

EXPANDING SERVICES BY DENTAL AUXILIARIES; WHY? WHERE? HOW?*

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Miss Weinstein, with guidance from Dr. Hansen, has gone forward vigorously to learn more about the acceptance of an intraoral technical assistant by the dental profession.

The economic and educational affluence of recent years has produced a heightened public awareness of the correlation between personal health and general well-being. Coincidentally the development of the ideal concept of individual right to comprehensive professional health services is beginning to put stress on systems for delivering health care.

The preventive measures from public health have not caused a decrease in the need for dental services, but merely have changed the character of the need. The results of fluoridation of communal drinking water, for example, now are becoming apparent and are turning the attention of both the public and the profession from restoration of cavities to the more sophisticated and productive professional services that maintain total oral health throughout a lifetime.^{1,2} Increased pressures on the dental profession by continued development and expansion of private and governmentally supported plans of prepayment also have increased the demand for dental services.

Better training, equipment, and increased operational efficiency are, without doubt enhancing the productivity of individual dentists. Increasing numbers of graduates from more dental schools also will boost the productivity of the profession. But these gains will keep pace with neither the need nor the demand for dental care.⁴ Added demands on the Nation's dental force make progressively more difficult its ability to meet the population's needs for adequate dental care. Based on the time required for treatment, the Bureau of State Services of the Public Health Service estimated that a dental force five times the present size would have to work for a year, full-time, to meet the accumulated backlog of dental needs in this country. The provision of adequate dental care to the people of this country, hence, will demand much more effective utilization of auxiliary personnel. More effective utilization of auxiliary personnel, in turn, will become the most significant factor in helping the dental profession meet the increasing demand for dental care.¹⁰

The practice of dentistry encompasses two specific fields of operation: (1) prevention, and (2) restoration and rehabilitation. The dental hygienist, by virtue of her training, practices a preventive phase of dentistry. To remove her from that task and expand her duties in restorative treatment would defeat the purpose of her education and disrupt the efficiency of dental hygiene practiced in her office.

It seems reasonable to contend, therefore, that any expansion of delegated personnel must be through the dental assistant. The dental assistant already is oriented to restorative procedures. A relatively uncomplicated, and a much more direct approach to the problems of her training and, subsequently, her functions in dental practice

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would evolve if the assistant were the one selected to help meet the increased demand for dental care.

Properly trained dental auxiliaries, it has been shown, can enhance the efficiency of dental practice and its productivity tremendously. The problem of expanding the functions of auxiliary personnel, however, is not merely one of training. The professional attitude, particularly of the dentist, must adjust to the realization of the need and usefulness of responsibilities delegated to an auxiliary.

Experimental programs notwithstanding, the determination of the desirability of training dental auxiliaries to perform additional duties is not, in the view of the Council on Dental Education, solely an educational determination. Rather, it is appropriate that the profession initiate the decision in terms of the best interests of the individual patient and his community, but based on certain educational criteria.⁸

This conclusion was restated in the 1966 and 1967 meetings of the American Dental Association's House of Delegates:

Resolved, that it is the responsibility of the individual practitioners, acting through component and constituent dental societies and state dental examining boards, to proceed promptly with studies, decisions and legislative actions which will help meet the manpower needs of the public, including the identification of auxiliary functions which can be delegated to auxiliary personnel working under the direct supervision of the dentist.

Resolved, that constituent societies and state dental examining boards consider recommending revisions of dental practice acts to give their examining boards authority to prescribe rules or regulations to achieve more effective utilization of the services of dental hygienists and dental assistants. . . .⁸

These functions were not to include those enumerated by the American Dental Association's House of Delegates as duties specifically assigned to the dentist: (1) diagnosis, planning treatment, and prescription; (2) surgical procedures on hard and soft tissues; (3) all restorative, prosthetic, and orthodontic procedures which require the knowledge and skill of the dentist; (4) prescription of drugs, medications, and authorization of work.⁴

Current debates have emphasized the real problem associated in defining and delegating added responsibilities to auxiliaries; it is lack of agreement in the profession on the duties to be delegated to auxiliaries and to what auxiliary the duties should be delegated. Sullens¹² observes that an increasing number of dentists employ dental assistants each year; the number was over 90 percent in 1965. It is not at all unreasonable to anticipate the time when virtually all dental practitioners will employ an assistant in their offices. The manner in which the assistant is utilized, however, reduces the effect of this optimistic projection. In far too many offices, the individual identified as a dental assistant is, in reality, a receptionist, a purchasing clerk, a caretaker, and a personal servant. The description of the dental assistant, hence, needs a much better definition in terms of the direct, technical services which she can provide for the dentist. It makes little sense to train a young woman for one or two years who will be assisting chairside in the elements of biological sciences, in the properties of dental materials, and in laboratory procedures unless these knowledges and skills can be applied in the office where she is employed.

