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of the

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COLLEGE  
OF DENTISTS**

JULY 1980

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Dentist-Staff Communication  
Forecasting in the Health Field  
National Health Insurance  
The Admissions Interview  
Patient Relations

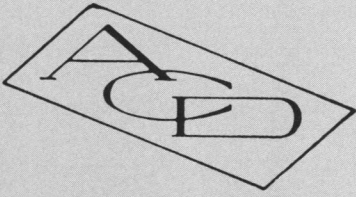


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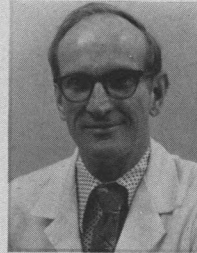


## NEWS AND COMMENT

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### **GORDON H. ROVELSTAD NAMED EXECUTIVE DIRECTOR**

At a special meeting earlier this year, the Board of Regents interviewed a number of outstanding candidates for the post of Executive Director to replace Robert J. Nelsen, who is retiring at the end of 1980. After careful deliberation, they chose Gordon H. Rovelstad who is currently serving the College as its president and has had a close association with its operation for the past seven years as a Regent and presidential officer. Dr. Rovelstad will assume his new duties early in 1981. He is presently an associate dean at the University of Mississippi School of Dentistry.



### **BOARD ACTIONS**

Meeting in mid-April in Bethesda, the Board of Regents of the College took the following actions:

- Approved the terms of agreement with Gordon H. Rovelstad for his employment as Executive Director.
- Confirmed the appointment of a Search Committee to select a new Editor.
- Postponed consideration of a revised Pledge for new Fellows of the College until the fall meeting of the Board.
- Approved arrangements for the 1980 annual meeting and convocation in New Orleans.
- Heard and discussed a report on the finances and cash flow of the College and a demographic study of Fellowship by age presented by Alfred J. Ouska, and referred the report to the Financial Advisory Committee.
- Received a report on section rechartering which indicates that all except the Montana Section have completed rechartering.

- Received the report of the Oral History Committee indicating that that interviews with George Paffenberger have been completed and are being put into book form.
- Approved a motion that an ad hoc committee be appointed to plan the format for an Oral History project on dental journalism.
- Approved the formation of a Section of the College in Central New York State.
- Accepted the report of the Committee on Credentials.
- Accepted reports of the Nominating, Publications Advisory, Sections and Self-Assessment Committees and the Commissions of the Board.

### **METROPOLITAN WASHINGTON SECTION PROMOTES PROJECT LIBRARY**

Approximately two and a half years ago, the Project Library Committee of the Metropolitan Washington Section of the American College of Dentists embarked on a most ambitious undertaking. It set out to place a Project Library package in every public and private senior high school in the Metropolitan Washington area. Geographically, this area encompasses the District of Columbia, Alexandria, Arlington County, Virginia, Montgomery County, Maryland, and Prince George's County, Maryland.

Now, thirty months later, it has achieved its goal and then some. Project Library packages have been placed in 101 senior high schools, 7 junior high schools, 9 elementary schools, 1 vocational school, 1 university, 1 county library, and 21 out of town school libraries. This total of 141 Project Library packages is believed to be the highest number ever distributed by any Section. This effort on the part of the Section guarantees the availability of appropriate literature on dentistry where it is needed most—on the library shelves of our school systems.

Henry J. Heim was chairman of the Project Library Program.

### **CONTRIBUTING EDITORS**

Contributing Editors for this issue are Juliann S. Bluitt of Chicago, Robert E. Lamb of Dallas and Bernard Yanowitz of Washington, D.C.



## SECTION NEWS

### Illinois Section

With 127 guests in attendance, the Illinois Section held its Annual Midwinter Luncheon at the Union League Club of Chicago, February 17, 1980.

Prior to the luncheon a tour of the art collection which is owned and housed at the Union League Club was enjoyed by the group.

The invocation was offered by Arthur Skupa and was followed by a brief salutation by our Chairman, Norman Olsen.

The luncheon was followed by introductions of V.I.P.'s in attendance including Joseph Hagan, trustee, and John Houlihan, president elect representing the American Dental Association; officers of the Illinois State and Chicago Dental Society and deans of the other dental schools in the Chicago area.

Greetings were extended by our national president, Gordon H. Rovelstad, who offered brief remarks about the relevancy of the occasion.

One of the highlights of each year's annual program is the presentation of the Student Merit Awards. This year the recipients were introduced by their respective deans and the awards presented by chairman Olsen in recognition of their outstanding achievement to:

Patrick Angelo—Loyola University

D. Kent Moberly—Southern Illinois University

Harold Doerr—Northwestern University

Allan Boghosian—University of Illinois

Mr. Boghosian, in accepting the awards for the group provided a most incisive and perceptive commentary about the significance of the award and the challenges faced in dentistry within the next decade.

The featured speaker was I. Lawrence Kerr, president of the American Dental Association who presented the challenge of ethics and morality and the quest for excellence in this time of change. His direct, hard-hitting, and frank presentation was stirring, thought provoking, and challenging to all who were in attendance.

A special award of recognition was presented by chairman Olsen to Syrus Tande in appreciation for the time, effort and interest he has shown through 7 years of dedicated service to the Illinois Section.





*Left to Right: John J. Houlihan, ADA president elect; Norman H. Olsen, Regent; Mrs. Gordon H. Rovelstad; I. Lawrence Kerr, ADA president and Gordon H. Rovelstad, president of the College.*

### **Texas Section**

The Texas Section held its annual business meeting and election of officers on May 9 at the Marriott Hotel in San Antonio, in conjunction with the annual session of the Texas Dental Association.

After the business meeting the Section heard two outstanding speakers, Reagan Brown, Texas Commissioner of Agriculture and Donald House, former Senior Economist and now consultant to the American Dental Association, and owner of a consulting firm in Bryan, Texas.

President Bill Ritchey chaired the program and after luncheon introduced I. Lawrence Kerr, president of the American Dental Association, who gave an interesting talk on the current activities of the A.D.A.

Section officers elected for the coming year are:

James P. Addison—president

Robert Maberry—president-elect

Ernest H. Besch—vice-president

Robert E. Lamb—secretary-treasurer

*(continued on page 188)*

# the JOURNAL of the AMERICAN COLLEGE of DENTISTS

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A QUARTERLY PRESENTING IDEAS IN DENTISTRY

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LYNDEN M. KENNEDY                      GERALD E. McGUIRK  
ROBERT A. CUPPLES

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## Regent Norman H. Olsen

Norman H. Olsen, Dean of Northwestern University Dental School was elected to the Board of Regents of the College at its last annual session. Educated at the University of Idaho and Creighton University, he received his dental degree at Creighton in 1951, and a Master of Science in Dentistry at Northwestern University two years later.

Pursuing a teaching career in pedodontics, he accepted the post of professor of pedodontics and department chairman at the University of Kansas City School of Dentistry and was a member of the dental staff at Mercy Hospital. While at the University of Kansas

City he produced a number of films on pedodontic subjects which are still in use.

Coming back to Chicago he joined the pedodontic department at Northwestern and entered private practice. In the course of time, he rose to a full professorship, and in 1972 was named dean of the dental school. He presently holds staff appointments at Northwestern Memorial Hospital, Childrens' Memorial Hospital, Evanston Hospital, St. Francis Hospital in Evanston, and is consultant in pedodontics at the Cleft Palate Institute at Northwestern University.

Dr. Olsen is a Fellow and past president of the American Academy of Pedodontics, a diplomate, past member and past chairman of the American Board of Pedodontics, past president of the Illinois Unit of the American Society of Dentistry for Children and former chairman of the sections on pedodontics for the American Dental Association and the American Association of Dental Schools. He is a past president of



the Association of Pedodontic Diplomates, first chairman of Chicago Dental Society's Annual Childrens' Dental Health Day, and a charter member of the Illinois Academy of Pedodontics.

He served as program chairman for the Chicago Dental Society's Mid-winter meeting and the Illinois State Dental Society meeting. He is also a former member of the Joint Commission on Accreditation of Dental Laboratories and was a consultant to the ADA Council on Dental Therapeutics and the Council on Scientific Sessions

Dr. Olsen also holds memberships in the International Association for Dental Research, the American Academy of Gold Foil Operators, the Board of Governors of the Odontographic Society of Chicago and the Board of Infant Welfare of Chicago. He belongs to Sigma Alpha Epsilon and Delta Sigma Delta fraternities, Omicron Kappa Upsilon honorary dental fraternity and the Westmoreland Country Club. He is currently president-elect of the Evanston Rotary Club, trustee of the Northminster Presbyterian Church, trustee of the Roycemore School and past chairman of the professional division of the Evanston United Fund.

He is widely known as an essayist and clinician and has appeared before local, state and national dental meetings in some 42 different states. Dr. Olsen is also the author of numerous published articles, primarily on pedodontic subjects, and is co-editor of two editions of "Current Therapy in Dentistry".

He is the recipient of a number of honors and awards, including the Merit Award of Northwestern University, the Award for Excellence of the American Society of Dentistry for Children, the Alumni Merit Award from Creighton University and Fellowship in the Chicago Institute of Medicine. He received Fellowship in the American College of Dentists in 1963.

Dr. Olsen and his wife, Donna, live in Winnetka, Illinois and have three children, Eric (Skip), a June graduate from Northwestern University Medical School; Heidi, a junior at Northwestern University and Holly, a high school student.

## Editorial

# OUR SIXTIETH YEAR

The American College of Dentists observes its sixtieth birthday this year. It was founded upon the belief that an organization was needed which would honor members of the dental profession for significant achievement, and held its first meeting in Boston in 1920. Since that time, it has welcomed into Fellowship thousands of worthy individuals who met its high standards.

For many years, in recognizing outstanding service—to the profession, to the community, to the public—the College made few claims upon its members other than the payment of annual dues. Sections were formed in various states or regions for the purpose of enhancing Fellowship, but meetings of these groups were usually of a social nature, often held as infrequently as once a year in conjunction with state dental meetings.

As time went by and membership grew, the College began to take on a new role—as a catalyst or facilitator of activities and programs developed by Fellows who were among the leading thinkers in the dental world, and implemented by professional organizations. There were conferences held at which leaders of the profession addressed many of dentistry's problems and offered possible solutions. As an example, the American Association of Dental Editors was formed as a result of College efforts to improve the low state of dental journalism that existed prior to 1930.

In recent years, under the able guidance of Executive Director Robert J. Nelsen, the College took a new direction. In an effort to make Fellowship more meaningful, the College sought ways to involve more members in its activities. The Self-Assessment and Continuing Education Program and Project Library were started and the process of electing officers and Regents was opened up to provide greater input and participation by Section members.

There is still much to be done however. With a new administration and a new Executive Director, it is hoped that some means can be found to overcome the apathy that still exists in some Sections, that new programs and activities can be found which will stimulate and challenge the Fellowship. It should not be unreasonable to expect that the services and accomplishments of an individual which made him worthy of Fellowship in the first place, should be channeled in directions which will benefit the College after he is inducted. The College must be more than just an honorary organization.

If this can be accomplished, the coming years will see the College increase in stature and importance, as it speaks out on timely issues



facing the profession. If not, it will wither and stagnate, grow old and tired and ultimately cease to exist.

In the life of a man, his sixtieth year often, but not always, brings him to the brink of advanced age, with his best years behind him. Is this to be the fate of the College, or is it objective enough to move forward with renewed vigor, true to its principles but ready and willing to adapt to a changing world? This is the challenge of our sixtieth year.

R. I. K.

## **ANNUAL MEETING AND CONVOCATION**

**FAIRMONT HOTEL                      NEW ORLEANS  
OCTOBER 11, 1980**

### **DENTISTRY IN THE 1980's *PERCEPTIONS AND PERSPECTIVES***

#### **PANELISTS**

**LLOYD N. HOLLANDER — CLEVELAND, OHIO**  
*General Practitioner*

**RICHARD C. OLIVER — MINNEAPOLIS, MINN.**  
*Educator and Dean, University of Minnesota Dental School*

#### **MODERATOR**

**ROGER H. SCHOLLE — CHICAGO, ILLINOIS**  
*Editor of the Journal of the American Dental Association*

**THE CONVOCATION SPEAKER WILL BE**

**BERTRAM W. TREMAYNE, JR.**  
*Prominent St. Louis Attorney*

# Report of the President-Elect

WILLIAM C. DRAFFIN, D.D.S.

