

The allied dental professions are emerging into a period of significant change. Potential changes in the roles and responsibilities of allied dental professionals are part of ongoing discussions about ensuring the adequacy of the current and future dental workforce in meeting the oral health care needs of the U.S. population. Renewed consideration is being given to extending the roles and positions of allied dental professionals to increase access to care, particularly for unserved and underserved communities and populations.

These new roles and responsibilities have been proposed in workforce models recently introduced by the American Dental Association and the American Dental Hygienists' Association. In addition, the Alaska Native Tribal Health Consortium, managed by the Alaska Native tribal governments, has implemented a Dental Health Aide Therapist (DHAT) program, modeled after the New Zealand dental nurse program. This program is designed to provide basic emergency, restorative, and preventive dental care for remote and isolated Alaskan Native communities.

Workforce Adequacy

Access to Oral Health Care

There are several reasons to review the current and future adequacy of the dental workforce. The first is chronicled in the 2000 report of the Surgeon General on oral health in America.¹ This report well documents continuing improvements in the oral health status of the U.S. population. It also documents "profound and consequential oral health disparities within the population," particularly among "its diverse segments, including racial and ethnic minorities, rural populations, individuals with disabilities, the homeless, immigrants, migrant workers, the very young, and the frail elderly."¹ The report describes barriers to oral health care access, including limited income, lack of insurance, limited means of transportation, constrained ability to obtain or afford time off from work, and insufficient availability of oral health care providers.

"Employed Hispanic adults were twice as likely to have untreated dental caries as non-Hispanic whites..."

*Source: Oral Health in America:
A Report of the Surgeon General*

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Demographic Changes

A second factor is the demographic changes occurring in the U.S. population. The population is expected to grow by about 20 percent by 2020, with much of that growth in minority populations, particularly Hispanic/Latino.² Given the well documented oral health disparities already experienced by racial and ethnic minorities, these changing demographics place additional pressure on the dental profession to solve access problems.

By 2050, 49.9% of the U.S. population will be minorities. In 2000, they composed 31% of the population.

Source: U.S. Census Bureau

In addition, the U.S. population is aging. The percentage over age 65 is growing at a faster rate than any other age segment. Currently, 12.4 percent of the population is 65 years of age or older. By 2020, the percentage will be more than 16 percent, and by 2050, more than 20 percent of the population will be 65 years of age or older.²

Overall, people age 65 or older have retained more of their teeth and maintained better oral health than previous cohorts in the same age group. This group is interested in maintaining its oral health, while there may be more medical and therapeutic aspects for their health care providers to consider. Care may be more complex because of the need to maintain prior restorative care or because of the frailty of the individual. The dental workforce must have adequate capacity and capability to meet the demands and requirements of a growing aging population.

In 2000, 12.4% of the U.S. population was age 65+. It will increase to 16% by 2020 and 21% by 2050.

Source: U.S. Census Bureau

Ratios of Dental Caregivers to the Population

A third factor is the decline in the number of active private practicing dentists per 100,000 people in the U.S. Although the American Dental Association projects an increase in the aggregate number of dentists over the next two decades, the increase will not keep pace with the projected U. S. population growth. Therefore, it is estimated that by 2025 the ratio of practitioners to population will decline from a current 55 active private practitioners per 100,000 to 50. Still the ADA, through the assessment of various workforce scenarios, has concluded that the projected dental workforce will have an aggregate productive capacity greater than that of the current dental workforce. Even though the ratio of dentists to population may decline, the ADA reports that "a major increase in the aggregate number of dentists is probably not needed at this time."³

Part of the ADA's reasoning lies in the current and reserve capacity of the dental workforce made possible by employing allied dental professionals. But based on the current numbers of dental and allied dental graduates, there is concern that the capacity of allied dental education is not keeping pace with the quantitative demands of the dental workforce.

Dentist to Population Ratio
55 per 100,000 in 2005
declining to
50 per 100,000 in 2025

Currently, 94 percent of dentists employ one or more full-time or part-time chairside dental assistants. This rises to 98 percent for new dentists, defined as those who graduated from dental school fewer than ten years ago. The average number of chairside dental assistants per dentist who employs them is 1.8. Sixty-eight percent of dentists employ one or more dental hygienists, full-time, part-time, or both. This ratio is 71 percent for new dentists. The average number of dental hygienists per dentist who employs them is 1.8.⁴ The majority of work requiring a dental laboratory technician is requested by prescriptive work orders with a dental laboratory. Only about six percent of dentists and only 4 percent of new dentists employ a dental laboratory technician. The average number of dental laboratory technicians per dentist who employs them is 1.3.⁴ However, essentially all other dentists routinely employ the services of a dental laboratory.

To maintain the projected adequacy of the dental workforce, the numbers of formally educated allied dental professionals must increase to keep up with the increase in the aggregate number of dentists, even if the allied professionals' roles and responsibilities are extended.