The Survey

In order to define more clearly some of the problems in expanding the functions of auxiliaries, the national educational and legal status of dental assistants had to be investigated. The primary concern was to determine the functions delegated to assistants by the dental practice acts of states, and the correlation existing between the laws and the education received at the accredited schools of dental assisting. Once this information was ascertained, utilization of assistants could be investigated. The

question then raised would be, "How would a fully qualified dental assistant—qualified both by education and by law—be utilized by the dentist?"

The 14 functions enumerated in the questionnaire were based on those listed in a report to the Board of Trustees of the Michigan Dental Association² (See the sample questionnaire). Questionnaires were sent to the state boards of dentistry of the 50 states and the District of Columbia, to a random sample to 50 accredited schools of dental assisting, and to a random sample (based on dental population in each district) of 200 Michigan dentists.

The legal status of the dental assistant in the United States will be found reported in Table 1. Tables 2 and 3 summarize the responses of the schools and the dentists concerning the 14 duties. The information received indicates a considerable gap between the actual legal status of the dental assistant and the status desired by many dentists for more efficient and productive practices. The high positive correlation between the curricula offered by the various accredited schools of dental assisting and the state laws shows a need for reevaluation of states' laws in order to provide an improved educational experience for dental assistants.

Revisions of the dental laws of various states also show an attempt to reconcile the laws with the new needs of the profession. These changes, perhaps, reconcile the laws with the new needs of the profession. They perhaps represent a beginning, but a more realistic interpretation of the growing demands on the dental profession must be made by this country's lawmakers. To permit dentists to serve the public's needs and desires better, laws must keep pace with advancing concepts of dental practice.

The Questionnaire

(An introductory statement for all three designated groups followed)

- I. Are dental assistants in the State of _____ allowed by law to perform any or all of the 14 tasks listed?
- II. Are dental assistants trained to perform any or all of the 14 tasks listed?
- III. Assuming that your dental assistant has been trained fully to perform the following functions and that they all are legal functions of dental assistants, would you approve her performance of the tasks that follow:
 1. Place and remove the rubber dam or use any other technic to isolate the teeth from saliva;
 2. Place and remove the matrix to contain any restorative material within the cavity, that previously has been prepared by you;
 3. Apply a drug or a varnish to the internal walls of the cavity prepared by you;
 4. Place, condense and contour the restoration listed in No. 2;
 5. Complete the finishing and polishing of the restoration listed in No. 2;
 6. Place and remove a temporary filling material from a cavity;
 7. Polish the crowns of the teeth of patients with a fine abrasive paste or powder to remove stains and films after hard accretions have been removed by you or your dental hygienist;
 8. Apply solutions such as fluorides to the surfaces of isolated teeth;
 9. Remove excess cement from around permanent or temporary restorations of teeth and from around orthodontic bands;
 10. Expose, process, and mount oral radiographs;
 11. Secure impressions of the teeth for study casts;
 12. Place and remove periodontal dressings;
 13. Remove sutures placed by the dentist;
 14. Engage in increased education of the patient regarding his oral health?