It is my feeling that the action of the Board of Regents at the special meeting in March was a very great step toward insuring the continued efficient, effective productive operation of the American College of Dentists. The securing of Dr. Gordon H. Rovelstad to succeed the retiring Dr. Robert J. Nelsen as Executive Director will do more to assure that the programs of the College move forward without interruption than any other step open to us.

With all the problems being perpetrated upon us as a profession and the overflow of these into College activities, this coupled with the loss of the executive director presented a scene into which no president-elect wished to be cast. However, with the completion of negotiations and the ratification of the agreement by the Board, the atmosphere is much more inviting.

It is a pleasure to work with the president this year and to serve in a well planned orderly program. President Rovelstad has exerted a very positive influence on the outlook of the Fellows of the College. His willingness to participate in Section programs has given new impetus to the membership.

Section activities must continue to receive the attention of this Board and must not be allowed to return to the state of dormancy that prevailed prior to rechartering. Although it is important to stimulate them to imaginative and innovative thinking and planning of programs and activities to further the aims and objectives of the College, at the same time a steadying influence from this governing body is necessary. This is not to advocate spoon feeding or inordinate control but does urge a variety of suggestions intended to stimulate activity and serve as a directional influence in all areas of endeavor.

Additionally, taking into account the invasive restrictions fostered by the FTC, individual integrity in upholding the high principles of professionalism endorsed and espoused by the American College must be encouraged. Where the collective "We" cannot be used, the courageous "I" can. It is often easier to say "we believe this" than to

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*Presented at the Spring meeting of the Board of Regents, Bethesda, Md., April 19, 1980.*

step forward and say "I believe this." Many factors within the profession as well as from without are encouraging some members of the profession to alter their perspective and even their principles.

With the increased availability of dental services eliminating any backlog of prospective patients, persons are tempted to advertise under the guise that it is legal and therefore acceptable. The young graduates are certainly not the only group so beguiled. Older practitioners are joining the gradually increasing number of defectors from the hard line ethics of the recent past. The College must offer leadership to bolster the resistance of the profession to withstand the meddling of bureaucracy and the seductive promises of Madison Avenue type publicity. The recent position papers and the proposed pledge endorsed by the Executive Committee of the Board are positive steps to secure this objective.

The future of the College is being threatened by at least two other sets of circumstances. On the one hand the appreciation of service opportunity is not as appealing to many of the younger generation as in the past. The common trend is not to stand out by being either in the top or the bottom of the group but rather to strive to be absorbed in the mass. Thus the effort to acquire those accomplishments and traits that lead to nomination to Fellowship are lacking in growing numbers. There are fewer standouts.

The second threat is a fumbling economy with a devastating inflation, further weakened by a vampire type of taxation that sucks away anything resembling profit. Fortunately we have not been faced with any significant number of refusals of nominees to accept Fellowship. We do have, however, a growing number of resignations who indicate that financial problems were the main consideration in the decision to resign.

This combination makes it more imperative that the Board keep the American College in the forefront by the careful selection of activities and by the perpetuation of the highest degree of professionalism. These can be accomplished not alone by exhortation but must be demonstrated by example. We must overcome the "Mass Syndrome." Likewise, we must assure the membership of the College by a faithful and wise stewardship of the funds entrusted to us. There is a legacy of such stewardship in the history of the College to date. It behooves us to continue the pattern.

I pledge to you my efforts to support the programs of the present administration and my attention to securing the vitality of the College at every opportunity. I am sure that I can count on your support in these endeavors and thank you for your cooperation and suggestions in advance.



*The verbal exchange of information and understanding between the dentist and auxiliary personnel is an important consideration in the orderly operation of a dental office. The dentist usually controls communication directed toward auxiliaries, but has little control over communication initiated by the auxiliaries. On the other hand, the dentist assumes a less active role in the verbal interaction which occurs between auxiliaries. Communication between auxiliaries, which may not involve the dentist, does contribute to the effective functioning of a dental practice.*

*Six styles of communication and the implications of using each style are explored in this paper. Suggestions are offered regarding which communication styles are most appropriate for a dentist to use when interacting with auxiliaries. Finally, several guidelines are proposed for improving the communication process in a dental practice.*

## Dentist-Staff Communication

JAMES P. SCHEETZ, Ph.D

STEPHEN FELDMAN, D.D.S., M.S. Ed.

In any dental practice in which auxiliary personnel are employed, communication between the dentist and the staff may influence how efficiently and harmoniously the office functions. Although a dentist may assume that the message which he or she intends to communicate to auxiliaries is understood, this assumption may or may not be valid. The way in which a person says something often conveys as much meaning as the words which are spoken.

The purpose of this paper is to explore dentist-staff communication patterns and styles and to suggest which styles of communication might be most appropriate in a dental office. Although communication between the dentist and patients affects the climate of a dental practice, communication between the dentist and the staff personnel probably affects the efficient and harmonious operation of a dental practice to a greater degree than does communication with patients. For this reason, the communication patterns addressed in this paper

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*Dr. Scheetz is assistant professor and Dr. Feldman is associate professor in the Department of Community Dentistry, University of Louisville School of Dentistry, Health Sciences Center, Louisville, Kentucky 40201.*

will be limited to those between the dentist and the office staff. In addition, only verbal communication will be considered since the majority of communication is verbal rather than nonverbal.

### A DEFINITION OF COMMUNICATION

Before considering the role of communication in a dental office, a definition of communication will be presented. In line with the stated intent of focusing on verbal communication, the following definition will be employed in this paper: Communication involves the transmission of information and understanding by verbal means. This definition closely parallels the definition presented by Gibson *et al.*<sup>1</sup> and focuses on the need to establish a common ground for discourse between the sender (speaker) and the receiver (listener).

### THE FLOW OF COMMUNICATION IN A DENTAL OFFICE

In any organization the communication process can be analyzed with regard to the direction of communication flow. In a dental office, downward communication would be from the dentist to the auxiliaries. Upward communication would be initiated by the auxiliaries and directed to the dentist. Horizontal communication occurs between people at the same organizational level. The most frequent type of horizontal communication in a dental office would be that which takes place among the auxiliaries and may exclude the dentist. In the remainder of this section, the purposes of downward communication will be explored, barriers to upward communication will be discussed, and the role of horizontal communication in a dental office will be examined with a view towards developing a better understanding of the communication process and, possibly, improving this process.

#### *Downward Communication*

In their discussion of the communication process, Katz and Kahn<sup>2</sup> have presented five types of downward communication. In a dental office, one type of downward communication would be directed from the dentist to the auxiliaries and would include instructions about how jobs or tasks are to be accomplished. The primary purpose of this form of downward communication is to assure that individuals know how to do the tasks assigned to them. For example, if a dentist explains to a dental assistant how to take and develop radiographs with a particular unit, he or she is presenting specific job instructions.

The second type of downward communication would focus on producing an understanding of a particular task and its relationship to

other tasks. The intent is to inform employees why things are done in a certain way. The ultimate goal is full understanding of a job. If a dentist explains to an auxiliary how a series of radiographs is utilized in diagnosis and treatment planning, hopefully the auxiliary will begin to understand why radiographs are part of the examination process.

The third form of downward communication involves information related to office policies, procedures, and practices. This type of communication might relate to such things as vacation policy, employee benefits, or the style of uniforms which auxiliaries are expected to wear in the dental office.

The fourth area of downward communication involves providing feedback to employees regarding their performance. This type of feedback is important because it provides individuals with some indication of where they stand with their employer. In a dental office, the dentist or the office manager should be responsible for providing every employee with an evaluation of their performance. For example, a dentist may commend a hygienist for the thoroughness with which patients' teeth are cleaned while also pointing out that the hygienist has a need to improve rapport with some patients.

The fifth form of downward communication is of an ideological nature and its purpose is to instill a sense of mission to employees. This is usually done as part of an attempt to elicit a commitment to organizational goals. If a dentist stresses the importance of presenting oral hygiene instructions to patients in an understandable manner, the auxiliaries may eventually value preventive dentistry as strongly as does the dentist.

In summary, downward communication is directed from the dentist to the auxiliaries and may be viewed as facilitating the accomplishment of tasks and goals that need to be accomplished or met. The dentist usually controls the amount and duration of downward communication in a dental office. In contrast, the dentist has very little control over upward communication which is the topic treated in the next section.

### *Upward Communication*

Since upward communication is initiated by someone other than the dentist, the dentist can try to encourage this type of information exchange, but cannot cause it to occur. One potential barrier is the status difference between the dentist and the auxiliaries.<sup>3</sup> The differences which may exist if the dentist is the owner and manager of the practice can inhibit upward communication. The auxiliary personnel may view the dentist as being judgmental with regard to information which he or

she receives. This barrier can be partially overcome if the dentist does not react in a judgmental manner. For example, if an auxiliary expresses a dislike for treating pedodontic patients, the dentist should not be critical of the auxiliary for mentioning a reluctance for working with children. In addition, the dentist can minimize status differences by freely expressing his or her feelings and opinions and encouraging auxiliaries to do the same. A dentist may tell the auxiliaries, for example, that he or she would prefer not to treat endodontic problems. If the dentist wishes to initiate and maintain an open flow of information and ideas, he or she can facilitate this flow by taking the lead in doing so.

A second potential barrier is dilution of information. This may take the form of auxiliaries telling the dentist what they want the dentist to know. If two auxiliaries do not like each other, one individual may paint an unfavorable picture of the other individual for the dentist. Many times one individual will try to create a favorable impression of himself or herself by presenting information to the dentist which creates an unfavorable impression of the other individual. For this reason, it is important for the dentist to maintain an open flow of communication with all members of the office staff and be aware that he or she may be receiving only partial information.

A third potential barrier to upward communication is filtering of information. Filtering may result in an attempt to color events so that an individual will be judged favorably by the dentist. This may take the form of an auxiliary trying to conceal mistakes or errors which the dentist might judge as a lack of competence. If a dentist becomes aware that this type of behavior is occurring, he or she might focus on the need to improve the skills of the person rather than reacting in a hostile or critical manner. A critical reaction may encourage more filtering of information by auxiliaries.

In summary, the dentist would be expected to play an active role in downward and upward communication. However, the dentist would play a minor role in horizontal communication, that is, the interaction which occurs among the auxiliaries in a dental practice.

#### *Horizontal Communication*

Vertical communication (downward and upward) is certainly a recognized necessity for the functioning of any organization, including a dental practice. However, the communication which occurs between peers also contributes to the effective functioning of an organization. In a dental office, horizontal communication, as previously stated, is that which occurs between the auxiliaries and may exclude the dentist.



The purpose of horizontal communication is to facilitate the accomplishment of the tasks which are to be completed. Many times a discussion may occur between two or more people at the same level in an organization which results in a more efficient approach to achieving goals. This type of communication may be of little or no interest to people in higher levels of the organization.

In a dental office, horizontal communication can contribute to the smooth functioning of the office. For example, two auxiliaries may devise a method for monitoring the use of supplies or one auxiliary may help another auxiliary who is having problems taking radiographs. These are examples of how horizontal communication may be beneficial to a dental practice. The dentist should realize that these types of interaction do occur and should not feel that he or she must be involved at all times in the communication process. The auxiliary personnel may be reluctant to engage in these kinds of exchanges if they feel that the dentist will insist upon knowing what has been discussed.

Up to this point the discussion has focused primarily on the direction of the flow of communications. In the next section, six styles of communication will be reviewed and the implications of using each style in a dental office will be explored. Within any style, the flow of communication may be downward, upward, or horizontal.

