Prognosis Versus Actual Outcome: A Long-Term Survey of 100 Treated Periodontal Patients Under Maintenance Care*

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ONE HUNDRED TREATED PERIODONTAL PATIENTS under maintenance care were evaluated for 5 years, and 39 of these patients were followed for 8 years to determine the accuracy of assigned prognoses based on commonly taught clinical criteria. The results suggested that this population reflected many of the same characteristics seen in well-maintained patients. The ultimate fate of teeth initially labeled as hopeless varied substantially, and even though the average prognosis of the teeth studied at each interval remained relatively stable over time, individual prognosis categories and individual tooth prognoses changed frequently. Possible reasons for these shifts are discussed. In conclusion, it was found that projections were ineffective in predicting any prognosis other than good, and that prognoses tended to be more accurate for single rooted teeth than for multi-rooted teeth. Further evaluation of the data is needed to determine how each of the prognostic indicators relate to the success or failure of our projection. *J Periodontol 1991; 62:51–58.*

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Prognosis is a forecast. It is developed as a prediction of the probable course of a disease.[1] The ability to prognosticate accurately for the entire dentition or an individual tooth is important for many reasons. First, the patient uses this information to determine whether treatment seems worthwhile. Second, insurance companies state that benefits will be paid only for those services which have a reasonably favorable prognosis. Finally, the periodontist uses it as one of the factors to determine which treatment modality would be most effective and to develop restorative recommendations. The assignment of a prognosis to a particular tooth, one of the most important tasks that any periodontist is asked to do, becomes critical information in developing a restorative treatment plan. Often, an important part of the periodontist's clinical reputation is based on how often his prognosis is correct.

As important as the development of an accurate prognosis is, one would assume that there are universal and agreed upon guidelines to follow. Yet, when one asks a practitioner how he assigns a prognosis, one typically gets a vague answer based more on hunches and clinical intuition rather than on concrete guidelines. Guidelines are available, however, and almost all periodontal textbooks have their perfunctory chapter on prognosis. In general, they agree upon a number of factors that are important in assigning a prognosis (Table 1). The bibliography of most of these chapters have references predominately from the 1950s and most of the papers cited are empirical and not scientific studies. The development of a prognosis is further complicated by the fact that even though the list in Table 1 is rather objective, the individual therapist will weigh each one of these

Table 1: Factors to Consider When Assigning a Prognosis

Individual Tooth Prognosis	Overall Prognosis
Percentage of bone loss	Age
Probing depth	Medical status
Distribution and type of bone loss	Individual tooth prognosis
Presence and severity of furcations	Rate of progression
Mobility	Patient cooperation
Crown to root ratio	Economic considerations
Root form	Knowledge and ability of dentist
Pulpal involvement	Etiologic factors
Caries	Oral habits and compulsions
Tooth position and occlusal relationship	
Strategic value	
Therapist knowledge and skill	

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factors differently depending on his knowledge, judgment, ability, and past experiences.

The development of prognosis based primarily on anatomical factors is questionable in light of new understanding that periodontal diseases may occur and progress on a more random basis depending on disease type and microbes,[2,3] rather than on factors such as root proximities. These studies stress that periodontal diseases are site-specific infections that depend much more on pathogens, protective species, and host resistance than they do on the prototypical list for determining prognosis.

In the last several years, some studies have addressed prognosis. Hirschfeld and Wasserman, in their classic 1978 study,[4] pointed out that prognoses of questionable teeth depend on the general trend of the case as well as on the extent and configuration of periodontal destruction at the time of the examination. Following that study, a series of papers[5-7] evaluated tooth loss based on prognosis during maintenance care. Becker, Berg, and Becker[8,9] addressed the outcome of initial prognosis as it related to treated periodontal patients with and without maintenance. Becker et al. stated that, while making a definitive prognosis for an individual tooth was a difficult task, they found, in the unmaintained population, a higher incidence of tooth loss with both good and questionable prognoses. They also emphasized the difficulty in determining hopeless teeth, by pointing out that many teeth initially labeled as hopeless, remained at the end of 5 years. Recently deVore et al.[10] demonstrated that "hopeless" teeth can be retained for many years without adversely affecting adjacent teeth. Other researchers who studied teeth with furcation involvements agreed that furcation involvement by itself should not condemn a tooth to an unfavorable prognosis.[4,11-13] Although prognosis was mentioned in these studies, the primary emphasis was placed on tooth loss as it related to maintenance care.

The purpose of this study is to determine if it is possible to predict the long-term prognosis of individual teeth based on commonly taught clinical criteria listed in Table 1.

