

# D E N T A L   E D U C A T I O N

---

## Direct Gold Restorations in Dental Education

JOSE E MEDINA

### INTRODUCTION

The process and contents of a dental educational program required to prepare a graduate to practice dentistry and to ensure that the continued competency of dental practitioners is maintained should be developed and instituted in accordance with the prevailing and projected trends in dental practice. In order to properly discuss the role and/or use of direct gold restorations in dental education, one must assess those factors that influence its need, its demand, and its value as a restorative service for the society we serve. Stated in another way,

---

**University of Florida College of Dentistry,  
Department of Dentistry, Box J-415,  
Gainesville, 32610**

JOSE E MEDINA, DDS, professor; formerly  
dean of the College of Dentistry

---

Presented at the annual meeting of the American Academy of Gold Foil Operators on October 17 at San Juan, Puerto Rico.

the dental educational program and its content should be a reflection of the prevailing and anticipated requirements a dentist must possess in order to render high quality services to the patients he/she will serve. It behooves us, then, to take a look at the future need, demand, and value for this restorative service, so that we can develop an educational program designed to fulfill the expected expertise of the practicing dentist.

### NEED

It is extremely difficult for me to accept a philosophy of practice that does not incorporate the provision of direct gold restorations as part of total restorative services to patients. The uses of this material are many: for repairing margins of gold castings, for sealing vents utilized in the cementation of full crowns, for sealing full-crown access openings for endodontic therapy, for treating small pit-and-fissure lesions, for restoring small eroded gingival class 5 and incipient class 3 lesions in anterior teeth, for sealing cupped-out incisal and cuspal

abraded surfaces (class 6), and for replacing those small incisal angles resulting from fracture and/or abrasion (class 4). Without question the need exists, if we accept the philosophy of practice based on providing the highest possible quality service for our patients. Granted that some patients will not accept the proposed treatment, it is nevertheless our responsibility to recommend the best possible treatment procedures based upon the needs of the tooth and the permanency and longevity of the restoration. Every practice includes patients who require this restorative service, and it is our duty and obligation to recommend its use where indicated. Additionally, the increase in life expectancy, with a concomitant increase in the retention of the natural dentition, is generating a large increase in the number of senior citizens who are in need of this service for the indications discussed above. In my opinion, the trends indicate to me that the need for direct gold restorative services is increasing and will continue to do so into the 21st century and beyond.

## DEMAND

Even though the need for direct gold restorative services exists and will increase in the years ahead, the demand for its use is another factor that bears assessment. The demand for any elective health service is influenced by many factors, among which are patient motivation and awareness, patient's education level, socioeconomic standards, time availability, and desired quality of life. As professionals, it behooves us to educate our patients to the desirability of longevity and permanency of service and to inculcate in them the motivation and desire to retain the masticatory system in good health and function. It has also been my observation that those patients with higher educational backgrounds and in the middle and above socioeconomic groups tend to be more motivated and more demanding of a higher quality of life, including oral health. As we move into the 21st century, it is my understanding that the increase in life expectancy and, therefore, the increase in senior citizens, will have a tremendous impact upon the demand for dental services. The reason for this increase in demand is due to the fact that this new population group will be better educated, will

have a higher socioeconomic standard, will be more motivated, and will have more leisure time to demand and expect higher quality dental services to go along with their desire for a higher level of quality of life. I anticipate, without hesitation, that the demand for excellence of service, including the use of direct gold restorative services, will definitely increase.

## VALUE

In addition to anticipating an increase in need and demand for direct gold restorative services, we must also determine in our deliberations whether such a service has value. Value can be defined as a fair return in goods or service, or it can be defined as a relative worth, utility, or importance — that is, the degree of excellence. Over the years, direct gold restorations have proven to be a good investment for longevity and permanency of service. Numerous references in the dental literature attest to the outstanding service provided by these restorations. It is true that the initial investment by the patient, both in time and money, appears to be higher than for other restorative services; however, the long-lasting benefit of this patient service assures us that the direct gold restoration is one of the most cost-effective treatments, if not the best, that can be provided. The assumption, of course, is that the service is rendered well and only where there is an indicated need for its use. We can also expound upon its merits in regard to its marginal seal and integrity, dimensional stability, tenderness to surrounding soft tissue, reparability without losing its integrity, ability to maintain the mesiodistal arch dimension, resistance to tarnishing and corrosion, and inertness to the oral environment. Its value as a restorative service is above reproach and its worth as a long-lasting service cannot be questioned. Without a doubt, it is a restoration of great value and it is the standard most of us use to evaluate the degree of excellence of other restorative services.