## COMMUNICATION STYLES

Six communication styles which may occur in organizations have been identified by Wofford, Gerloff and Cummins.<sup>4</sup> These styles will be reviewed in this section and include the following: controlling, egalitarian, structuring, dynamic, relinquish, and withdrawal.

### *Controlling Style*

The controlling style involves an attempt by the communicator to direct the thoughts or actions of other people. This style mainly involves one-way communication with any discussion being for the purpose of clarification. Communicators who use this style indicate that they will use their authority or power to assure compliance with their wishes. This style of communication may cause feelings of resentment and hostility among subordinates because they may view the way in which they are treated as demeaning. However, not all controlling communication may result in negative reactions. If the communicator attempts to persuade rather than command an individual to do a particular task, this style of communication may be useful in achieving specific goals.

A dentist may effectively use the controlling style in some situations. These include those circumstances in which the dentist may have more knowledge than the auxiliary personnel, such as developing and implementing an efficient patient recall system. Because the dentist has superior knowledge, this style may be appropriate with inexperienced personnel when directions and instructions are given. On the other hand, the controlling style may contribute to poor performance in some instances. Frequent use of this style by a dentist may result in resistance to directives by auxiliaries ultimately resulting in lowered productivity and apathy. This style also tends to stifle initiative and creativity by auxiliaries because they become dependent upon the dentist for direction of their efforts.

### *Egalitarian Style*

The egalitarian style involves an open discussion in which each person freely expresses ideas and opinions in an atmosphere of acceptance and understanding. With this style, the communicator does not rely upon power or manipulation to gain acceptance of his or her point of view, but receives information as well as providing it. The communicator encourages other people to say anything that may be of concern to them. The egalitarian style results in an atmosphere in which people feel relaxed and are receptive to a variety of opinions. This style is consistent with the participative approach to management in which subordinates have input into the decision-making process and may also be used to enhance the teamwork approach in task accomplishment. When communicating with people who are inexperienced or lacking in competence, the egalitarian style may not be appropriate. In these situations, the controlling style may be more effective.

Those situations in which a dentist might employ the egalitarian style are almost the direct opposite of those for the controlling style. The egalitarian style would be most effective if the dentist wanted to increase feelings of closeness and understanding between himself or herself and the auxiliary personnel or when the auxiliaries know as much as the dentist about a particular procedure. For example, if a dentist wanted to explain to a recently hired auxiliary how the plaque-control program worked in the dental office and the auxiliary had five years experience working in another dental practice which had an active preventive program, the egalitarian style might be most appropriate. However, this style would be ineffective when instructing an inexperienced dental assistant in the proper method of presenting oral hygiene instructions to patients. If a dentist uses the egalitarian

style, it is likely that auxiliary commitment to the goals of the practice will be greater than if the controlling style is employed. The egalitarian approach can also be used to overcome resistance to change. For example, if a dentist wished to change office hours to include treating patients in the evenings, the egalitarian style might lessen auxiliary resistance to this type of change.

### *Structuring Style*

The structuring style is most useful when the communicator is attempting to establish a structure or obtain compliance with rules or policies. The communicator influences others by discussing with them the rules or procedures that apply in a given situation. This type of communication usually is oriented toward facts with little expression of feelings or beliefs. Misinterpretation of the issues discussed should occur rarely because the focus of the discussion is clarification of the rules and procedures in question. Misuse of the structuring style may occur if an individual focuses on rules and regulations rather than dealing with issues which need to be resolved. Although the structuring and controlling styles may appear to be quite similar, the controlling style involves persuasion or coercion whereas the structuring style focuses on imparting factual information with no attempt at persuasion or coercion.

A dentist may use the structuring style when attempting to standardize office procedures. Explanation of how to interact with patients would fall into this category. For example, a dentist may use the structuring style when explaining to office personnel what information to obtain from patients when scheduling appointments. The purpose of this communication is to insure that the same information will be obtained no matter which member of the staff makes the appointment. Little communication between the dentist and auxiliaries is likely to be structural in nature unless the dentist is clarifying or explaining policies or procedures.

### *Dynamic Style*

The dynamic style is usually employed by a person who sees himself or herself as highly active or aggressive. If duties are delegated using this style, the person to whom tasks are delegated must be competent to function with little direction because the communicator does not provide a detailed description of how the tasks are to be accomplished. The use of this style implies a willingness to delegate authority, to allow others to make decisions, and to permit freedom in determining the means by which goals are achieved. The dynamic style usually

involves only a brief contact by the communicator with those people to whom communications are directed. The communicator stimulates and guides other people rather than working in close proximity to them.

In the opinion of the authors, the dynamic style of communication would rarely be appropriate in a dental office. The dentist has continued contact with the auxiliaries indicating that the need for brevity in communications would seldom arise. While the dentist may delegate certain aspects of patient treatment to auxiliaries, he or she is ultimately responsible for the treatment provided. For this reason, it is unlikely that a dentist would delegate tasks to auxiliaries and then be unavailable to clarify how the auxiliaries should proceed. The use of this style in a dental practice could be very frustrating for the auxiliaries if they feel they are expected to do their jobs without sufficient explanation by the dentist.

#### *Relinquish Style*

In the relinquish style, one person is clearly subordinate to another person. The communicator may yield to the wishes or desires of the other person. A communicator is receptive rather than directive and expresses interest in the feelings, opinions, and contributions of other people. The communicator assumes a supporting or facilitative role and does not assume a dominant role when interacting with others. The relinquish style may be used to increase the self-confidence of others. This may be accomplished by allowing subordinates to make decisions or by accepting their point of view. However, the use of this style with people who are dependent upon others for direction may result in the person with legitimate authority being viewed as weak and indecisive.

A dentist may use the relinquish style as a means of showing empathy and building the confidence of auxiliaries. These goals may be accomplished if the dentist is willing to accept a subordinate position when communicating with auxiliary personnel. However, over-use of this style may result in undesirable consequences such as loss of respect by the auxiliaries. The relinquish style may be useful in some situations, such as allowing a well qualified hygienist to manage a patient recall program, but probably would be of limited applicability in most dental offices.

#### *Withdrawal Style*

The withdrawal style implies a lack or an avoidance of communication. Individuals who use this style are indicating a

reluctance to influence others and an unwillingness to be influenced by other people. An individual who uses this style usually prefers to work alone on tasks and to minimize contact with others. People who state that they do not care to discuss a given topic or verbally attack another person are using the withdrawal style.

The withdrawal style of communication is rarely appropriate for a dentist. This style may be used to maintain patient confidentiality, but probably would not be used in communicating with auxiliaries. Refusing to deal with a problem which may arise in a dental practice will rarely produce a solution. The use of this style by a dentist may create barriers to future communication by indicating to staff personnel that the dentist wishes to minimize contact with them. For these reasons, the withdrawal style should seldom or never be used by a dentist when dealing with auxiliaries.

In this section, six communication styles were reviewed. It was suggested that the first three; the controlling, equalitarian, and structuring styles may be used effectively by a dentist when interacting with auxiliaries. The dynamic, relinquish, and withdrawal styles would probably be less appropriate in a dental office because they tend to restrict the free flow of information between the dentist and the auxiliary personnel. In order to enhance the communication which occurs in a dental practice, some suggestions for achieving this goal will be reviewed in the next section.

### IMPROVING COMMUNICATIONS

Effective communication is more likely to occur if an effort is made to clearly communicate with the intended audience. The following points summarized by Hodgetts,<sup>5</sup> should help to improve the quality of communication.

1. *Plan what you are going to say before you say it.*

If a dentist spends some time clarifying his or her ideas before communicating, the message will probably be presented more clearly than if no time is spent in planning. While many of the exchanges which occur between the dentist and the auxiliaries may be spontaneous, many situations may benefit from careful planning as part of the communication process. For example, if a dentist is contemplating a change in patient scheduling procedures, the explanation of how this change is to be accomplished should be well planned before it is presented to the office staff.



2. *Follow up on communication.*

Many people assume that when they speak to another individual, that individual understands what is said. However, this assumption may or may not be valid. In order to be a more effective communicator, a dentist may try to determine if the message which he or she is communicating is clear to the auxiliary personnel. For example, if a dentist is explaining a change in patient scheduling procedures, he or she should determine if the staff personnel fully understand how the new system will be implemented by asking them to explain what they are expected to do.

3. *Support words with deeds.*

This suggestion focuses on the importance of doing things after telling people that certain events will occur. If a dentist tells the auxiliary personnel one thing and does another, he or she may lose credibility in the eyes of the auxiliaries. For example, if a dentist states that the office policy is to review every employee on an annual basis for a salary increase but this review does not occur at one year intervals, distrust of the dentist may develop among the auxiliaries. If distrust does develop, the dentist is faced with the difficult problem of regaining the confidence of the auxiliary personnel.

4. *Examine the true purpose of communication.*

Many times people have a definite message which they wish to communicate, but the message is not understood by others because it is not explicit. If a dentist wishes to convey information to the office staff, he or she should determine what information is to be presented and the reasons for presenting the information. For example, a dentist may desire to impress upon the staff that they are to be in the office by 8:30 a.m. He or she should make this explicit rather than hint to the auxiliaries that promptness is appreciated.

5. *Be a good listener.*

Communication involves listening as well as speaking. It is not possible to communicate effectively if the feelings, beliefs, and opinions expressed by other people are ignored. Even though a dentist may be extremely busy treating patients and managing the dental practice, it is important to listen to what the auxiliaries have to say. If the auxiliaries feel that the dentist is too busy to listen to them, free and open communication between the dentist and the office staff may not occur and patient treatment may suffer.

In addition to the five points listed above, the following suggestions should also result in more effective communication:

6. *Approach communication efforts in a timely manner.*

If a problem arises, it is advisable to deal with it as soon as possible. If a dentist notices that a member of the office staff is visibly upset, the dentist should try to determine why the person is upset and resolve the problem immediately. If no action is taken, the auxiliary may become even more agitated. The dentist should take the initiative in this situation. Prompt attention to potential problems may prevent minor issues from becoming major causes of dissension with the ultimate benefit being a more harmonious practice environment.

7. *Focus on the relevant issues.*

When attempting to clarify a point of discussion or resolve a problem, the communications should focus on the issues at hand. It is easy for the original intent of the message to become distorted if other topics are mentioned during the discussion. For example, if a dentist is reminding an auxiliary that all members of the staff are to be present by 8:30 a.m., the auxiliary may comment on the work habits of the dentist. In this situation the dentist might avoid a discussion of his or her work habits until the discussion regarding the auxiliary's tardiness is completed.

8. *Avoid labeling and name-calling.*

People will often become defensive when confronted with such tactics and the result may be a breakdown in communications. A dentist may be tempted to use these tactics when he or she becomes frustrated with auxiliaries, but this will usually be counterproductive because it may result in long lasting feelings of hostility and resentment by the auxiliaries toward the dentist.

9. *Avoid being judgmental.*

If a dentist is judgmental in dealing with auxiliaries, the flow of upward communication, as previously mentioned, may be impeded. In addition, frequent use of this tactic by a dentist may cause auxiliaries to feel that they are constantly being evaluated, resulting in an unwillingness to take any action unless directed to do so by the dentist. The final outcome may be a feeling of dependence by the auxiliaries which is usually not conducive to an efficiently managed dental practice. It is suggested that a dentist should communicate with auxiliaries on an adult, factual, professional level.

### SUMMARY

In this paper, several aspects of the communication process as related to the functioning of a dental office have been reviewed. The flow of communication was analyzed in terms of downward communication directed from the dentist to the auxiliaries, upward communication directed from the auxiliaries to the dentist, and horizontal communication which may involve the dentist to a minimal degree. The analysis of communication flow focuses on who initiates the communication and who is the intended receiver.

In the section dealing with communication styles, six approaches were presented and the implications of using each of the styles in a dental office were explored. The controlling, equalitarian, and structuring styles were considered to be the most applicable in a dental office. The dynamic, relinquish, and withdrawal styles were viewed as potential causes of problems if employed by a dentist when interacting with auxiliaries.