TABLE I: Legal Status of Dental Assistants in the United States

STATE	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	#14
Alabama	+	+	+	--	--	+	--	--	--	+	+	+	+	+
Arizona	--	--	--	--	--	--	--	--	--	+	--	--	--	+
California	--	--	--	--	--	--	--	--	--	+	--	--	--	+
Colorado ¹	--	--	--	--	--	--	--	--	--	--	--	--	--	+
Connecticut ⁵	--	--	--	--	--	--	--	--	--	2	--	--	--	?
D. C. ⁴	--	--	--	--	--	--	--	--	--	--	--	--	--	+
Florida ¹	--	--	--	--	--	--	--	--	--	+	--	--	--	+
Georgia	--	--	--	--	--	--	--	--	--	+	--	+	+	+
Hawaii ³	--	--	--	--	--	--	--	--	--	+	--	--	--	--
Idaho	--	--	--	--	--	--	--	--	--	+	--	--	--	+
Indiana	--	--	--	--	+	--	--	+	+	+	+	+	+	+
Iowa	--	--	--	--	--	--	--	--	--	+	--	--	--	+
Kentucky	+	--	--	--	--	--	--	--	+	+	--	--	+	+
Louisiana	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Maine	--	--	--	--	--	--	--	--	--	+	--	--	--	+
Maryland ¹	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Massachusetts	--	--	--	--	--	--	--	--	--	+	--	--	--	--
Michigan	--	--	--	--	--	--	--	--	--	+	--	--	--	--
Minnesota ^{3, 6}	--	--	--	--	--	--	--	--	--	+	--	--	--	--
Mississippi	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Missouri	--	--	--	--	--	--	--	--	+	+	+	--	--	+
Nebraska ⁶	+	--	--	--	--	--	--	--	--	+	--	--	--	+
Nevada	--	--	--	--	--	--	--	--	--	+	--	--	--	+
New Jersey ⁷	--	--	--	--	--	--	--	--	--	+	--	--	--	+
New York	--	--	--	--	--	--	--	--	--	+	--	--	--	--
North Carolina ¹	--	--	--	--	--	--	--	+	--	+	--	--	--	+
North Dakota	2	2	--	--	--	--	--	--	2	3	--	--	--	+
Oregon ⁶	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Pennsylvania	+	+	+	+	+	+	--	--	+	+	+	+	+	+
South Carolina ⁸	+	+	+	--	+	--	--	--	+	+	--	+	+	--
South Dakota	+	--	--	--	--	--	--	+	--	+	--	9	+	+
Tennessee ¹	--	+	+	--	--	--	--	--	+	--	--	--	--	+
Texas	--	--	--	--	--	--	--	--	--	+	--	--	--	+
Washington	--	--	--	--	--	--	--	--	--	+	--	--	--	+
West Virginia ⁴	--	--	--	--	--	--	--	--	--	+	--	--	--	+
Wisconsin ¹	--	--	--	--	--	--	--	--	--	+	--	--	--	+
Wyoming	(see footnotes) ¹													

¹ Legislation in the process of being revised.² Not denied by Law; therefore, permissible.³ One-year training required.⁴ Process and mount radiographs--not expose.⁵ Functions constitute practice of dentistry, by law.⁶ Under the direct supervision of a dentist.⁷ Dental assistants, under the Dental Practice Act may expose, process and mount x-rays. A new title--effective December 5, 1969--sets up a Board of X-ray Technicians and by stated date dental assistants must take an examination and obtain a limited license in x-ray technique.

⁸December 8, 1968, the State Board of Dentistry defined a qualified dental assistant: "a currently certified dental assistant, or one who had graduated from an approved course for certified dental assistants, or one who has had continuous employment as a chairside assistant in a dental office for at least 2 years."

Duties approved for qualified dental assistants:

- (1) Take and record pulse, blood pressure and temperature;
- (2) Take dental x-rays;
- (3) Topical application of drugs prescribed by the dentist;
- (4) Polishing restorations with a rubber cup and pumice;
- (5) Remove celluloid or plastic strips from between restored teeth;
- (6) Remove orthodontic ligature wires.
- (7) Remove rubber dam;
- (8) Place rubber dam;
- (9) Remove excess cement from restorations or appliances;
- (10) Remove sutures
- (11) Remove cotton rolls.
- (12) Place cotton rolls as desired by the dentist;
- (13) Remove socket dressing.
- (14) Remove periodontal dressing.

⁹Remove only.

Table II

Percentage of Respondants Indicating That Functions Are Legal, Taught, or Considered Desirable.			
Function	Legislation ¹	Education ²	Dental Utilization ³
1	19.6%	51.3%	79%
2	11.2	18.9	51
3	11.2	5.4	44
4	2.8	8.1	22
5	8.4	5.4	52
6	5.6	5.4	57
7	0.0	8.1	73
8	8.4	16.2	82
9	19.6	13.5	79
10	86.8	97.2	99
11	11.2	35.1	69
12	16.8	0.0	37
13	19.6	10.8	70
14	64.4	97.2	90

¹ Percentages based on the 36 questionnaires received out of 51 questionnaires that were sent to State Dental Boards.

