

PSROs in Dentistry

JAY W. FRIEDMAN, DDS, MPH

The purposes, functions, and importance of Professional Standards Review Organizations in dentistry are discussed and the activities of one such organization are detailed.

Introduction

Although the discussion of Professional Standards Review Organizations (PSROs) has been directed almost entirely to medical care, dentistry will not only become part of the process, it can also lead the way.

This paper presents a brief review of the background of dental PSROs and the experience of U.S. Administrators as a prototype PSRO, including a description of the quality assurance system and data based on 2 years' experience.

The significance of this paper is the demonstration that effective implementation of PSRO principles in dentistry will not only improve the quality of dental care programs but will also pay for itself by eliminating unnecessary and excessive services.

Developing Criteria and Standards

Most efforts to establish criteria and standards for quality assurance in dental care are less than 10 years old and are more likely to have begun in the past 5 years. The more important papers have been written by Abramowitz and Mecklenburg,¹ Cons,² Dejong and Dunning,³ Friedman,^{4, 5} Ryge and Snyder,⁶ Schonfeld et al.,⁷ and Soricelli.⁸ Donabedian's Guide to Medical Care Administration⁹ describes the fundamental principles of quality evaluation for any of the health care disciplines.⁹ A comprehensive review of quality assurance in dental care by Jago¹⁰ and an approach to the development of standards by Bailit et al.¹¹ emphasize the increasing importance of the subject to the dental profession. Space does not permit description of

these publications but they are essential reading for anyone interested in the subject.

The two documents with the most extensive and specific descriptions of dental criteria and standards for their evaluation are contained in the Indian Health Service manuals¹² and Friedman's Guide.⁵ Some specialty groups are developing their own guidelines.¹³ These references deal primarily with "process" rather than "outcome" of dental care. Effectiveness has been assumed, not proved. Most clinical research has been limited to technical aspects of the longevity of dental restorations without consideration of such questions as the necessity for the services or the overall effect on the dental and general health of the individual. However, research is moving in this direction.¹⁴

Until the last year or two, efforts to establish explicit criteria and standards were more or less ignored by organized dentistry. Little consideration has been given to essentiality of treatment so long as technical competence was satisfactory and fees charged were reasonable. A few popular publications attempt to provide the consumer with some criteria for choosing a dentist and, to a lesser extent, the type of treatment.^{15, 16} But they cannot prevent overtreatment, which is probably the major issue confronting the individual patient today. As decision-making on the authorization of treatment shifts from the individual paying the bill to the third or fourth party organizations administering funds on behalf of the recipient population, it becomes possible to reduce or eliminate overtreatment through the review process.

Many problems have yet to be overcome if patients are to have the protection promised by PSROs. The most contended issues are adoption of the concept of essentiality of care and an effective mechanism for indirect (nonclinical) review. Unfortunately, limitation of program benefits to necessary and essential treatment does not necessarily limit what the practitioner does to the patient if the patient is willing and able to pay for additional services. The fact that

Dr. Friedman is Dental Director, US Administrators, 8383 Wilshire Boulevard, Beverly Hills, California 90211.

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a service is listed as a covered benefit does not justify *carte blanche* authorization. Extractions may be a covered benefit, but the removal of sound teeth at the request of a patient who does not fully understand the consequences would represent unnecessary dental surgery, which is no more justifiable than an unnecessary hysterectomy or appendectomy. Replacement of every missing tooth simply because there is a space for prosthesis without regard for its necessity also can be harmful. It could easily exhaust available funds required for more essential treatment.¹⁷

PSROs will establish the criteria and standards necessary to assure the quality of care. Implementation will occur at two levels. Primary review is the responsibility of the administrative organization. It may be a third or fourth party organization which pays the bill, or a hospital or group practice with internal review mechanisms. Secondary review will be performed by peer review committees of professional organizations or other delegated agencies to resolve disputes between providers and administrative consultants. Some state dental associations have begun to develop their own guidelines for this purpose.^{18, 19}

The issue of posttreatment review has been particularly irksome to the profession. As dentistry is conditioned to handling only complaints, there has been major resistance to establishing an effective mechanism to detect defective treatment of which the patient is not aware. Most dentists assume that evaluation of technical competence requires clinical examination of patients. Theoretically, clinical examination represents the ideal modality. But as a sampling and screening mechanism it is impractical. Not only would the expense be prohibitive, but the logistical difficulties of accomplishing this type of review are insurmountable, except for purposes of a specific limited study. Even then the number of respondents for the examination is usually too low for significant conclusions. Clearly, indirect (nonclinical) evaluation must form the basis for posttreatment review, supplemented by clinical examination in individual cases that cannot be resolved otherwise.⁵ Unless peer review committees adopt the method of the indirect audit, they will be swamped and paralyzed by the mass of cases referred for resolution by dentists irate at third party interference.