Some general guidelines for improving dental office communications and the necessity for the dentist to be an attentive listener were stressed. Also discussed were the issues of proper timing of communications, focusing on relevant issues, and the reasons for avoiding labeling and judging people when communicating with them.

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# Risks in Forecasting in the Health Field

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Soothsayers, weathermen, oracles, astrologists, and other forecasters long have been the object of veneration and ridicule, depending upon the results of their prognostications. Their collective foresight has forewarned many of impending disaster which often has preserved life and property. However, few remember their favorable accomplishments and tend to dwell on their more unfortunate predictions which often create waste and confusion.

The lot of any community and health planner is equally as precarious. Somehow, these modern-day oracles must bring together the swirling forces of today to plan for the needed services of tomorrow. Aided by modern systems of computer simulation and high speed analytic procedures, forecasts are developed which mold the programs and lives in our modern society. But, as with others in the prediction business, health planners are not immune from making the same miscalculations resulting from unanticipated circumstances and any number of unexpected exigencies that originally were not considered.

An example of the difficulties faced by health planners has been the situation related to the prognostications made during the 1960s and the early 1970s forecasting the need for more dental manpower. The result was an expansion of dental educational programs designed to increase the number of available dentists and auxiliaries. The implementation of these plans, based on the forecasts, did increase the manpower pool. However, questions are being raised now about regional oversupply of dental practitioners, while new forecasts are being presented about the downturn in employment possibilities for dental ancillary personnel.

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While we may smile at the daily newspaper astrology column, fortune cookies, the theories of phrenologists and palmists and others of this ilk, miscalculations in planning for health services and providers is quite a serious matter. The intent of this paper, therefore, is to place in proper perspective the potential downturn in educational programs for dental auxiliaries which could result from the recent United States Public Health Service (USPHS) forecast that,

Under optimistic assumptions about the future growth and demand for dental services . . . a declining future role of auxiliaries in dental office practice [is predicted].<sup>1</sup>

### THE FORECAST

In an effort to "guide those planning dental and dental auxiliary education as well as those contemplating careers in dentistry",<sup>2</sup> the Bureau of Health Manpower of the United States Public Health Service issued a series of forecasts\* until the year 1995. The Bureau's report predicts:

- (1) Competitive market pressures generated by future increases in the number of dentists relative to the demand for dental services despite population and economic growth and the spread of dental prepayment plans.
- (2) Limited ability of dentists to increase prices.
- (3) An actual reduction of dental prices in relation to the inflationary trends measured by the Consumer Price Index.
- (4) Increasing costs of utilizing auxiliary personnel relative to the price of services that can be charged.
- (5) Decisions by dentists to substitute their own time for that of auxiliaries in an effort to maintain desired income levels.
- (6) An increase by about 50 percent of the number of hours worked by dentists to compensate for the changing employment and economic realities.

However, these forecasts are couched in a series of assumptions which include (1) a continuing improved dentist-to-population ratio, (2) no significant breakthrough in preventive dentistry techniques to alter the prevalence of dental disease during the next fifteen years,

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\*Whereas projections are based on the assumption that past events will continue in the future, forecasting predicts future changes based upon knowledge of cause-and-effect relationships. Forecasting requires a much more sophisticated analytical technique than does projection.<sup>3</sup>



and, most important, (3) no "inclusion of dental benefits in any future national health insurance plan since the high cost of financing dental benefits is generally agreed to be prohibitive."<sup>4</sup> In addition, the presumed effects of exclusion from health insurance programs are extended, with the assumption that the "market equilibrating function of price is not eroded as a larger and larger proportion of the population is covered by dental prepayment."<sup>5</sup>

It is noteworthy that in an earlier 1977 study to project requirements for dentists for 1980, 1985, and 1990,<sup>6</sup> this same Bureau included expected changes in population, projected national economic growth, and the effects of dental insurance. It well may be that the wide dissemination of this new series of forecasts, which omit significant modifying factors, could adversely affect the planning for personnel and programs as the profession and health planners attempt to come to terms with the changing conditions of health services in the final years of this century.

## DENTAL MANPOWER

### *A. Dentists*

Historically, there has been a wide variation in the number of dentists in particular states and localities. Nevertheless, on a national basis, between 1920 and 1960 there was limited variation in the dentist-to-population ratio.<sup>7,8</sup> By 1950 there were 57.2 dentists per 100,000 population. This number had declined to 56.1 by 1964. During this same period, the number of active non-federal dentists per 100,000 civilians dropped from 49.9 to 44.8.<sup>9</sup> The 1967 Task Force on Health Manpower of the National Commission on Community Health Services projected a continuing decline in dentist manpower in the future. The Commission supported the recommendations of the 1961 report of the Commission on the Survey of Dentistry in the United States,<sup>10</sup> which called for a significant increase in the capacity of schools of dentistry to overcome the anticipated deficit of as many as 41,000 dentists to meet the expected demand for dental services in 1975.

In accordance with these forecasts, Congress passed several pieces of legislation in the 1960s which made available construction funds for building new and expanding existing schools of dentistry. The number of dental schools increased from 47 in 1962 to 60 in 1980. In keeping with the general findings that health professionals tend to practice in the same state or region in which they attended school (e.g., in 1976, 56.3 percent of professionally active civilian dentists who graduated from United States dental schools practice in the same state as was their school of dentistry; 21.9 percent in the same region but in another

state<sup>11</sup>), the majority of the new schools were located in the South, where the shortage of practitioners was most pronounced.

In addition, Congress passed the Health Manpower Bill of 1971 which mandated dental class size increases as a condition for receiving capitation grants. The federal legislation effectively increased the number of dental school graduates from 3,253 in 1960 to an anticipated 5,150 in 1980 (a 58.5 percent increase).<sup>11</sup> The expected 5,400 annual number of graduates throughout the 1980s should increase the number of active practitioners to approximately 154,500 of a 171,000 "total stock of dentists" in 1990.<sup>1,11</sup> The presentation of actual and prospective numbers of dentists and dentist-to-population ratio varies widely, depending on the reporting agency, the publication by that agency, and the purpose for which the report is intended. Thus, while all agencies and reports indicate an increasing dentist-to-population ratio, the precise degree is uncertain (see Table 1). However, because various reporting agencies (and different reports from the same agencies) do not use the same definitions for presentation, it is all but impossible to compare data.

#### *B. Auxiliaries*

In an effort to increase the productivity of the dental practitioner, a variety of auxiliary personnel have been incorporated in the dental office practice. But whereas medical practitioners have delegated duties to large numbers of allied health personnel, dental auxiliaries, for the most part, serve in a supportive role to increase the services provided personally by the practitioner. Nevertheless, there has been a marked increase in the number of auxiliaries and to some degree the variety of personnel, particularly during the last number of years.

##### *Programs*

Formal training of dental hygienists was instituted in the 1910s.<sup>19</sup> While there was a gradual growth in the number of programs and graduates from schools of dental hygiene until the mid-1940s, between 1945 and 1974 over 42,000 hygienists were graduated—more than 80 percent of all hygienists ever graduated in this country. Between 1950 and 1977 there was an increase from 26 to 186 programs with an increase from 632 graduates in 1951 to 4,616 in 1976<sup>11,19</sup> (see Table 2).

While there has been an increase in the numbers of dental assistants during this same period of time, it is difficult to document the specific numbers because of a tradition of on-the-job training for many assistants. However, in recent years dental assistants increasingly

TABLE 1. NUMBER OF DENTISTS, POPULATION-TO-DENTIST RATIOS, AND DENTIST-TO-POPULATION RATIOS BY SELECTED PAST AND FUTURE YEARS

Year	Source	Total Number of Dentists	Pop./Total # Dentists	Pop./Active Dentists	Pop./Full Time Dent	Total Stock of Dentists	Total Professionals Active	Dentists/ 100,000 Pop
1976	ADA <sup>12</sup>	111,178*	1,930	2,186**	2,843***			
	ADA <sup>13</sup>	117,514***	1,825					
	USPHS <sup>11</sup>	124,659	1,710					
	(from ADA data)	115,000		1,944				
1979	ADA <sup>14</sup>	118,991		1,830			118,991	
	ADA <sup>15</sup>			1,830*			124,952	
	ADA <sup>16</sup>			1,745***			127,440 (Jan. 1)	
							130,127 (Dec. 31)	
1980	ADA <sup>16</sup>						130,127 (Jan. 1)	
	USPHS <sup>1</sup>					141,272	132,900 (Dec. 31)	63.6*****
	USPHS <sup>17</sup>					142,111		57.1
	USPHS <sup>18</sup>							
1985	ADA <sup>16</sup>						144,697 (Jan. 1)	
	USPHS <sup>1</sup>					156,336	147,621 (Dec. 31)	67.1*****
	USPHS <sup>17</sup>					157,447		60.5
	USPHS <sup>18</sup>							

TABLE 1. (continued)

Year	Source	Total Number of Dentists	Pop./Total # Dentists	Pop/Active Dentists	Pop./Full Time Dent	Total Stock of Dentists	Total Professionals Active	Dentists/ 100,000 Pop
1990	ADA <sup>16</sup>						158,801 (Jan. 1) 161,461 (Dec. 31)	
	USPHS <sup>1</sup>					170,978		70.2*****
	USPHS <sup>17</sup>					172,333		
	USPHS <sup>18</sup>							62.4
1995	USPHS <sup>1</sup>					184,901		

NOTE: Titles for column headings are those presented in each report and are NOT interchangeable.

- \* Does not include dentists whose location is unidentified.
- \*\* Includes dentists involved in some form of clinical activity.
- \*\*\* Includes practitioners involved in clinical activity more than 30 hours per week.
- \*\*\*\* Includes non-located dentists.
- \*\*\*\*\* Presentation of data does not permit transfer to population/dentist format. It should be noted that data in the report were presented in terms of dentists/10,000 population. It is assumed that was an error.



TABLE 2. NUMBER OF DENTAL HYGIENIST, DENTAL ASSISTANT, AND DENTAL LABORATORY TECHNICIAN TRAINING PROGRAMS AND GRADUATES BY SELECTED YEARS<sup>20</sup>

Academic Year	DENTAL HYGIENIST		DENTAL ASSISTANT		DENTAL LABORATORY TECHNICIAN	
	Programs	Graduates	Programs	Graduates	Programs	Graduates
1950-1951	26	632				
1960-1961	37	1,023				
1965-1966	56	1,650	64	1,593	6	142
1970-1971	121	2,903	165	3,922	26	447
1975-1976	173	4,616	250	6,208	40	991
1977-1978	186	N/A	273	N/A	49	N/A

have entered the work force by graduating from formal training programs. By the 1965–1966 academic year, there were 1,593 graduates from 64 training programs. The number of programs had increased to 273 in the 1977–1978 academic year, with 6,208 graduates in 1976<sup>11</sup> (see Table 2).

As in the case of dental assistants, dental laboratory technicians have been trained on-the-job. Similarly, in recent years increasing numbers have entered the work force by graduating from accredited training programs. Between 1965 and 1977, there was an increase from 6 to 49 programs with an increase from 142 graduates in 1966 to 991 in 1976.<sup>11</sup> (see Table 2).

It should be noted that despite significant increases in the numbers of programs and places in entering classes, large numbers of qualified applicants who seek admission to schools of dental auxiliary training are unable to obtain admission to training programs (see Table 3).

In addition to the traditional hygiene, assistant, and laboratory categories, large numbers of receptionists are employed by practitioners providing a variety of office supportive services. Because of the particular responsibilities of these personnel, no formal training programs have been established under the auspices of the profession.

Finally, beginning in the early 1960s, a series of experimental and formal programs have been established to train an assortment of expanded function auxiliaries. Programs also have been established for dental students to more effectively function with traditional personnel (Dental Auxiliary Utilization—DAU—programs), and with expanded function auxiliaries (Training in Expanded Auxiliary Management—TEAM—programs). In response to the increasing number of expanded function personnel, at least 39 states have modified their dental practice acts to permit the performance of duties by expanded function ancillary personnel which traditionally have been reserved for dentists.<sup>22</sup> And in the future it appears that, as increasing numbers of states legalize denturism—either for independent operators or those functioning under the supervision of dental practitioners—programs to train denturists no doubt will flourish.