MATERIALS AND METHODS

Study Population

One hundred consecutive patients with at least 5 years of maintenance care were selected from the author's appointment book over a 2-month period. All had been diagnosed initially as having chronic generalized moderate to severe adult periodontitis and were treated by the author. The majority of these patients had been under a maintenance regime of 3-month intervals. Some maintenance visits were alternated with their general dentist's office. The patient population was predominately white from middle economic levels. There were 65 women and 35 men and the severity of disease at initial exam was approximately the same. The average age of the patient at initial examination was 46 years, with a range between 22 and 71 years (Table 2). The length of maintenance care ranged from 5 to 11 years with a mean of 7 years (Table 3).

Table 2: Distribution of Sample by Age at Initial Examination

Age Range	Number of Patients
20–29	5
30–39	22
40–49	33
50–59	32
60–69	7
70–79	1
Total	100

Table 3: Distribution of Sample by Years of Maintenance

Years of Maintenance	Number of Patients	Percent
5	25	100
6	20	75
7	16	55
8	17	39
9	10	22
10	10	12
11	2	2
Total	100	

Therapy

All patients followed a similar course of treatment. Periodontal conditions were charted on anatomical charts initially and at 1 month to 6 weeks following active therapy. Data included pocket depth, mobility, furcation involvement, mucogingival problems, occlusal interferences, and any other descriptive notes of interest. At each maintenance visit, significant mobilities were charted along with any pocket depths greater than or equal to 5 mm and bleeding on probing and/or purulence was noted.

A medical evaluation was made at initial examination; the medical history updated at each recall. Oral hygiene levels were evaluated during the initial therapy, post surgically, and at each recall. An approximation of hygiene was classified as good, fair, or poor.

The initial examination was usually followed by scaling and root planing performed in one half of the mouth at a time, generally under a local anesthetic. Oral hygiene instructions were given at both scaling visits and at a separate oral hygiene instructional appointment. Occlusal adjustment by selective grinding was, in most cases, limited to the removal of fremitus. Caries control and definitive restorative dentistry other than final crown and bridgework were accomplished when possible. Final crowns and bridges were deferred until all periodontal therapy was completed. Biteguards were made or suggested for any patients with parafunctional habits.

Oral hygiene instruction included the Bass technique with a soft-bristled brush and flossing instructions. A variety of oral hygiene aids were dispensed and used depending on the patients' individual needs.

Following the initial preparation, a periodontal reevaluation took place and some surgery was found to be indicated in all of the patients in this study. The surgery was generally flap-approach osseous surgery, and pocket elimination with osseous resection was attempted when possible. In anterior regions, when esthetics was a concern, open or closed root planing and scaling was accomplished. When pocket elimination was not deemed feasible due to severe osseous destruction, the defects were treated with open flap debridement and rarely with osseous grafts. During surgery, dictation was made, describing the topography of defects, furcation involvements, and any other factor thought to be significant in the future outcome of the case. Patients were seen 1 week following surgery for postoperative care and oral hygiene instructions, and in 2 weeks from that visit for further evaluation and postoperative care. Approximately 1 month following surgery, the patients received a prophylaxis with light scaling and a postsurgical reevaluation of pocket depth, tissue maturation, and home care. Based on this information, the patient was assigned a maintenance interval, generally from 1 to 3 months.

During these recall visits, data were collected as previously described. Scaling, root planing, and polishing of teeth was routinely accomplished. Individual radiographs were made as needed and a full mouth periapical series was made every 3 years. Minor occlusal adjustment was performed as necessary. The length for the next recall interval would be shortened or lengthened as appropriate. Many of the patients who were on alternating recall with their general dentist were seen exclusively in the periodontal office when the periodontium was deemed unstable.

During the maintenance period, when probing depth increased, patients were often treated with definitive scaling and root planing. On rare occasions, surgical intervention was justified.

Assigning Prognoses

Following the active phase of periodontal therapy and prior to placing the patient on maintenance recall, each tooth was assigned a prognosis. Prognosis was based on clinical and radiographic findings with particular weight being placed on surgical notes. Prognosis was determined as follows:

Good Prognosis: (one or more of the following) adequate periodontal support and control of the etiologic factors to assure the tooth would be relatively easy to maintain, assuming proper maintenance.

Fair Prognosis: (one or more of the following) attachment loss to the point that the tooth could not be considered to have a good prognosis and/or Class I furcation involvement. The location and depth of the furcation would allow proper maintenance with good patient compliance.

Poor Prognosis: (one or more of the following) moderate attachment loss with Class I and/or Class II furcations. The location and depth of the furcations would allow proper maintenance, but with difficulty.