² Percentages based on the 37 questionnaires received out of 51 that were sent to Schools of Dental Assisting.

³ Percentages based on the 100 questionnaires received out of 200 questionnaires that were sent to dentists in Michigan.

Some Comment

Historically, it has been shown that change takes place without plan when the pressures of public demand become sufficiently articulate. Change already can be pointed out in the provision of dental prostheses, because illegal practice by dental technicians has created a major problem for the profession and the public. One of the many reasons for the development of such a problem has been the failure of the dental profession to assume its responsibility in educating and training dental technicians. To prevent similar developments in the practice of the other two auxiliaries (in dental assisting and dental hygiene), it appears necessary to broaden promptly the scope of their educational

Table III

Correlation between Legislation and Education: Comparison of Legal Status of Functions and Corresponding Curricula of Schools of Dental Assisting.		
Function	Number of schools ¹ corresponding to laws.	Percentage
1	17	52.7%
2	24	74.4
3	27	83.7
4	29	89.9
5	26	80.6
6	26	80.6
7	28	86.8
8	26	80.6
9	25	77.5
10	32	100.0
11	20	62.0
12	28	86.8
13	25	77.5
15	22	68.2
Average percent positive correlation		78.7

¹ Sixteen states: 32 schools reported.

programs by adding the procedures that conserve the dentist's time for those tasks in which he alone is competent. Increasing demands for dental service will be the important factor in determining the future role of dental auxiliaries. It would be advantageous to predict now the full import of this factor and to plan intelligently on the basis of such a prediction. It is imperative too that the expanded duties to be delegated to dental auxiliaries be determined by the profession promptly.⁷

The past experience of a number of countries has shown that failure to serve the public's needs forces change in the practice of a health profession. Dentists, to preserve their independence of action, must define the national dental goals and determine sound, but vigorous measures for achieving these goals. To perform otherwise invites social planners and government to perform these two tasks for the profession.

The warning of Sullens^{1,2} now appears appropriate. In February 1967 he noted that prompt and proper determination of the future role of dental auxiliaries will require more active participation by dentists at the level of component and constituent dental societies, not just the national level. Increased emphasis has to be placed upon the responsibility and privilege of the individual practicing dentist to delegate defined duties to his auxiliary personnel. The individual dentist, after all, is responsible for his patient's health and welfare, and he is the one who must retain sole responsibility for the opinions, decisions, and judgments that determine the practice of dentistry.

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Perception, Interaction, Social Change

One rarely can predict the behavior of society accurately because a society is based on interaction through communication. A single act of a single individual has been recorded in history as changing the future of an entire world. Inventors, intellectual and political leaders, and assassins have been known to affect all of mankind. Nuclear disarmament depends upon interaction, and decisions of one power to escalate or de-escalate influence the decisions of other powers. The mutual reinforcement of behavior is a factor in several current problems of cooperation or conflict. (University of Michigan Research News for July, 1969)

An O.K. Word?

Will I accept the verb "to host" of "escalate" or "finalize," or "enthuse"? Do I approve of nouns that pose as adjectives—"health reasons" or "disaster proportions"? How do I feel about "it's me"? Will I allow "like to be used as a conjunction"—*like* so many people do? Will I give my O.K. to "mighty" as in "mighty fine"? Will I give my O.K. to "O.K."? If one wants some answers, a "Usage Panel" of 104 critics appraises new words and dubious constructions in the American Heritage Dictionary of the English Language. (William Zinsser in Life for August 29, 1969)

Social Pressure for Continued Education

All are aware in the health sciences of the changing posture of the federal government in regard to health. A biomedical revolution, that began in the late 30's, now is interested in the interaction of society to health affairs which indicates specific emphasis on sufficient qualified health manpower and a reorganization of the delivery of care to the public. The question has been raised, "Is there any method, short of compulsion, to ensure the continuing education of all health scientists?" (Dean John H. Moxley, III, in the Journal of the American College of Dentists for July, 1969)