In addition to the situation that is occurring with the denturists, a trend might be evolving relative to the dental hygienist. The concept of a hygienist providing direct services to the public, free from supervision of the dentist, and as an independent contractor, is in effect in one state (California) and being supported by an agency of the federal government (Federal Trade Commission). The activity is so new that there has been limited consideration of the effects by the prognosticators. However, it has the potential of having a significant impact on the

TABLE 3. NUMBER OF APPLICANTS AND NUMBER AND PERCENT OFFERED ADMISSION BY  
TYPE OF DENTAL AUXILIARY PROGRAM, ACADEMIC YEAR 1976-1977<sup>21</sup>

Type of Training Program	Number of Applicants	APPLICANTS MEETING MINIMUM ADMISSION STANDARDS		APPLICANTS OFFERED ADMISSION	
		Number	Percent	Number	Percent
Dental Hygiene	27,921	16,136	57.8	5,919	21.2
Dental Assisting	15,138	11,393	75.3	8,579	56.7
Dental Laboratory Technology	2,620	1,788	68.2	1,344	51.3

availability of dental services, their cost, and the system by which dental care is delivered. Along with emergence of the denturist, it might be the most significant change in the delivery of dental care for the coming year.

#### Utilization

In 1950, 34.4 percent of dental practitioners employed no full-time auxiliary personnel. By 1955, this percentage had declined to 22.8.<sup>10</sup> In 1961, over 20,000 dentists still worked without the benefit of a dental assistant. The 1961 Commission on the Survey of Dentistry in the United States forecast that only 10 percent of the practitioners in 1965 and 8 percent of the dentists in 1975 would employ no ancillary personnel. The actual employment data for this period were 10.1 percent in 1964 and 3.9 percent in 1975<sup>11</sup> (see Table 4). However, based upon the Survey of Dental Practice reports by the American Dental Association for the periods between 1964 and 1977, there was variation in employment data which leaves in question the specifics of these figures (see Table 4).

The difficulty in pinpointing the data and thereby forecasting with some degree of certainty is highlighted in the findings of the 1975 and 1977 Survey of Dental Practice auxiliary employment data. Because of the changing presentation of employment data (the 1977 report combined full- and part-time personnel, the 1975 report presents the data separately), only data for "non-employment" category can be compared. Yet, the variation between these two year reports for this category is so large it would be difficult to establish a basis for planning purposes. For example, in 1975, 7.5 percent of the reporting dentists employed no chairside assistants and 35.8 percent employed no secretaries. Comparable data for 1977 were 14.4 percent and 26.6 percent. It should be noted that the reported almost doubling of non-employment of chairside assistants is offset by the decrease in the percentage of non-employment of secretaries. The overall outcome of the two categories of employment is essentially unchanged. (This potential mix-up may have resulted from practitioner interpretation of the Survey questions which changed during the period. In 1975, the term "dental assistant" was used, while in 1977 "chairside assistant" was substituted. However, both reports categorize the findings under "chairside assistants".) Nevertheless, in terms of planning, it is possible to misinterpret findings and implement various proposals to *offset non-existent or questionable changes*.



TABLE 4. DENTISTS IN INDEPENDENT PRACTICE\* WHO EMPLOY NO AUXILIARIES;  
ACTUAL AND FORECAST BY SELECTED YEARS

Year	Actual Percent	Forecast Percent	When Forecast
1950 <sup>10</sup>	34.4		
1955 <sup>10</sup>	22.8		
1964 <sup>23</sup>	10.1		
1965 <sup>10</sup>		10.0	1961
1968 <sup>23</sup>	7.6		
1971 <sup>24</sup>	10.1		
1975 <sup>10,25</sup>	3.9	8.0	1961
1977 <sup>26</sup>	6.3		
1980-1995 <sup>1</sup>		decreasing auxiliary hours/dentist hours from a ratio of approximately .75 to .50**	

\* General phrase used in Dental Survey reports.

\*\* Specific numbers not presented in graph presentation.

### C. Other Factors

A review of the changing number of dentists and auxiliaries available for the delivery of services is only a partial consideration of the factors which affect the planning for the delivery of dental services. The interplay of need, want, and demand for services, prepaid arrangements, the extent of fluoridation usage, increasing productivity of office delivery arrangements, changing patterns of food consumption, and general social and economic attitudes toward health services are but a partial list of considerations which increasingly are components of the health planner's analysis used in forecasting future manpower requirements.

But further complicating the situation is the reality that proposals made by health planners are limited frequently by traditional attitudes. For example, Feldstein's<sup>27</sup> proposal to alter significantly the support for dental students has found limited, if any, acceptance despite the potential to reduce greatly the cost of dental services. Feldstein suggested, in 1974, that instead of federal subsidies for increasing the supply of dentists (including student financial programs, construction, and institutional support programs), an alternative program to subsidize the number of dental auxiliaries which could produce an increase in dental visits at *less than one-tenth* the cost of the dental student subsidy programs. Further, he suggested that a subsidy could involve reimbursing dentists for the auxiliaries' entire annual wage and still increase services at reduced costs for dental care.

## DISCUSSION

The presentation of data by dental planners, of necessity, is offered with a variety of specific definitions and a series of qualifications, provisions, and stipulations. As noted in the previous sections of this paper, while general trends may (or may not) be detected in some research analyses, the specifics may be quite difficult to determine. Unfortunately, subsequent researchers and policy makers often fail to take these limitations (or variations between reports from different agencies or differences in reports from the same agency) into consideration when they use the data to support future research or administrative and legislative decisions. Thus, the recently issued forecast by the United States Public Health Service anticipating a declining future role of auxiliary personnel in the dental practice setting could lead to a variety of decisions to decrease support for, or even reduce, educational programs for these personnel. Yet such a

decision could be made without taking into consideration the major assumptions that dentistry will not be included in future national health insurance plans, or that other third party programs will not affect significantly the prices of dental health services.

But we already have proof that such assumptions may not be valid. For example, the recent decision by the Supreme Court to uphold a lower court order requiring the State of Pennsylvania to provide orthodontic treatment to children from poor families has national implications.<sup>28</sup> The decision left intact a United States Court of Appeals ruling which concluded that it would be unfair to interpret Medicaid regulations to provide only for removal of teeth or the substitution of false teeth when a dental problem could be corrected by orthodontic treatment. Thus, under the Court ruling, orthodontic dental services would be available to persons under 21 who are eligible for the early periodic health screening and treatment program through Medicaid. Similarly, in the state of Ohio, as a result of legal action taken by dental practitioners, the Department of Public Welfare was required to modify a payment system which compensated dentists at a substantially lower level than other health providers under the state's medical assistance program.<sup>29</sup> In both instances, increased dental services are now possible, with the former ruling potentially affecting all states which provide dental services under the Medicaid program.

At this time, we are not sure how dental health services will evolve. However, some of the known factors which will affect the outcome include:

- (1) National Health Insurance
- (2) denturism
- (3) independent dental hygienists
- (4) the general economy
- (5) the effects of sunset legislation on dental practice acts
- (6) the future role of the Federal Trade Commission

In spite of the possible dramatic effects of any one of these factors, it is those factors in the unknown category (as of this writing in mid-1980) which might have the greatest effect.

Thus, to say that the dental profession in the 1980s is in turmoil is almost an understatement of our current situation. As a result of prognostications which are based on so many unknown factors, changes may take place which are irreversible or reversible at great expense to the community and could have permanent negative effects on the lives of individuals and the population in general. Hopefully, the

current federal manpower forecasts will not prove to be another "Susan B. Anthony dollar" fiasco to be foisted on the profession and the public we serve!

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# Dentistry Under A National Health Insurance Plan

ROBERT J. THOMAS, D.D.S.

On July 29, 1978, President Carter directed H.E.W. Secretary Joseph A. Califano to develop a "National Health Plan" incorporating ten principles. These principles outlined comprehensive health care coverage for all Americans to be phased in starting in 1983. In February 1979 a tentative proposal by H.E.W. to be known as "Health Care," would assure that all U.S. residents are covered either by private insurance or by a federal insurance program. Primary coverage would be through employer-employee premium contributions. The plan would establish standards governing benefits and rates of payment to providers of services.

Though one of President Carter's ten principles states that "previous experience with government programs, in which expenditures far exceeded initial projections, must not be repeated," it is difficult to visualize a government health plan that will not repeat the enormous cost overruns that have taken place in other countries' experience.<sup>1</sup>

A classic case demonstrating such experience is the National Health Service in Great Britain. In the thirty years that this plan has operated, the costs have escalated from £500 million annually to £6.182 billion in 1976, although the patient is now required in many areas to make individual payments over and above the mandatory contributions required. This sum represented over 5 percent of the Gross National Product of Great Britain and certainly attests to the fact that the National Health Service employs over 770,000 persons making it the largest individual employer in that nation.<sup>2</sup>

It is important to recognize that only 10 percent of the total expenditure for the N.H.S. comes from the mandatory contributions that are part of the social security payments from employer-employee sources. Eighty-seven percent of the expenditure is met by the Government and the remaining 3 percent comes from charges made for certain services.

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A brief review of the British National Health Service structure presents some idea of the bureaucratic complexity involved.

The Health Ministers (the Secretary of State for Social Services in England and the Secretaries of State for Scotland and Northern Ireland) have overall responsibility for the National Health Service in their respective areas. Below the Department of Health and Social Security there are two tiers of administration, composed of 14 regional health authorities and 90 area health authorities.

The regional authorities are responsible for regional planning including the allocation of resources to the areas and the design and construction of major new facilities.

The area health authorities share the day to day running of services with the District Management Team, the Local Health Committee and the Local Medical Committee. There are generally between one and six districts in each area, making a total of 205 for the whole country.<sup>3</sup>

It appears that Secretary Califano is pursuing this general model according to a speech made to the National Health Maintenance Organizational Conference in March, 1978. He stated that the provision of health care to the public through the H.M.O. modality is the method of choice, and looks forward to an administrative linking of H.M.O.'s to form a network under the overview of H.E.W.<sup>4</sup>

In February, 1979, H.E.W. Under-Secretary Champion stated that H.E.W. plans to double the existing number of H.M.O.'s to 440 and the 1980 health budget singles out H.M.O.'s to receive a 90 percent increase to \$74 million from fiscal 1979 levels. The 1980 request would allow 108 H.M.O.'s to progress to the next stage of their development, start 64 H.M.O. feasibility projects, resulting in an estimated 39 new H.M.O.'s, and expand 18 already existing H.M.O.'s in order to serve larger areas.<sup>5</sup>

The parallelism, administratively and functionally, of the H.M.O. to the British Area Health Authorities is obvious. It might appear that the dentist remains a reasonably free agent under the British system. The constraints become more apparent when this relationship is examined.

The services of family physicians, dentists, opticians and retail pharmacists are provided as independent contractors with the Family Practitioner Committees. There is one of these committees for every Area Authority.

The dentist is paid strictly for the work done in terms of identifiable items of treatment in accordance with the detailed fee schedule determined and periodically revised by the Health Ministers, on advice from the Review Body on Doctors' and Dentists' Remuneration and the

Dental Rates Study Group. The dentist receives payment by filling in the official form and submitting it to the Dental Estimates Board on completion of each course of treatment. The Board, when satisfied that all is in order, authorizes payment to the dentist by the Family Practitioner Committee. Certain items of treatment, such as metal based dentures, multiple crowns, fixed bridgework and orthodontic treatments require prior approval of the Dental Estimates Board before the dentist may proceed. The net result of this procedure is that relatively few items on the "prior approval" list are performed.<sup>6</sup>

The National Health Service has further legislated against the performance of dental procedures by setting a non-incentive fee scale for this type of service and in many cases making the patient pay a significant amount of the fee, even though treatment for medical ailments is essentially free.<sup>7</sup>

Under the National Health Service the income of the British physicians and dentists has progressively fallen, and requests for restoration of their salaries to appropriate levels has been met by the British Government's insistence on adherence to the Government National Restraint guidelines.