One method of indirect auditing of the quality of care is based on analysis of statistical data. Extraction, bridge, and denture rates, for example, should decline as a program matures, provided that the population remains fairly stable. Comparisons can be made on the effectiveness of different programs as this type of data accumulates. Computerized profiles can also be developed for individual providers. The problem with this approach is that it may take many years before there are sufficient numbers of cases accumulated to allow meaningful evaluation of provider performance. By then the practitioner will no longer be the same person. He will have aged, his interests may have changed, his competence may have deteriorated. In short, statistical methods of assuring the quality of dental care cannot be applied to protect the individual patient at the time that treatment is provided or within a reasonably short period thereafter.

Fortunately, dentistry has a means by which treatment can be assessed, within limits, indirectly without clinical examination of patients. By utilizing postoperative radiographs the major portion of dental treatment, e.g., prophylaxes, fillings, and bridges, can be reviewed. The method need not be applied indiscriminately, and more research is required to determine how effective it can be and under what conditions it should be applied.

Experience of U.S. Administrators

U.S. Administrators is an independent, privately owned fourth party organization. It administers a variety of dental plans, ranging from self-insured union trust funds to commercial insurance plans. Unlike third party organizations, the fourth party administrator does not insure or share in risks and profits. Though it may be a profit-making concern, its income and profits derive from administrative fees and the efficiency of its operation. This distinction is important to observe from the dentists' viewpoint—particularly the consultants—because it minimizes self-interests if, as in the case of the U.S. Administrators, substantial “savings” accrue to the quality assurance program. To be sure, if the effect of the administrative process were to increase overall costs to the trust fund or insurance company it would likely go out of business, or at least it should. But if income and profits are tied to administrative efficiency, the professional consultant can function more independently and with a clearer conscience.

There is another advantage to an independent organization. It is less subject to political pressures and it can develop and change policies much more rapidly. Pressures from governmental sources upon governmental agencies are well known, as are pressures from major stockholders upon insurance companies and from the dental profession upon the dental service corporations. Each must answer to its constituencies. Nonetheless, the independent administrative organization does not function in a vacuum. It must also respond to the political and economic pressures of its clients and to the representatives of the profession, in this case to the dental associations.

TABLE 1—Quality Assessment in Dentistry: The Indirect Dental Audit

Outline of the Process	
I.	Preauthorization Review of the Treatment Plan
A.	Prevention of unnecessary treatment
B.	Correction of diagnosis
C.	Supplementary consultation
II.	Postoperative Review
A.	Detect defective and unacceptable treatment
B.	Detect incomplete treatment
C.	Protect against improper and false claims for payments
III.	Computer Analysis
A.	Develop profiles of providers
B.	Screen for improper and false claims
C.	Screen for inappropriate repetition of services

Table 1 presents an outline of the process employed by U.S. Administrators. Some phases, such as the computer analysis, are being programmed, but will require accumulation of data over a number of years for effective application. From the standpoint of quality assurance, preauthorization review of treatment plans is the most important phase. If administered properly, preauthorization review discourages and eliminates not only nonessential treatment but also treatment that is actually or potentially harmful to patients. Equally important, it suggests additional services that improve the quality of care, even though more costly to the program. Thus, the overall effect of the preauthorization process has been to "save" almost the entire cost of administering the programs by eliminating payment for nonessential treatment. In 1 1/2 years, \$643,548 or 6 per cent of dental claims paid was saved. There is nonetheless a significant increase in the cost of treatment for many individuals. Overall, approximately 93 per cent of administrative changes as measured by dollars in treatment plans reduce expenditures, while 7 per cent of dollar changes are increases suggested by the dental consultant (Table 2). Unless the process demonstrated both increases and reductions in costs, cost containment rather than quality assurance would appear to be the primary motive.

There is no reason to be apologetic about cost containment since this goal is based on acknowledged abuse of insurance and prepaid health care financing. But the concern of consultants should be necessary and effective treatment, whichever way the dollars fall.