## DENTAL EDUCATIONAL PROGRAM

Having thus far assessed the need, demand, and value of this direct gold restorative service,

what, then, should be the role of a dental educational program? In view of the fact that the value and worth of direct gold restorations are second to none and that the need and demand will not diminish in the future, dental educational programs must provide the opportunity for dental professionals to be educated and trained in its use. Based on the assumption that the dental professional is a continuing student from the first day he/she enters dental school to the day he/she retires from practice, then a complete lifetime educational program needs to be implemented. It makes no sense whatsoever to assume that a recent graduate, after four years in dental school, can be a master or an expert in the assimilation of all the knowledge, skills, and judgment required to practice the profession. The majority of us gladly accept the premise that we should continue to obtain knowledge through continuing education courses but we fail to recognize the need to continue to enhance our skills and judgment through the same mechanism. Consequently, we become better informed, more knowledgeable through the years, and our judgment improves as we see our successes and failures, yet our skills often remain at the graduate level, even though we have gained speed in their application. What, then, should be the matrix of a sound educational program designed to provide the appropriate experience for the use of direct gold restorative services?

For the purpose of organization for this presentation let me divide the educational program into three components: (1) formal predoctoral education, (2) formal postdoctoral graduate education, and (3) semiformal continuing education.

### **Formal Predoctoral Education**

The formal four-year predoctoral program leading to a DDS or a DMD degree is extremely demanding for all students. They must be exposed to an ever-increasing wealth of knowledge, they must develop minimal competencies in diagnostic and therapeutic skills, they must develop communication skills, they must develop a humanistic approach to patient care, they must be motivated to the pursuit of excellence of service — in short, they must acquire the basic fundamental knowledge, skills, and

judgment to permit them to practice their profession. The student does not have the time nor has he/she developed professionally enough upon graduation to be able to master and/or be an expert in all the disciplines and requirements of dental practice. However, prior to graduation, the student must be exposed to all aspects of care, and such an opportunity must be provided, including the use of direct gold restorative services. This exposure should be a part of the regular curriculum either as a formal technic and clinic requirement, or as an elective. No graduate should complete his/her four-year program without an exposure to the direct gold service. However, every graduate must be motivated to pursue further education in order to become proficient in rendering this service.

### **Formal Postdoctoral Graduate Education**

A postdoctoral graduate program in restorative dentistry should be made available in all dental schools. Such a program, of a two-year duration, is an excellent mechanism for the development of additional knowledge, skills, and judgment and is one of the best approaches for enhancing the experience needed for managing direct gold restorations. Under the watchful eyes of well-trained and highly skilled faculty, the graduate student will begin to develop his/her expertise. Such a program will enhance knowledge, skills, and judgment and prepare the graduate for a lifetime of service in his/her chosen profession.

### **Semi-formal Continuing Education**

This facet of a dental educational program is perhaps the most important in enabling the practitioner to remain abreast of all current developments in the profession. However, it is of the utmost importance in mastering the use of direct gold restorations. I label it semiformal continuing education because not only does it include attendance at seminars, lectures, conferences, workshops, and so forth to enhance knowledge, but it also involves a structured program through participation in formally established study groups. A study group can be

didactic in structure, but to be most effective for learning about direct gold it must also have a strong clinical participation component. If all members of a study group live in close geographic proximity, the group will meet one day a month. If the members are geographically apart they will meet for two or three days at a time four times a year. In any case, the group members will operate 10 - 12 times a year under the guidance of a mentor or director who constantly shares and demonstrates improvements in the management of direct gold and in the enhancing of the delivery of the service. Through study group participation the practitioner's skills are continually enhanced and the acquired knowledge and judgment are clinically applied. To me this semiformal continuing educational program is the most effective way to improve our level of proficiency in our constant struggle to achieve perfection for the purpose of meeting the needs and demands of our patients.

## **SUMMARY**

I sincerely hope this assessment of the role of direct gold restorative services in dental education has been of some value to you. It is my firm belief that there is a need for this service, that this need will persist in the years to come, that there will be an increased demand for its use, and that we have the responsibility to provide the opportunities for all practitioners to become proficient in its use. Freedom of opportunity and freedom of choice, both for us as the providers of dental services and for our patients as the recipients of our services, must always be available. Let us offer our patients the best service we have available to meet their needs and demands, but let us also be prepared to render that service to the best of our ability. Let us always enhance our professional growth through a lifetime of continued learning in the hope of achieving excellence of service in all our professional endeavors.

## **Dental Education**

### **Direct Gold Restorations in Dental Education**

**Madina, J. E. : Direct gold restorations in dental education. Oper Dent 12 (1) : 20-24  
1987**

The Author strongly believes that the need for the direct gold restorative services will increase and continue to do so into the 21<sup>st</sup> century and beyond since direct gold gives a very high quality restoration. As we move to 21<sup>st</sup> century, people will have better education, higher socioeconomic standard, and will demand and expect higher quality of life, including dental services.

Over the years, direct gold restorations have proven to be a good investment for longevity and permanency of service. Even though the initial investment by patient appears to be higher than other restorative services, the direct gold restoration give a long lasting benefit and it is one of the most cost-effective treatments.

Direct gold restoration should be provided in dental education programs including

- 1) formal predoctoral education,
- 2) formal postdoctoral graduate education, and
- 3) semiformal continuing education.