The British Government stated that any labor force in the nation could receive a larger percentage salary increase if the amount over the restraint level was met by a "self-financing productivity scheme." In essence, this scheme is based on the theory that by working harder, more work can be produced in a given period of time so that the worker is allowed to receive more salary relative to that increased output. It is not clear how this concept can justifiably be applied to a dental practice in Britain under the rules of the N.H.S. but the Government has shown no departure from this position.<sup>8</sup>

In this context, it is interesting to note Secretary Califano's remarks in a speech to the National Council on Health Planning and Development where he stated "The task of assessing the productivity of health care providers and services will be an issue of emerging national significance and has applications far beyond the planning process. But it may have no more important use than in this area."<sup>9</sup>

Another important proposal has been made by Senator Kennedy in his "Health Care for All Americans Act" recently submitted for Congressional approval. It is a comprehensive health insurance program using government regulated private health insurance. When fully operational it is expected to cost \$28.6 million annually in addition to the amounts currently spent on Medicaid and Medicare.

The system would operate by setting up a five-member National Health Board and similar five-member State Board. The national board



would set up categories of providers, from which representatives to the groups to negotiate with the state boards would be elected. There would be two negotiating groups, the first to include classes of hospitals, H.M.O.'s, community health centers and other providers who could prospectively be paid. The second group would deal with fee schedules and would include medical and osteopathic specialties according to style of practice and geographic area. There would be proportional representation for different types of providers based on their numbers in the community and the percentage of their services represented in the total amount paid by the program.

Providers participation in this program would be optional, but since this plan would take over health related insurance nationally, it is assumed that most would join.

Again, financing for this plan would come from wage-related insurance premiums, premiums on non-wage-related income, payments from State and Federal departments on behalf of institutional populations, Medicare taxes and general revenues.<sup>10</sup>

Under this plan, it is notable again that there would be negotiated fee schedules between the providers and the supervisory bodies. While dentistry is not included in the present proposal, there is no doubt that any inclusion at a later date would be under the established conditions.

The deterioration of the British dentists' remuneration mentioned earlier is mainly due to the bureaucratic approach to salary increase recommendations made by the appointed Review Body. The Government has withheld part of the increases which it had accepted some three years ago so that the 1975 fee scale has remained unchanged.

The estimated 1977-78 net remuneration, (after deduction of practice expenses) for the British general dental practitioner is \$16,022. This amount should be viewed against the background of the 1978 British Income tax of 40% at this income level.<sup>11</sup>

It is hoped that philosopher Santayana's statement, "Those who cannot remember the past are condemned to repeat it,"<sup>12</sup> will be remembered when the full ramifications of the proposed American Health Plan are made known to us.

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- (continued on page 179)

*This study presents the results observed when the traditional admissions process (mostly academic measurements) is supplemented with a standardized personal interview to include non-grade attributes. A hypothetical class was selected using prior criterion and when compared to the class actually selected, two groups emerged which represented a rotation of 20% of the entering class. The two groups were distinctly different; the differences being the group that was actually selected in had lower grades and stronger attributes as measured by the interview. While this study represents only a one-year sample, the results are of significance and may be helpful to any health professions college considering the merits of interviewing for admissions.*

## The Admissions Interview: Does It Change the Character of a Dental Class?

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Dental college admission committees are becoming increasingly more sensitive to non-grade variables which may enter into the selection process. For many years, the use of the applicant's academic record, if not the sole criterion for admission, has received the most consideration. When statistical predictions of student's educational achievements are reported, they are based predominantly on Admissions Test (DAT) scores and academic grades. This defends the practice of selecting a class of students based primarily on cumulative grade point average, in some way adjusted by the aptitude test scores. For the most part, non-grade attributes are vague and non-precise subjectively determined, and often applied non-systematically.

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Present studies indicate that in-school performance can be predicted; however, it is felt by many that there is a need to predict beyond the confines of the school environment into success in dental practice. This means that our present practice of selection is becoming obsolete, and if one agrees with Barkley<sup>1</sup> that professional students of the future will be chosen largely on non-grade attributes, then this particular study provides some interesting direction for change.

The interview is one method to assess non-grade attributes and most dental schools presently interview (or have interviewed) in one fashion or another. The traditional interview is usually non-productive in the sense that what is observed in the interview is highly personal and subjective and usually does not deal with the attributes that predict success in practice. The authors believe that the best way to provide revealing information is from the structured personal interview, and this study employed the "SRI Dentist Perceiver" of Selection Research, Incorporated.\*

In 1972, the late Robert F. Barkley<sup>1</sup> noted that this firm had developed a remarkably accurate method of sorting out the most effective elementary and secondary teachers from applicants received by school boards. They found that effective teachers differ sharply from ineffective teachers in several aspects, but a major difference was in their level of appreciation and desire for mutually favorable relationships with their students. Less effective teachers placed a relatively low value on such relationships. This type of relationship observed with outstanding teachers is in many ways similar to a doctor-patient relationship.

Psychologists have shown that a person's attitudes towards other people seem to be established prior to early college age and remain basically unchanged thereafter.<sup>2</sup> This would seem to clearly indicate that regardless of its quality, training cannot teach certain interpersonal behaviors. By comparison dentistry could do well to locate relationship-valuing people and train them to become dentists. This would seem to be more beneficial than to recruit top-quality science students and then attempt to make them effective at working well with patients and staff.

The SRI Dentist Perceiver does not duplicate the major weakness of other selection processes by only identifying those who might simply do well academically; instead, it reveals people who would likely be outstanding dentists, because they were aware of, and concerned

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with, relationships with people. Using a technique developed in business and industry for selection, this firm interviewed successful dentists in depth. Fourteen attributes emerged which could distinguish more successful dentists from their less effective colleagues, and these "life themes" with their definitions are presented in Table 1. When asked questions regarding these themes, dental applicants were found to be much like dentists in the variance of their responses. Knowing how successful dentists answered questions permits a keyed "listen for" by which an applicant's responses could be coded. This method not only asks all applicants the same set of questions, it permits a strength comparison of their scores.

The University of Iowa's College of Dentistry conducted traditional interviews for a number of years, but found their results undependable. From 1974 to 1977, no interviews were required while the search for a more defensible method was undertaken. This structured interview was seen as most promising because: 1) it was based on successful dentists, 2) it permitted the applicants to tell about themselves, 3) it was standardized, and 4) it could be scored. Naturally, the question of validity was raised. In response, a study was conducted on an entire senior class (N=86) wherein senior student interview scores were correlated with faculty ratings on interaction with patients and how the faculty viewed the seniors as potentially successful dentists.<sup>3</sup> The study results showed significant agreement between the SRI Dentist Perceiver scores and faculty ratings in each of the two noted areas, a fact which seemed to justify using the interview for admissions purposes for the 1978 freshman class.

Upon adding another dimension to the admissions process, that being, to specifically look at non-grade attributes, the question was now asked as to what changes occurred in a class profile. The purpose of the study is to describe the changes which did occur by the use of the systematic interview information as part of the selection process.

## METHOD

Essentially, the method of this study involved a comparison of the results of the present admissions process to what had previously been done. An overview of Iowa's dental admission process is appropriate so the reader has an understanding that it is not unlike that conducted by other health science schools. The Admissions Committee is composed of fourteen members who vote independently on an applicant's admissibility. While applications are reviewed in descending cumulative grade point average, no two committee

members may place exactly the same emphasis on each aspect of the record as they cast their vote. However, influential factors may be generally classified into five categories:

1. Pre-dental academic record (cumulative GPA, science GPA, and DAT scores)
2. Scholastic factors (school sensitivity, number of pre-dental years, if grades varied or were consistent, and course loads)
3. Judgmental factors (applicant's biographical sketch, and letters of recommendation)
4. Special factors (age, persistence in application, and explanation of circumstances)
5. Interview summary information.

If an applicant receives seven votes, he or she is admitted. If not, the case is deferred until the next meeting when it again will be considered. This process is continued until the class size of 96 dental students is attained.

The 1977-78 cycle was the first year Iowa used the SRI Dentist Perceiver, and the full interview of 98 questions was administered to all resident applicants. All Admissions Committee members were trained to conduct the interview systematically, and the interviews were tape recorded. The tapes were replayed by one of five trained "perceivers" who were qualified to code the applicant's response to each question as either plus or zero. Whenever a weak or questionable response was heard, two or more coders consulted to arrive at an agreement. A summary of the interview information was available in each applicant's folder, along with all other admissions data. In this way, the interview data was available as simply another piece of information and each committee member was free to determine how much weight to ascribe to it.

In order to compare this year's resident admittances to those of recent years, it was necessary to hypothetically select a class using the same criteria that had been used in past years. Essentially the criteria were similar, with the exception of the interview information. To arrive at past year's criteria, admissions statistics were studied for the previous two entering classes, and the lower limits of the most used variables were obtained:

1. Seniors or graduate applicants: a minimum of 3.10 cumulative GPA, 2.90 science GPA, and DAT scores of 4,
2. Junior applicants: a minimum of 3.50 cumulative GPA, 3.40 science GPA, and DAT scores of 5.



Non-resident applicants were not used for this study, as their composition in each class varied considerably from year to year. A compounding reason was that non-residents were offered a shortened telephone version of the total interview.

The hypothetical class and the actual class selections were compared to determine how many students would fall in both groups. The differences emerged as two distinct groups; the "In" group (those who were actually admitted with the addition of the interview) and the "Out" group (just the converse). The characteristics of these two groups constitute the results of the study. (Fig. 1)

## RESULTS

The raw data by subjects and variables are presented in Table 2 (the "In" group) and in Table 3 (the "Out" group.) There were fifteen subjects in each of these two groups.

The first research question to be answered was: Were the two groups different? The answer was: The two groups were different. A multivariate discriminate analysis resulted in a 100% reallocation of each subject back into the subject's group. Perfect reallocation would not have been possible if the score distributions of the dependent variables had been the same within each of the two groups. Because the two groups were different, the second question to be answered was: How were the two groups different? This question was statistically answered by the use of an analysis of variance procedure. In Table 4 are listed the variables that were significant at less than, or equal to the 0.05 level.

The largest F-Value obtained by the analysis of variance was from the interview total score, while the second largest F-Value was obtained from grades. The direction of the differences of the means was not always the same for the two groups (e.g. interview and GPA lower for the "In" group). There were no differences found between the two groups in either the DAT academic or PMAT mean scores.

The interview and its sub-scores were some of the variables which discriminated between groups. Nine of the fourteen themes were found to be significantly higher in the "In" group; but not one theme was higher in the "Out" group. All five of the "people-related" themes of the individualized perception, activator, relator, delegator, and empathy were found to be significantly higher in the "In" group. Additional significant themes were mission, interest in health, self-actualization, and ability to conceptualize. No significant differences were found in ethics, technology, ego, sophistication, or time binder.