Questionable Prognosis: (one or more of the following) severe attachment loss resulting in a poor crown-to-root ratio. Poor root form. Class II furcations not easily accessible to maintenance care or Class III furcations. 2+ mobility or greater. Significant root proximity.

Hopeless Prognosis: Inadequate attachment to maintain the tooth in health, comfort, and function. Extraction was performed or suggested.

If there was a question as to which prognosis a tooth should be given, the operator was generally optimistic and assigned the better of the two prognoses.

Teeth deemed hopeless at the initial examination and extracted during the initial active periodontal therapy were not included in the study. The cause of tooth loss was recorded when possible.

Table 4: The Average Prognoses of the Teeth Studied at Each Interval (%)

Interval	Good	Fair	Poor	Questionable	Hopeless (Retained)	Hopeless (Extracted)
Initial (100 patients 2,484 teeth)	71.2	20.2	6.3	1.4	0.9	-0-
5 Years (100 patients 2,475 teeth)	74.2	19.6	4.6	0.3	-0-	1.4
8 Years (39 patients 966 teeth)	73.0	19.6	5.6	0.2	-0-	1.7

Determining the Actual Outcome

Teeth lost during the initial active phase of periodontal therapy were documented, along with the prognosis assigned to each tooth following active therapy and prior to maintenance care. Prognosis and tooth loss was also recorded at 5 and 8 years into maintenance care. The same set of criteria used for assigning prognosis initially was used at 5 and 8 years. These assessments were blind to previously assigned prognoses. Subsequent prognoses were determined by charted clinical data accumulated between initial to 5 years and 5 to 8 years, rather than on information recorded only at the 5, and 8 year examination. A more accurate projection of prognosis was intended by this method. The initial, 5, and 8 year prognoses were compared.

RESULTS

The average prognoses of the teeth studied at each interval changed very little from initial to 5 to 8 years (Table 4). Each prognosis category remained relatively stable over time even though the number of teeth and patients varied. The initial group had 0.9% hopeless teeth. These were teeth the patient elected to maintain, against the advice of the clinician. The 5 and 8 year groups have a column representing extracted teeth, rather than hopeless teeth, because in every instance, the patient elected to have any hopeless teeth extracted when they were deemed hopeless during maintenance care.

There were a total of 2,484 teeth in the study. Fifty-one

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of these were lost, giving a 2.1% tooth loss for the population. The number and location of teeth lost during maintenance can be seen in Figure 1.

While the average prognoses of the teeth studied at each interval remained relatively stable, the prognosis categories themselves changed frequently (Table 5). When comparing the prognosis category from initial to 5 years, 5 to 8 years, and initial to 8 years, it was obvious that only the good prognosis category stayed relatively stable over time. The fair and poor categories improved. The questionable category generally got better, but a significant number of teeth were lost. No teeth remained with a questionable prognosis. Most hopeless teeth were lost, but some were retained.

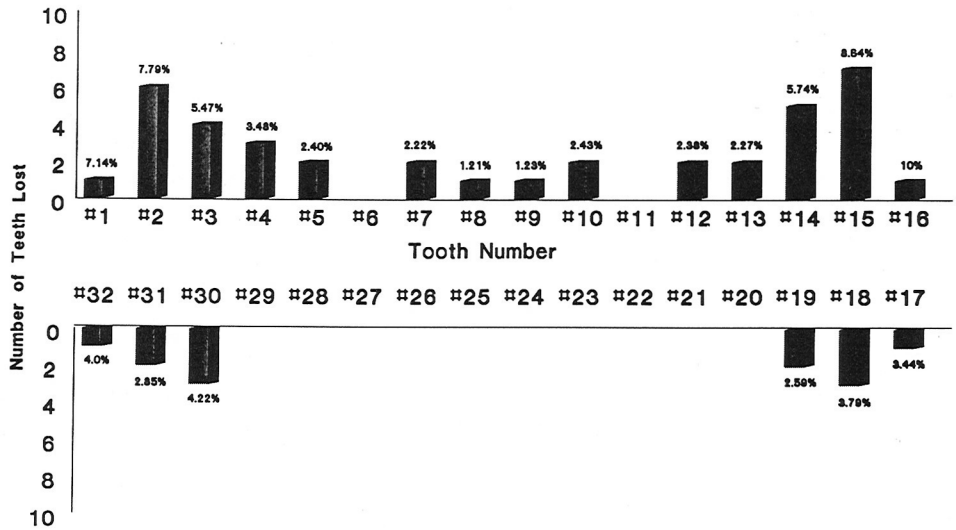

Figure 1: Number and location of teeth lost (N = 51).