If emphasis is placed on abuse, acknowledgment should be given to the fact that 71 per cent of all treatment plans are authorized without change because they are diagnostically accurate and rational, within the limits of our knowledge and perception (Table 3).

Fourteen per cent of deletions are for excessive gingival curettage or scaling—what used to be known as prophylaxis. Overcharges to the program produce 13 per cent of deletions, consisting of such items as charging for cement bases under fillings or for pulp caps that could not be justified on the basis of radiographic evidence. The largest number of treatment plan deletions are for crowns and fixed bridges, which together account for nearly 18 per cent of all deletions (Table 4). Needless to say, crowns and fixed bridges are among the more costly services, and the deletion of these functionally unnecessary services accounts for the major savings to the program.

Major additions to treatment plans consist of fillings for cavities that have not been diagnosed and for additional diagnostic X-rays to assure a thorough examination, 34.5 per cent and 31.2 per cent, respectively. Consultant recommendation of crowns and fixed bridges represents over 7.3 per cent of additions. There also is no reluctance to recommend either endodontic therapy or extraction, depending on the essentiality of the teeth involved. In a small number of cases dentures rather than extensive treatment of extremely doubtful prognosis may be recommended (Table 5).

Of the more than 1000 cases involving gross misdiagno-

TABLE 2—Fiscal Effects of the Indirect Dental Audit of Treatment Plans

January, 1973 to July, 1974		
A. "Savings"		
Expenditures	(claims paid)	\$10,175,307
Deletions	\$692,871	
Additions	-49,323	
Net savings	\$643,548	= 6% of claims paid
B. Dollar changes		
Deletions	\$692,871	93%
Additions	49,323	7%
Total changes	\$742,194	100%

TABLE 3—Preauthorization Review of Treatment Plans Utilizing Dental Radiographs

Preauthorization Review of Treatment Plans*	Evaluators		Dental Consultant		Total	
	No	%	No	%	No	%
Approved	7,436	67	407	20	7,843	71
Changed	1,638	15	1,626	80	3,264	29
Referred to Dental Consultant	2,033	18				
Total	11,107	100	2,033	100	11,107	100

* Based on a 2-month sample.

sis, missed caries (cavities) had the largest incidence at nearly 50 per cent, followed by radiographically undetectable interproximal caries, 12.6 per cent, and unnecessary extractions and other surgery, 10.8 per cent. A not insignificant number of cases contain missed pathology of a more serious nature, such as periapical radiolucencies indicating possible abscesses, cysts, and other conditions. Perhaps the worst type of misdiagnosis is unnecessary conversion of a patient to a state of complete edentulism in one or both jaws. The number of individuals involved was not large due to the relative newness of our program. Nonetheless, 78 full dentures for nearly as many individuals were diagnosed which in the opinion of the dental consultant were not necessary (Table 6).

Refusal to authorize payment for such services or recommendation of the addition of others does not necessarily assure that the dentist and patient will respond accordingly. In some instances, preauthorization occurred after the fact. In other words, treatment was already performed. Also, there is no way to prevent a patient from having unnecessary extractions if the patient is willing to pay the fee and a willing dentist is found. Unfortunately, data are not available on the degree of compliance with administrative intervention, but our overall impression is that we are successful enough to justify the process and suffer the censure by both dentists and patients that sometimes follows. On the other hand, nothing is more gratifying than to have a diagnosis changed and accepted by both dentist

TABLE 4—Treatment Plan Changes: Deletions

Type of Change (Deletion)	No.*	%
Gingival curettage or scaling	646	14.2
Overcharges	596	13.1
Porcelain/metal crown or pontic to gold/plastic	504	11.1
Crowns	407	9.0
Fixed bridges	391	8.6
Delay "instant" crown and bridge after RCT	360	7.9
General anesthesia—IV sedation (227 + 6)	234	5.1
Interproximal cavities not evident in X-rays	144	3.2
Extractions	123	2.7
Pulp cap	93	2.0
Periodontal surgery	88	1.9
Plaque control	64	1.4
Endodontic therapy	57	1.3
Full lower denture	54	1.2
Partial lower denture	43	0.9
Occlusal adjustment	38	0.8
Spacer	37	0.8
Lingual restoration in amalgam, not plastic	33	0.7
Unilateral single-tooth removable bridge	32	0.7
Amalgam/plastic buildup	30	0.7
Partial upper denture	25	0.6
Full upper denture	24	0.5
Staplate	20	0.4
Post on crowns	18	0.4
Study models	12	0.3
Chrome partial changed to all acrylic base partial	9	0.1
Miscellaneous	462	10.2
Total	4,544	99.8†

* Each listing represents the number of cases or treatment plans in which the change was made, not the actual number of fillings, crowns, scaling, etc.