TABLE 1  
14 THEMES OF THE "DENTIST PERCEIVER" INTERVIEW

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<i>MISSION:</i>	Mission is the life theme that has to do with the dentist's perception of purpose or reason for being, and includes his orientation toward home, family, and career.
<i>HEALTH:</i>	Health has to do with the dentist's sense of providing an important aspect of the patient's total health care through the practice of dentistry.
<i>ETHICS:</i>	Ethics has to do with the dentist's desire to do what he feels is right for the patient, even though the patient may not know what is best for him, believes he can't afford it, or feels he doesn't want it.
<i>EGO DRIVE:</i>	Ego drive has to do with the dentist's desire to be seen as a significant person.
<i>SELF—ACTUALIZATION:</i>	Self-actualization has to do with the dentist's drive toward self-fulfillment. The self-actualized person is essentially oriented to the here and now as far as time is concerned, and is his own man as far as his definition of success, strength awareness, personal values and goals are concerned.
<i>RELATOR:</i>	Relator has to do with the dentist's desire to build lasting relationships of mutual trust.
<i>INDIVIDUALIZED PERCEPTION:</i>	Individualized perception has to do with the dentist's ability to see and appreciate the uniqueness of each individual person.
<i>ACTIVATOR:</i>	Activator has to do with the dentist's orientation toward promoting change.
<i>DELEGATOR:</i>	Delegator has to do with the dentist's tendency to extend responsibility by focusing on the uniqueness of each delegatee, and determining the readiness to assume greater responsibility in keeping with the strengths of the delegatee.
<i>CONCEPTUALIZATION:</i>	Conceptualization has to do with the dentist's ability to state his philosophy of dentistry.
<i>SOPHISTICATION:</i>	Sophistication has to do with the dentist's increasing discrimination and taste in aesthetics, career, avocation, recreation, or home and family.
<i>TIME BINDER:</i>	Time binder has to do with the dentist's orientation toward futuristic, pre-crisis, preventive maintenance health care, as opposed to a do-it-now restorative orientation.
<i>TECHNOLOGICAL:</i>	Technological has to do with the dentist's ability as a craftsman or technician.
<i>EMPATHY:</i>	Empathy has to do with the dentist's ability to put himself in the other person's shoes and feel as they feel.

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TABLE 2  
"IN" GROUP  
THOSE ACCEPTED BY TRADITIONAL METHODS AND SRI SCORES WHO WOULD NOT  
HAVE BEEN ACCEPTED BY TRADITIONAL METHODS ONLY

Name	Class*	Total Scores	Missions	Health	Ethics	Ego Drive	Self-Actualization	Relator	Individualized	Perception	Activator	Delegator	Conceptualization	Sophistication	Time binder	Technological	Empathy	DAT		SCI GPA	CUM GPA
																		ACD AVG	PMAT AVG		
01	4	68	6	5	6	1	4	4	4	3	5	6	6	6	5	7		4	5	2.18	2.70
02	3	52	4	4	5	2	3	2	5	4	2	3	5	5	5	3		6	9	2.80	2.88
03	4	54	4	6	3	4	3	2	2	4	4	5	2	4	6	5		5	6	2.65	2.88
04	4	57	6	2	4	4	4	3	3	5	5	5	4	3	6	3		6	7	2.96	3.03
05	4	58	5	7	3	2	3	3	5	5	6	6	4	2	3	4		4	4	2.42	2.80
06	4	59	2	3	7	2	3	3	4	3	5	5	5	6	6	5		4	6	3.01	3.01
07	4	60	4	6	6	2	6	4	4	4	5	3	2	3	6	5		4	4	2.94	2.95
08	3	63	6	6	7	5	2	4	3	5	5	5	5	2	3	4		4	2	2.71	2.98
09	3	69	5	7	6	0	5	5	5	4	7	5	5	4	6	5		4	6	2.84	3.07
10	4	75	7	6	5	1	7	6	3	6	5	6	6	5	6	6		5	2	2.91	3.00
11	3	45	4	4	5	3	3	1	2	3	3	4	3	2	3	5		4	5	2.77	2.92
12	3	58	6	7	3	5	4	4	2	5	4	3	5	4	3	3		5	3	3.05	3.01
13	4	59	6	7	3	3	4	1	6	1	7	5	3	2	5	6		5	4	2.88	2.98
14	4	58	4	4	4	4	4	2	3	4	4	5	5	6	6	3		4	6	2.96	3.07
15	4	63	4	5	4	5	3	7	5	2	3	6	3	5	5	6		5	4	2.79	2.93

\*Class Status: 4 = Graduate  
3 = Senior  
2 = Junior  
1 = Sophomore

TABLE 3  
"OUT" GROUP  
THOSE WHO WOULD HAVE BEEN ACCEPTED BY TRADITIONAL MEHODS BUT WERE NOT ACCEPTED BY  
METHODS DESCRIBED IN THIS STUDY

Name	Class*	Total Scores	Missions	Health	Ethics	Ego Drive	Self-Actualization	Relator	Individualized	Perception	Activator	Delegator	Conceptualization	Sophistication	Time binder	Technological	Empathy	DAT		SCI GPA	CUM GPA
																		ACD AVG	PMAT AVG		
01	2	37	3	4	4	2	0	2	4	1	3	2	2	3	4	3	5	4		3.97	3.94
02	2	49	4	4	3	2	1	3	3	2	3	5	4	4	6	5	5	6		3.89	3.87
03	2	37	0	5	5	2	0	2	2	3	4	4	2	1	5	2	5	9		3.81	3.87
04	2	39	0	4	5	1	2	2	1	1	2	5	2	4	5	5	5	4		3.86	3.85
05	1	42	3	4	3	1	3	2	3	4	4	5	2	3	2	3	5	7		4.00	3.69
06	4	49	5	4	4	4	2	4	3	4	1	3	6	4	2	3	2	5		3.60	3.50
07	3	33	5	3	5	1	0	0	2	2	2	2	3	2	3	3	4	4		3.36	3.41
08	3	41	1	4	7	4	1	2	2	1	2	4	2	4	3	4	5	4		3.28	3.41
09	3	39	4	2	5	4	1	4	1	2	4	3	2	1	3	3	3	4		3.12	3.38
10	3	40	0	2	3	5	3	3	3	3	2	2	5	1	5	3	4	4		3.51	3.38
11	3	33	4	3	4	1	2	2	2	1	2	4	2	3	1	2	4	3		3.19	3.24
12	3	49	0	4	4	3	3	4	3	2	5	5	5	4	4	3	5	4		3.04	3.21
13	3	50	3	3	4	2	3	1	5	4	2	4	5	3	6	5	4	5		2.96	3.14
14	4	35	0	3	4	1	2	1	3	1	3	0	4	5	5	3	5	6		3.06	3.11
15	3	34	2	3	3	2	1	0	3	2	2	3	2	3	5	3	3	6		3.47	3.10

\*Class Status: 4 = Graduate  
3 = Senior  
2 = Junior  
1 = Sophomore



TABLE 4

Variable	$\bar{X}$ "IN" Group (N = 15)	$\bar{X}$ "OUT" Group (N = 15)	F Value	PR F	$\bar{X}$ Class Admitted* (N = 60)
Interview total score	59.87	40.47	62.75	0.0001	52.47
Themes:					
Mission	4.87	2.27	18.52	0.0002	4.15
Health	5.27	3.47	15.23	0.0005	5.12
Ethics	4.73	4.20	1.32	0.2607	4.85
Ego Drive	2.87	2.33	0.98	0.3311	2.68
Self-Actualization	3.87	1.60	26.10	0.0001	3.65
Relator	3.40	2.13	5.16	0.0310	3.40
Individualized- Perception	3.73	2.67	6.24	0.0186	3.60
Activator	3.87	2.20	13.84	0.0009	3.82
Delegator	4.67	2.73	17.73	0.0002	4.45
Conceptualization	4.80	3.40	8.95	0.0057	4.80
Sophistication	4.20	3.20	3.83	0.0603	3.92
Time-Binder	3.93	3.00	3.33	0.0787	4.28
Technological	4.93	3.93	3.76	0.0627	4.90
Empathy	4.67	3.33	10.18	0.0035	4.00
Year in school	3.67**	2.73**	14.91	0.0006	3.20**
DAT					
Academic	4.60	4.27	1.14	0.2955	5.00
PMAT	4.87	5.00	0.04	0.8343	5.00
Science GPA	2.79	3.47	37.54	0.0001	3.42
CUM GPA	2.95	3.47	41.61	0.0001	3.46

\*Class not including the "IN" Group

\*\*Class Status: 4 = Graduate  
3 = Senior  
2 = Junior  
1 = Sophomore



Table 4 shows the mean scores of both groups compared to the actual class mean of the interview scores. Because of the vast amount of information involved in an analysis of multivariate with fifteen dependent variables at three levels of independent variables, statistical analyses beyond these descriptions were not conducted.

These results indicate that the 1978 entering class of The University of Iowa College of Dentistry may have been chosen on factors other than grade point and DAT scores. Presumably some of those other factors would be the applicant's interview scores.

### DISCUSSION

The results demonstrated that 20% of the students in the entering class were rotated, and the interview was seen as the responsible factor. This 20% is a serious consideration when one views the relative importance of selection to the goal of dental education. The drop-out rate at Iowa's College of Dentistry is about 5 to 7%, and the feeling exists that some means or method to reduce this rate is advantageous.

The interview has the implicit assumption that higher scoring applicants will be better motivated and find more success in the "people-oriented" aspects of dentistry.\* Therefore, one possible way to deal with the drop-out problem is by selecting applicants whose career goals are more in line with their ability to relate with people and their perceived health mission.

The distinctiveness of the two groups deserves comment. Rarely will a researcher find such clear delineation, for in this study it was excellent. The variables were so consistent in their effect on this study that each group was uniquely distinct in their characteristics. The "Out" group had the stronger grades and the weaker interview, while the "In" group was just the converse. This says that when given conflict between grades and interview strengths, the interview results predominated in the committee decision.

Although the "In" group had more years in formal academics, they did have lower grades as compared to the "Out" group. This finding suggests that the committee generally felt that these individuals, due to their ability to relate to people, must have had more to offer than was reflected in their academic record. The kind of person brought in by the interview is one significantly stronger in the "people oriented"

---

\*This assumption is supported in the Iowa validation study where students having academic difficulties or irregular progress were significantly below the total mean interview scores.<sup>3</sup>

themes. This individual may have other strengths, such as mission and health, which should make a motivated dental student, but the authors feel that the "person oriented" dimension is of greatest importance. It is gratifying that there was no difference in certain other themes very important to success in dentistry, especially ethics and technology. This study finds that no loss of desirable dental traits occurred during the "trade-off" of the two groups.

It should be noted that the male-female ratio remained constant as compared to previous years. While not a variable under consideration in the research design, nevertheless, the outcome was congruent with the ratio experienced in the past. With an increased number of female applicants, and the feeling that many of these female applicants were very aggressive and highly talented, an imbalance could have contributed a bias to the study. This bias did not occur.

The reader may question the reliability of the interview, for this has not been dealt with previously. The first aspect of reliability is the systematic structure of the format. Only predetermined questions are asked with no interpretation possible. The internal consistency of the instrument is the second aspect of reliability. And this has been amply documented by item to theme, and theme to total correlation in a previous study.<sup>3</sup> Coder agreement is the third aspect of reliability, and this study offers a coder agreement of at least  $r = .90$ . Only qualified perceivers code the interviews, and the training to become a perceiver demanded a  $r = .90$  or higher agreement. There were a few responses that were difficult to interpret, and whenever this occurred, a consultation with a second coder verified that score. Validity also depends on reliability, so the validity concern was partially supported by the .90 reliability. A further study tested concurrent validity at Iowa prior to the use of the interview for admissions purposes.<sup>3</sup>

The results of this particular study point out a greater emphasis on personality variables as compared to the traditional grade point average. Not all dental schools may feel comfortable with these findings, and certainly no generalization beyond The University of Iowa College of Dentistry is attempted.

The authors recognize that a one year study has limitation. Many inquiries have been received as to how the structured interview was working at Iowa and the extent of these findings should be shared with other health science schools having similar concerns about the apparent inability of grades to predict success in the health profession. Not all committee members were enthusiastic about using the interview, while others may have given it the "Hawthorne effect". Nevertheless, the independent method of voting probably balanced

this out. The reader may question whether the result of this study will remain stable over time. It should be noted that this is an ongoing study and that longitudinal evaluations will this question.