Table 5: Change in Individual Tooth Prognosis Categories for the Overall Population

	Total Population (N=100) Initial to 5 years		8 Year Maintenance Group (N=39) Comparing 5 to 8 Years		8 Year Maintenance Group (N=39) Comparing Initial to 8 Years	
Good	to Good	84.6%	Good	90.3%	Good	84.7%
(N=1776)	to Fair	13.2%	(N=705)	7.9%	(N=654)	10.7%
	to Poor	1.6%		1.3%		3.5%
	to Questionable	0.3%		0%		0.2%
	to Hopeless	0.2%		0.4%		0.9%
Fair	to Good	55.3%		28.9%		55.4%
(N=497)	to Fair	35.6%	Fair	57.9%	Fair	32.0%
	to Poor	7.4%	(N=159)	11.9%	(N=175)	11.4%
	to Questionable	0.4%		0%		0%
	to Hopeless	1.2%		1.3%		1.1%
Poor	to Good	35.2%		5.0%		45.5%
(N=153)	to Fair	40.5%		20.0%		40.5%
	to Poor	18.9%	Poor	52.5%	Poor	7.6%
	to Questionable	0%	(N=40)	5.0%	(N=79)	1.3%
	to Hopeless	5.2%		17.5%		5.1%
Questionable	to Good	18.9%		0%		40.0%
(N=37)	to Fair	32.4%		0%		20.0%
	to Poor	29.7%		33.3%		13.3%
	to Questionable	0%	Questionable	0%	Questionable	0%
	to Hopeless	18.9%	(N=3)	66.6%	(N=15)	26.6%
Hopeless	to Good	19.0%		0%		12.5%
(N=21)	to Fair	9.5%		0%		12.5%
	to Poor	19.0%		0%		0%
	to Questionable	0%		0%		0%
	to Hopeless	52.3%	Hopeless (N=0)	0%	Hopeless (N=8)	75.0%

Table 6: Change in Individual Tooth Prognosis Categories From Initial to 5 Years Comparing the Two Sub-Groups That Make Up the Total Population

	Population Under Observation for 5 Years (N=61) Comparing Initial to 5 Years		Population Under Observation for at Least 8 Years (N=39) Comparing Initial to 5 Years	
Good (N=1128)	to Good	82.9%	Good (N=640)	87.6%
	to Fair	14.7%		10.6%
	to Poor	1.9%		1.2%
	to Questionable	0.4%		0.3%
	to Hopeless	0.2%		0.2%
Fair (N=315)	to Good	50.5%	Fair (N=182)	63.7%
	to Fair	40.6%		26.9%
	to Poor	6.7%		8.8%
	to Questionable	0.3%		0.5%
	to Hopeless	1.9%		0%
Poor (N=73)	to Good	32.8%	Poor (N=80)	37.5%
	to Fair	31.5%		48.7%
	to Poor	27.4%		11.2%
	to Questionable	0%		0%
	to Hopeless	8.2%		2.5%
Questionable (N=21)	to Good	9.5%	Questionable (N=16)	31.2%
	to Fair	38.0%		25.0%
	to Poor	33.3%		25.0%
	to Questionable	0%		0%
	to Hopeless	19.0%		18.7%
Hopeless (N=13)	to Good	30.8%	Hopeless (N=8)	0%
	to Fair	0%		25.0%
	to Poor	7.7%		37.5%
	to Questionable	0%		0%
	to Hopeless	61.5%		37.5%

Only 39% of the study population was seen for 8 years. Therefore, tables reporting 5 to 8 year and initial to 8 year data may be misleading, since these tables represent different patients than those seen only for the initial to 5-year period. To determine if this fact is significant, the initial to 5-year patients were subclassified into two groups. One group consisted of the 39 patients who were followed for 8 years and the other group included the 61 patients that were followed for 5 years. (Table 6). This table demonstrates that although there are some differences, especially in the hopeless category, the prognoses trends of the two groups closely approximated each other during the initial to 5-year period.

Projected prognosis versus actual outcome as it relates to individual tooth type can be seen in Figure 2. This comparison relates initial prognoses to subsequent prognoses made over the longest available time interval, which varied from 5 to 8 years. Prognoses on single-rooted teeth were accurate more often than prognoses on multi-rooted teeth. Roughly 50% of the teeth responded as projected. Maxillary and mandibular third molars, with the exception of the mandibular right third molar, tended to maintain worse than projected. Mandibular molars and the mandibular right second premolar also tended to maintain worse than expected. The maxillary cuspids and mandibular teeth from the left second bicuspid to the right first bicuspid maintained better than initially projected. The mandibular right third molar also outperformed its initial prognosis.