† Less than 100 per cent as a result of rounding.

and patient, whereby total edentulism is avoided. To prevent unnecessary crippling is one of the major goals of quality assurance, and the patient with a full lower denture, especially, is a dental cripple no matter how well he adjusts.

Postoperative disapproval means services that have been completed for which payment is denied. Our experience with postoperative radiographs has been limited by professional resistance. If nearly 100 per cent review of the treatment plans over \$100 for preauthorization has been performed, the number of post-treatment reviews is much smaller, perhaps 10 per cent. Nonetheless, our observations are disturbing, considering that the cases represented are from dentists who have cooperated with the system. It is not unrealistic to postulate that a considerably larger number of defective cases would be detected if postoperative auditing was done on a major routine basis.

The 34.4 per cent figure presented for diagnostically unacceptable radiographs is an understatement (Table 7). If the recommended criteria of acceptability of dental radiographs were applied more strictly, 50 per cent or more of all dental radiographs would be rejected. Diagnostic

radiographs are taken far too frequently and in excessive numbers by most practitioners. The abuse is further compounded by the worthlessness of so many of the films. It is in the arena of indiscriminately applied preoperative diagnostic radiography that concern over radiation hazard is most warranted, to say nothing of the wastage of hundreds of thousands of dollars for unnecessary and incompetent exposure of patients.

The major findings of postoperative review other than radiographs are for missed caries that if untreated are likely to result in early pulpal infection, improperly performed root canal therapy, defective prophylaxis, and defective crowns and bridges. In my opinion, the majority of crowns and bridges that fail in 5 years or less are due to faulty technique by dentists, in particular the failure to obtain correct impressions of the prepared tooth. It is also disturbing to note that these defective services, so obvious to our lay evaluators, had not been detected by dentists who submitted voluntarily the postoperative diagnostic X-rays. Either they cannot read the X-rays or they believe we cannot. Or perhaps they believe that the only purpose of postoperative films is to detect fraud and that so long as there is evidence of a filling or an appliance they have discharged their responsibility. We do not know how widespread fraudulent claims are. More common is overdiagnosis, which is not necessarily the same as fraud, and incompetence itself.

Mention was made previously of the large number of overcharges. In addition to charges for cement bases and pulp caps, amalgam buildups and gingivectomies for crown preparations represent frequent abuses. Many extractions are overcharged to programs. It is not uncommon for simple

TABLE 5—Treatment Plan Changes: Recommendations (Additions)

Type of Change	No.	%
Fillings	565	34.5
Diagnostic X-rays	512	31.2
Partial denture instead of fixed bridge	128	7.8
Extraction	70	4.3
Endodontic therapy	68	4.1
Crown	66	4.0
Fixed bridge	54	3.3
Bilateral spacer instead of two unilaterals	33	2.0
Amalgam filling instead of inlay/onlay	26	1.6
Fixed spacer	20	1.2
Additional curettage or subgingival scaling	12	0.7
Prophylaxis	9	0.5
Study models	9	0.5
Full upper denture	5	0.3
Full lower denture	5	0.3
Miscellaneous	57	3.5
Total	1,639	99.8†

* Each figure represents the number of cases or treatment plans in which the change was made, not the actual number of fillings, crowns, scalings, etc.

† Less than 100 per cent as a result of rounding.

TABLE 6—Gross Misdiagnosis

	No.	%
Missed cavities	565	49.5
Diagnosed interproximal cavities not evident in X-rays	144	12.6
Unnecessary extractions and other surgery	123	10.8
Extraction indicated due to pathology and/or nonessentiality of diseased tooth	70	6.1
Root canal therapy indicated	68	6.0
Missed pathology, other than specified conditions	93	8.2
Full lower denture not necessary, teeth can be saved	54	4.7
Full upper denture not necessary, teeth can be saved	24	2.1
Total	1,141	100.0

(routine) extractions to be listed at a higher fee as "surgical" extractions, especially by oral surgeons, who are also prone to classify unerupted maxillary third molars as "bony impactions" for the higher fee. There is also gross abuse (overuse) of general anesthesia for procedures that do not warrant its administration.

