchange to assist learning. The evalua-

tion team possesses the data, but the NPO and others help to supply meaning and interpretation. Education programs do not take place in a petri dish, and best practice in evaluation never occurs in a vacuum. The goal is learning, not perfection.

However, the collaborative spirit of the evaluation did not compromise its independence. RWJF prizes independence in evaluation in order to obtain insights from a neutral third party, and we believe that this involvement enhances the credibility of the information. The evaluators collaborated to obtain the data, but the conclusions were always those of the independent evaluation team—let the chips fall where they may. All the parties respected this arrangement and recognized its importance for the credibility of the product.

The evaluation of the Pipeline, Profession, and Practice program is not without controversy. For example, the American Dental Education Association (ADEA) survey of dental school seniors is an important source of data for the evaluation. Dental educators may take issue with the quality of this survey. However, the key point is that no single indicator of impact in this study should be taken in isolation. A central principle of evaluation is presented in the methodology chapter, concerning triangulation of data. Any single data source has inevitable flaws, but if several sources all point to a similar conclusion and they do not suffer from the same flaws, then a fairly strong case can be made for the conclusion. As a result, taken together, the various data sources tell a story about the Pipeline program that is difficult for a skeptic to refute.

Some will object that certain aspects of the program were not studied as thoroughly as one might wish; for example, they might take issue with the available indicators concerning the quality of care that students provided in community-based clinics. In fact, this study does not directly address quality of care provided in any setting, community-based or otherwise. Even the most comprehensive evaluation cannot address all aspects equally; some choices were necessary. Moreover, something additional needs to be said about the quality of dental care as a goal for dental education, because it is not simply a technical concern. The Institute of Medicine defines quality in its report *Crossing the Quality Chasm*.[3] Technical quality is only one of several dimensions included in this definition. Also included are patient-centeredness—taking into account the wishes and the situation of the patient—and addressing disparities in care. Patient-centeredness is satisfied if the dentist can communicate better with patients, and disparities are addressed when the dentist provides effective service to diverse patients. These and other issues may require further study in community-based dental education settings, but there is now a much better basis to have the discussions in the first place.

A final source of controversy has to do with the challenging environment of dental schools in the twenty-first century. Dental schools are often under siege financially, and they are balancing a great many considerations besides those presented in this report. Under the circumstances, what is the use of the Pipeline program if we fear it will strain the resources of the schools, add additional challenges for faculty, or present a risk in terms of the students that are accepted? Surely the mission of dental schools is difficult enough without a new emphasis on equity and access? Are dental schools really in a position to do this work?

Readers must decide these issues for themselves on the basis of this report. The case studies clearly indicate that resources do not have to be strained in order to implement the Pipeline program. The most important ingredient for success appears to be having a committed, capable leader in place to champion the program. Taking all the evidence together, my own personal conclusion is that the Pipeline goals can be undertaken without detracting from the existing dental school mission. Dental education is not a zero-sum game: it is enhanced, not harmed, by addressing equity and access.

REFERENCES

1. Assessing our impact. The Robert Wood Johnson Foundation, 2008. At: www.rwjf.org/about/assessing.jsp. Accessed: July 29, 2008.
2. Davidson PL, Carreon DC, Baumeister SE, Nakazono TT, Gutierrez JJ, Afifi AA, Andersen RM. Influence of contextual environment and community-based dental education on practice plans of graduating seniors. J Dent Educ 2007;71(3):403–18.
3. Institute of Medicine. Crossing the quality chasm: a new health system for the 21st century. Washington, DC: National Academy Press, 2001.