Other Factors

The ADA's projected number of dentists is premised on an increasing number of dental students that is beyond the enrollment capacity of the current number of dental schools. Also, the number of designated dental health professions shortage areas continues to increase, standing now at 3,296.⁵ The estimated population in these areas is more than 45.6 million people. About 9,000 dentists would be needed to eliminate all of these shortage areas. (Nine thousand dentists, along with the average number of allied dental professionals working with those dentists, more than 25,000, is the equivalent of two full annual graduating classes of dental and allied dental students nationwide.) In addition to the designated health professions shortage areas, there are increasing reports by individual dentists, constituent organizations, public health entities, and various local and state legislative bodies of a current and an anticipated shortage of dentists.

Dental Health Profession Shortage Areas

3,296	Shortage Areas
45.6 million	People living in shortage areas
9,000	Estimated additional dentists needed to eliminate DHPsAs

These 9,000 dentists would employ an estimated additional

15,228 dental assistants

11,016 dental hygienists

Or the equivalent of

- Nearly three graduating dental hygiene classes
- More than two graduating dental assisting classes

Role of the Allied Dental Professions in Workforce Adequacy

History indicates that increasing the number of dentists does not necessarily improve access to, the availability of, or the utilization of oral health care. Increasing the number of dentists may not be the most cost-efficient way to increase the productive capacity of the dental workforce. A more intensive and extended employment of allied dental professionals can provide a more rapid, cost-effective, and flexible way of responding to the changing needs and demands of the U.S. population as a whole as well as unserved and underserved segments and communities.

Allied dental professionals contribute to the efficiency and productive capacity of the workforce in three ways. In certain settings and situations, they substitute for the dentist when there is none available. In others, they supplement the dentist as the dentist del-

egates functions within the dental team. Finally, they complement the dentist as they work directly in providing care. In moving from complementing to supplementing to substituting, there are issues of autonomy, supervision, and independent decision making among the dental and allied dental professions. These issues become more contentious as allied dental roles and responsibilities expand beyond direct and indirect supervision to a remote “standing orders” level of supervision that may or may not be part of a consciously designed interdisciplinary system of oral health care delivery.

Access to and availability of oral health care are complex issues. The numbers and types of providers are only two of the factors to be considered in ensuring a workforce of adequate size, composition, and preparation to meet the current, changing, and emerging demands of the U.S. population. The dental and allied dental workforce distributes itself according to demand, reasonable remuneration, and professional and personal quality of life expectations. In consideration of new workforce models in an effort to improve oral health care access and availability and to increase the productive capacity of the overall dental workforce, care must be taken not to create or expand elements of the workforce that cannot be effectively employed.

Allied dental professionals can complement, supplement, or substitute for the dentist.

One policy or approach will not resolve all issues. There are already great differences from state to state in scopes of practice, levels of supervision, and educational requirements for different types of allied professionals, even those performing similar procedures. Further differences between states will undoubtedly arise as individual state boards consider their dental practice acts in light of new models of care and the changes they might perceive as essential to meeting the oral health care needs of their populations.

ADEA’s Role in Allied Dental Education

It is not the role of the American Dental Education Association to develop new practice workforce models. However, it is appropriate for ADEA to anticipate and prepare for changes to curricula that new workforce models would require, in whole or in part, through statute or regulation by states or the federal government.

In this proactive process, it is appropriate to assess differing scopes of practice, levels of supervision, and educational requirements for different allied professionals. It is an opportunity to guide a convergence of educational and credentialing require-

ments that ensures similar foundation knowledge, competence, and credentialing for similar procedures, roles, and responsibilities held by the different types of allied dental professionals.

ADEA policy statements endorse formal education of allied dental professionals through accredited programs. Education must be to the highest standards of practice, not only in functional procedures but in the essentials of critical thinking, decision making, and skills required by all types of allied dental professionals, current or emerging. So it is also appropriate to recommend levels of education and training for current and proposed types of allied dental professionals, as they are prepared for their complementing, supplementing, and substituting roles and responsibilities on an efficient and productive oral health care team.

Education vs. Supervision

There are two intersecting axes in allied dental roles and responsibilities, educational requirements and supervision. On-the-job training of allied dental professionals requires the least education but the most supervision. In a scenario that emphasizes this training, allied dental professionals primarily complement the efficiency and productivity of the dental team. On the other hand, formal education prepares allied professionals for delegated procedures and prescribed scopes of practice.