Role of Lay Evaluators

Throughout this discussion reference has been made to the role of the dental consultant performing the dental audit. Although the entire review process must be under the direction of dentists who are responsible for the final decisions, it would be a waste of time for the process to be performed primarily by professional staff. U.S. Administrators' lay evaluators, persons experienced in dental assisting and as dental X-ray technicians, perform the basic review. It is they who evaluate all of the treatment plans, making minor modifications on the basis of criteria established by the dental director and referring larger problems to the consultants. Even in the cases referred, the lay evaluators have more or less made the decision, though it must be sanctified by a dentist. Thus, of all the cases referred by the lay evaluators for further dentist review, only 20 per cent of their "suggestions" for deletions or changes are overruled. In other words, 80 per cent of the time the lay evaluators are correct and the action of the dental consultant is to finalize the decision (Table 3).

Their referrals contain suggestions for both deletions and additions. Not only do they pick up missed cavities or nonexistent (overdiagnosed) lesions, but also gross pathological bony conditions. With experience in the process, they learn to look for improvements in the treatment plans, such as indications for additional abutment support in extensive fixed prostheses or for root canal therapy instead of extractions.

Thus, the function of the lay evaluator is to review the treatment not only for adherence to covered benefits but also for diagnostic adequacy. As we move from relatively small programs with limited populations to national health insurance covering everyone, it is obvious that implementa-

tion of an effective PSRO system will necessitate reliance on lay evaluators. Future demands will require special training programs for both evaluators and dental consultants if the system is to be applied effectively and intelligently.

Appeal Mechanisms

If this paper appears to suggest total arbitrariness on the part of the administrative organization, such is not the case. It is essential to establish mechanisms for appeal that allow the attending dentist to challenge decisions based on only indirect review. Most often, when a dentist submits additional information by telephone or by letter to support a treatment plan that was changed, he will have his way. One must recognize that there are conditions present in the mouth that the X-rays do not reveal and that can justify what was recommended. In general, however, relatively few appeals are made, whether out of recognition that the treatment prescribed really was not necessary or out of resignation to or frustration with the system.

If disputes cannot be resolved directly with the dental consultant, then the case should be referred to the peer review committees of the dental association. So long as there are realistic criteria and standards acceptable both to attending dentists and to administrative agencies, the majority of disputed cases can be settled successfully.

Conclusion

In view of our observation of unnecessary treatment and excessive charges, a quality assurance program in dentistry cannot fail to contain costs, if diligently and reasonably applied. But this approach to cost containment should not be confused with overall expenditures of a dental care program. If all—or most—of the population that needs dental care were to obtain it at the appropriate time in the appropriate amount, gross expenditures would more than double. Thus, our interest in cost containment is not to save

TABLE 7—Postoperative Disapprovals—Payment Denied unless Condition Corrected

Type of Service/Treatment	No.*	%
Diagnostically unacceptable radiographs	174	34.4
Missed cavities (54) and other pathology (39)	93	18.4
Root canal filling incomplete—allow Sargent Method Payment (approx. 1/3)	41	8.1
Grossly defective root canal filling	34	6.7
Defective prophylaxis/scaling	29	5.7
Defective crowns	28	5.5
Defective fixed bridges	23	4.5
Defective fillings	17	3.3
Treatment not completed—active pathological conditions such as large caries present	8	1.6
Miscellaneous	59	11.7
Total	506	99.9†

* Each listing represents the number of cases or treatment plans in which the change was made, not the actual number of fillings, crowns, etc.

† Less than 100 per cent as a result of rounding.

money, not to spend less on dental care, but to ensure that the money spent is spread as far as possible for everyone. We need to spend more, not less money on dental care. That is the true meaning of PSROs in dentistry, to assure the quality of care for the entire population.

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CHILD ABUSE CONFERENCE SCHEDULED

A National Conference on Child Abuse and Neglect, cosponsored by the Regional Institute of Social Welfare Research and the National Center for Child Abuse and Neglect, is to be held in Atlanta, Georgia, on January 4-7, 1976.

The purpose of this conference is to bring together notable authorities to examine the critical issues facing all professionals who are involved with children. There are 20 different workshops dealing with such topics as Parents Anonymous, child advocacy, emotional abuse, cooperative community services, clinical diagnoses, multidisciplinary and parental training, legal definition of certain issues, etc.

If interested in receiving more information about this program, please call or write: Joan C. Adams, Regional Institute of Social Welfare Research, University of Georgia, Tucker Hall, Athens, GA 30602. (404) 542-7614.