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*Many aspects of the dentist-patient relationship have been studied. One aspect which has not received adequate attention is the dentist's ability to be sharing and non-controlling in his patient interactions. This report presents preliminary findings describing dental student profiles on the dimensions of caring/indifference and sharing/controlling. Students were found to be concerned about their patients' well being, but were not comfortable in sharing the direction and control of treatment activities with their patients.*

## Caring and Controlling Dimensions in Patient Relations: The Dental Student Perspective

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Much attention has been given to the importance of recruiting and graduating students who are not only technically competent but also display what has often been described as social sensitivity, humanism, or patient centeredness.<sup>1,2,3</sup> This has resulted from the belief that the dentist's personal attitudes and behaviors are associated with patient fear and anxiety<sup>4,5</sup> and that the role of the dentist-patient relationship in motivating patients to improve home care activities<sup>6,7</sup> and to accept dental services is substantial.<sup>8</sup> Gazda<sup>9</sup> and Carkhuff<sup>10</sup> have also stressed the importance of the personal characteristics of the doctor, as they affect the doctor-patient relationship and its potential to promote meaningful changes in patient behavior.

"Research about the dentist-patient relationship has been mainly concerned with variations in the behavior, feelings, and attitudes of patients. The dentist appears only insofar as he may be advised about the management of patients. His personality and social expectancies are not included among the variables of the relationship."<sup>11</sup> Therefore, the therapeutic effect of the relationship itself, that is, the potential of the relationship to promote positive health actions in patients, has

not been fully explored. Many authors have emphasized the dentist's personal qualities and the nature of his relationship with his patients as being one of the crucial factors determining the dentist's success in promoting positive health outcomes in his patients.<sup>12-17</sup> However, most of these admonitions are anecdotal in nature, based on clinical judgement and experience, and lack a research foundation.

In stressing the importance of the relationship, a number of qualities have been identified as being necessary for the establishment of a good doctor-patient relationship. These include empathy, respect, warmth, genuineness, and understanding.<sup>9, 10, 18-20</sup> Although these qualities have been cited as being important, this assertion has not been substantiated in the dental literature. In particular, the presence of these qualities in the dentist has seldom been linked to improved health or other related health delivery system outcomes.

Potentially, another important quality needed by dentists in order to facilitate positive interpersonal relationships with their patients is the ability to be sharing and non-controlling.<sup>9, 10, 12, 13</sup> With few exceptions,<sup>21, 22</sup> most of the dental evidence to support this contention is empirical.

The effects of dentist authoritarianism on patient reactions to complete dentures has been studied by Hirsch.<sup>21</sup> Patients treated by low-authoritarian dentists were found to react more favorably to denture setups than patients who received care from high-authoritarian dentists.

Similarly, Sarnatt<sup>22</sup> studied permissive-authoritarian characteristics in dentists' behavior in relation to the cooperation of the child dental patient. Almost twice as many children were found to exhibit active cooperation with a permissive dentist as compared to an authoritarian dentist. However, although not statistically significant, it appeared that anxious children with authoritarian mothers were more cooperative with the dentist, whether permissive or authoritarian, than were non-anxious children whose mothers were permissive. The authors concluded that anxious children who had been educated by authoritarian parents were most likely to accept the dentists' authority. It must be realized that the authors' contention deals only with compliance while with the dentist and not with compliance related to at-home preventive activities.

Thus, although the dentist-patient relationship would appear to be of importance in helping to determine health related outcomes, little experimental research has been conducted to substantiate this. A facet of the relationship, the degree of caring and non-control exhibited by the dentist, appears to be of significance, but also has not



been examined adequately. The project reported here is a preliminary attempt to examine the degree of caring and non-control exhibited by dental students.

## METHODS

In order to study the degree of sharing and non-control exhibited by dental students it was necessary to develop a test instrument. Questions were developed based on dental and medical literature relevant to humanistic aspects of patient care. The questionnaire contained fourteen items scored on a five-point Likert scale ranging from strongly agree to strongly disagree. For statistical analysis, responses were collapsed to a three point scale. Of the fourteen items included on the total test instrument, seven measured a scale on the continuum from caring to indifference and seven, sharing to controlling.

The test instrument was administered to 117 University of Maryland, School of Dentistry students in the middle of their freshman year. Students were instructed that all responses would remain anonymous and results would be used for research purposes only.

The responses on the two scales were then subjected to statistical analysis to determine their reliability. Each of the scales was measured for inter-item consistency using the alpha coefficient. The greater the alpha coefficient obtained, the more confidence can be placed on the assertion that the items within a particular scale all measured the same attribute. The caring/indifference and sharing/controlling alpha coefficients were .3182 and .2672 respectively. Both coefficients were found to be significantly greater than zero at the .05 level.

Scale-to-scale correlations also were obtained. The Pearsonian Coefficient ( $r$ ) correlating the caring/indifference scale with the sharing/controlling scale was not significant ( $r = .0179$ ). This gives some support to the existence of two separate scales within the total test.

## RESULTS

Although a majority of the students made what were considered desirable responses on the caring/indifference scale (64%), few student responses were considered desirable on the sharing/controlling scale (14%). The difference in frequencies of students making desirable and undesirable responses on the caring/indifference and sharing/controlling scales was found to be significant (Chi square 507.78;df2; $P < .001$ ) (Table 1). Students tended to agree with the concept of caring and concern but disagree with sharing and non-control.

Table 1  
Association between the Frequency of Student Responses on the  
Caring/Indifference and Sharing/Controlling Scales

Scales	Desirable Responses	Neutral	Undesirable Responses
Caring/Indifference	523 (64%)	132 (16%)	164 (20%)
Sharing/Controlling	114 (14%)	112 (14%)	593 (72%)

Chi square (2) = 507.78,  $P < .001$

Table 2

Percentage Distribution of Student Responses on Caring/Indifference Scale

	<u>Agree</u>	<u>Neutral</u>	<u>Disagree</u>
A dentist's deep involvement with a patient's problems is <u>not</u> likely to lead to a loss of respect on the part of the patient.	61*	22	17
The dentist should refrain from touching the patient unless it is to obtain more clinical information.	22	21	58*
The ideal dental patient is stoical about pain.	22	17	61*
If the dentist cares too much about his patients, his judgement is likely to be impaired, and his ability to assist them diminished.	21	8	70*
It is best that the dentist share his true feelings with his patients.	29*	28	43
It is the dentist's auxiliary staff, i.e., dental assistants and hygienists, who would be primarily responsible for providing the patient with emotional support. This will relieve the dentist of this emotional drain on his energy.	13	15	73*
It is very important for the dentist to display the quality of receptivity.	97*	2	2

\* Desirable responses

NOTE: Percentages do not total 100% because of rounding error.

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Examining the items separately, on six out of the seven items on the caring/indifference scale, the majority of student responses were desirable (Table 2). On the sharing/controlling scale, only one item received a desirable response from as many as 44% of the students, all other desirable responses ranged from 3 to 17% (Table 3).

Table 3

Percentage Distribution of Student Responses on Sharing/Controlling Scale

	<u>Agree</u>	<u>Neutral</u>	<u>Disagree</u>
Most important of all, the successful dental practitioner must be objective, decisive, and rational.	92	3	5*
If a "professional distance" is not maintained between the dentist and his patient, the patient is likely to feel free to take advantage of the dentist.	35	21	44*
The best care is likely to be given when the dentist can get the patient to follow the dentist's advice.	95	2	3*
It is not the dentist's responsibility to be the primary judge of the success or failure of any course of treatment, including its results.	6*	9	85
The dentist's greater knowledge and experience makes it important for him to analyze and direct the patient's actions.	83	7	10*
When objective findings are in variance with the patient's subjective reports, the dentist should give maximum weight to the subjective reports.	17*	33	49
It is very important for the dentist to display the quality of passivity.	12*	19	69

\*Desirable responses

NOTE: Percentages do not total 100% because of rounding error.

## DISCUSSION

Results similar to those reported above have been obtained with senior dental students at the University of Mississippi.<sup>23</sup> However, further study is needed before the generalizability from one student group to another is assured. In addition, the generalizability of test results to the private practitioner has not yet been determined.

Although the test instrument appears to exhibit face validity, data supporting construct validity is lacking at this time. Finally, it must be kept in mind that additional study is needed to establish the link

between these parameters of the dentist-patient relationship and positive patient outcomes.

From these preliminary findings however, it appears that the students, although concerned about their patients' well being were not comfortable in sharing the direction and control of treatment activities with them. This apparent dichotomy between sharing and caring dimensions potentially has very important and practical implications. We are all too aware of current inadequacies in health education efforts. The ultimate efficacy of individual dentist-patient health education activities has been questioned.<sup>24, 25</sup> It is possible that current efforts are doomed to failure because of the very nature of the dentist-patient relationship that is currently being established by many practitioners. A dependent, dentist-oriented and controlled interaction may not be conducive to personal growth on the part of dentist and patient alike. Personal growth might be the ingredient that is needed for health education efforts to be truly successful.

A number of studies in the non-dental literature reveal the potential positive effect of a sharing, interdependent relationship. This has been found true both when dealing with parent-child interactions<sup>26</sup> as well as those involving individuals receiving psychiatric treatment.<sup>27, 28</sup> Carl Rogers has analyzed these and other studies and believes that when responsibility is given to the individual, responsible self-direction occurs.<sup>29</sup>

Thus, it is possible that although a concern for the patient's well being is enabling, it in itself may not be sufficient to achieve the maximum therapeutic potential of the relationship. A sharing and mutual interdependence between doctor and patient may be required. Further inquiry into this aspect of the doctor-patient relationship may prove beneficial in uncovering means of improving the success of health education efforts.

### SUMMARY AND CONCLUSIONS

A test instrument was developed to study caring/indifference and sharing/controlling dimensions in dental student-patient relationships. Additional study is needed to further validate this instrument. However, preliminary results indicate that there is a significant difference in the way students respond to the caring/indifference and sharing/controlling dimensions. Although students appear concerned about their patients, they are unable to share the direction and control of treatment activities with them.

Additional study is needed before these results can be generalized to other populations or related to enhanced patient health.

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### NEWS OF FELLOWS

**Richard C. Oliver**, dean of the University of Minnesota, School of Dentistry was recently chosen as president-elect of the American Association of Dental Schools.

**Jack Eisenson**, a pedodontist of Lakewood, Colorado was recently honored by the Metropolitan Denver Dental Society with its "Honus Maximus" award, in recognition of his outstanding services to the Society.

**Claude Nabers** of Wichita Falls, Texas was recently named Outstanding Alumnus of the University of Texas in Houston.

General **Stanley Kolodny** of the U.S. Air Force was honored as Outstanding Alumnus of Baylor University Dental School.

The Dallas County Dental Society has named **Robert D. Londeree, Jr.** as Dentist-of-the-Year.

**Travis L. Lanham** received the Distinguished Service Award of the Fort Worth District Dental Society recently for outstanding contributions to the dental profession and his community.

The Texas Dental Association President's Award for "Ongoing Ambassadors for Dentistry" was recently presented to **P. Earle Williams** of Dallas and **Charles W. Jarvis** of San Marcos.

**Arthur C. McFeaters** of Pittsburgh was installed recently as president of the Pennsylvania Dental Association.

## *The Objectives of the American College of Dentists*

The American College of Dentists in order to promote the highest ideals in health care, advance the standards and efficiency of dentistry, develop good human relations and understanding and extend the benefits of dental health to the greatest number, declares and adopts the following principles and ideals as ways and means for the attainment of these goals.

(a) To urge the extension and improvement of measures for the control and prevention of oral disorders;

(b) To encourage qualified persons to consider a career in dentistry so that dental health services will be available to all and to urge broad preparation for such a career at all educational levels;

(d) To encourage, stimulate and promote research;

(e) Through sound public health education, to improve the public understanding and appreciation of oral health service and its importance to the optimum health of the patient;

(f) To encourage the free exchange of ideas and experiences in the interest of better service to the patient;

(g) To cooperate with other groups for the advancement of interprofessional relationships in the interest of the public; and

(h) To make visible to the professional man the extent of his responsibilities to the community as well as to the field of health service and to urge his acceptance of them;

(i) In order to give encouragement to individuals to further these objectives, and to recognize meritorious achievements and potentials for contributions in dental science, art, education, literature, human relations and other areas that contribute to the human welfare and the promotion of these objectives — by conferring Fellowship in the College on such persons properly selected to receive such honor.

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