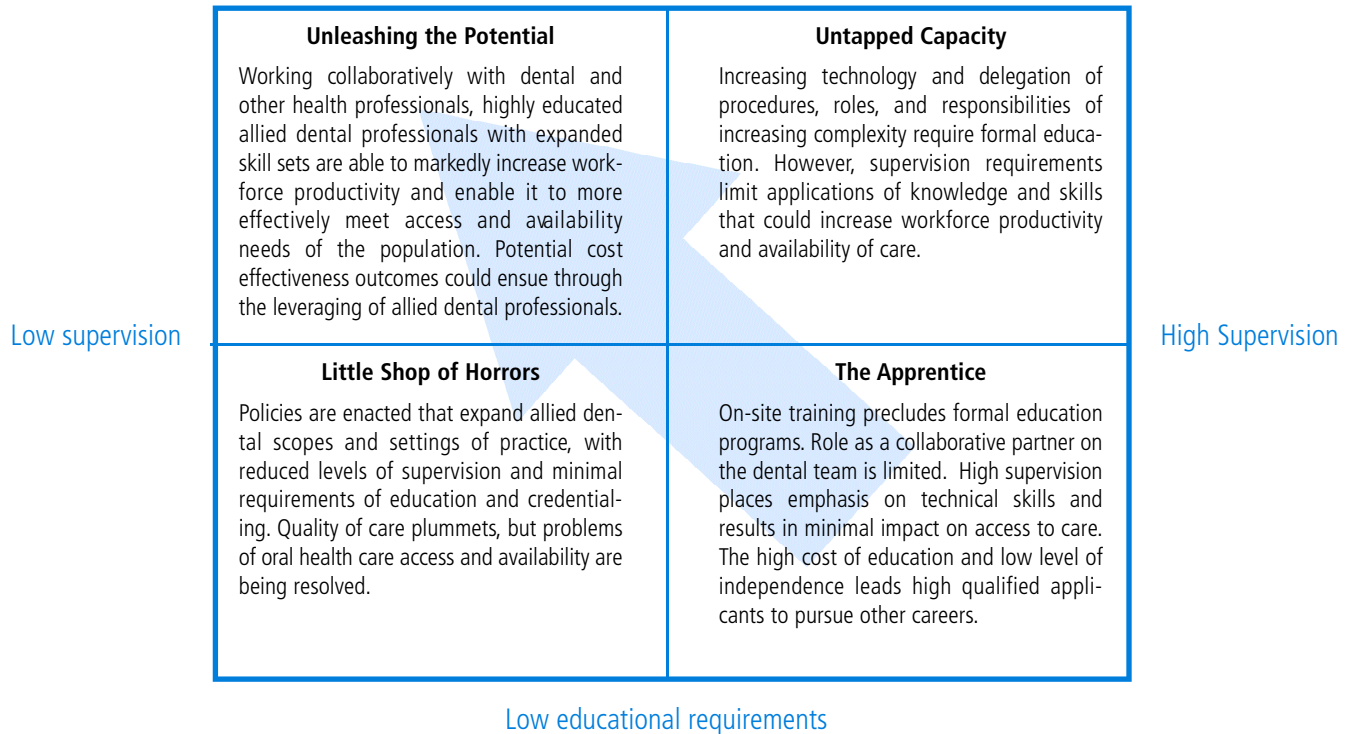
These roles and responsibilities, while enhancing the productivity of the dental team, are restrained by requirements of supervision. Allied dental professional frustration is often expressed as “We are overtrained for what we do, and not allowed to do what we could do.” Some proposed new workforce models not only expand scopes of practice and related educational requirements, but also diminish required levels of supervision. The resulting new roles and responsibilities have elements of “substituting for” the dentist. The intent of these new roles is to increase flexibility in the oral health care delivery system, both within and outside of the traditional dental practice. The new roles and responsibilities create oral health care delivery alternatives that can increase the efficiency and productivity of the dental team and address issues of access and availability of oral health care.

The intersection of the two axes of education and supervision creates a matrix describing four potential futures for the allied dental professions as illustrated on the next page.

Depending on how the two questions are answered, the role of allied dental education would vary widely, particularly as to settings, content, structure, educational methodologies, program length, and outcome assessments.

The new workforce models continue to raise questions about the varying roles, positions, and responsibilities of allied dental professionals in complementing, supplementing, and substituting for the dentist and the delivery of oral health care.

High educational requirements



Vertical Axis: What level of formal education will be required for success
Horizontal Axis: What level of supervision will the workplace require?

- What roles and responsibilities of allied dental professionals can be modified and extended to further the efficiency and productivity of the dental team and meet varying needs and demands of practice and society?
- What levels of formal education are required for various kinds of allied dental professionals, and how long must the program be to achieve the necessary formal education?
- What competencies, foundation knowledge, and experiential learning venues are essential to preparing individuals for the emerging and varying roles, responsibilities, scopes of practice, and levels of supervision?
- What infrastructure is needed to prepare the current and emerging allied dental workforce, such as master clinicians, teachers, researchers, and administrators, as well as the educational and clinical facilities?

Charge to the Summit on Allied Dental Education

It may be relatively easy to envision an allied dental workforce model. The challenge is a design that has the support of all communities of interest, is flexible in structure and content, and can be accommodated and effectively employed to meet the needs of varying types of practice, settings, and population groups. While contemplating extended roles and responsibilities for allied dental professionals, one goal should be bringing logic and order to the whole of allied dental education, credentialing, and practice.

These considerations will unleash the potential of the allied dental workforce as it complements, supplements, and substitutes within the dental team. The goals of the ADEA Allied Dental Education Summit are to:

- develop recommendations for changes to allied dental education in light of current practice standards throughout the nation and proposed new workforce models;
- provide guidance to the development and implementation of new curriculum models that address changing allied dental roles and responsibilities; and
- suggest steps that should be taken in the process by the allied dental professions, ADEA, and the communities of dental and allied dental education.

References

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