It was demonstrated in Table 5 that most good prognoses remained good. A more sensitive test, therefore, to demonstrate the ability to project individual tooth prognosis would be to evaluate the study group excluding all good prognoses. This can be seen in Figure 3. It can be seen from this histogram that we are less precise at projecting prognoses of individual teeth when they are assigned an initial prognosis other than good. Large changes in projected prognosis versus actual outcome are seen, but the same teeth mentioned above that tended to do better or worse than expected exhibited those same tendencies, even in this group. There were some additions to the list, however, with the maxillary left lateral incisor performing worse than expected and the maxillary right central incisor performing better than expected.

DISCUSSION

It is not the purpose of this paper to evaluate the effectiveness of periodontal therapy and maintenance care in private practice. Other studies have demonstrated that extremely well.[4-9,14,16] It is apparent that periodontal therapy is effective at maintaining teeth for long periods of time, including teeth with furcation involvements.[4,5,11-13,15] Certain comparisons to other longitudinal studies might be helpful in better delineating the study population and, therefore, make more meaningful extrapolations to other groups.

In evaluating the data from this paper, a strong case can be made that the study group has almost all of the characteristics of Hirschfeld and Wasserman's Well-Maintained group.[4] Tooth loss in that group was 2.6%[4] which was very close to the 2.1% tooth loss in this study. Only one patient lost more than three teeth, indicating that 99% of the patients in this study would fall into the Well-Maintained group. Tooth loss in this study would have been reduced if teeth lost for restorative reasons and teeth initially suggested for extraction and later lost were factored out. This would provide a more accurate representation of teeth lost for periodontal reasons which would be 42 teeth lost or 1.7%. Bilateral symmetry of tooth loss was noted in this study as it was in Hirschfeld and Wasserman's,[4] but fewer mandibular teeth were lost. No maxillary cuspids or mandibular bicuspids, cuspids, or incisors were lost. Maxillary second molars were lost more frequently than any other tooth (Figure 1). Therefore, any extrapolation from this study group to other groups would more likely hold true in a Well-Maintained group than it would in a Downhill or Extreme Downhill group.

We lost 26.6% of the questionable teeth in this study and this closely compares with the 27.7% of questionable teeth lost in McFall's[5] Well-Maintained group and the 25.8% of questionable teeth lost in the Becker et al. 1984 study.[9] One should be cautious, however, when comparing the present study to others. Both Hirschfeld and Wasserman[4] and Becker et al.[9] have published their criteria for ques-

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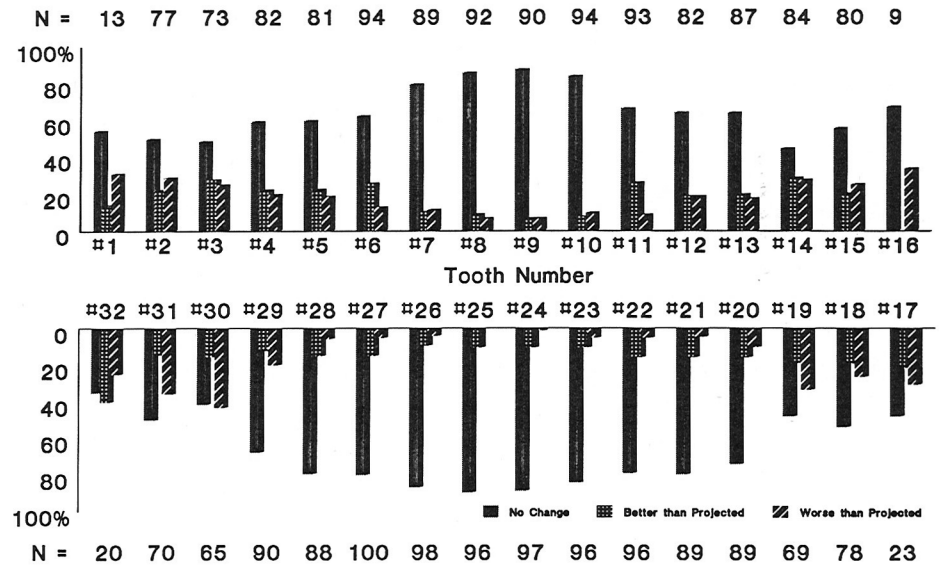

Figure 2: Prognosis versus outcome of individual teeth.

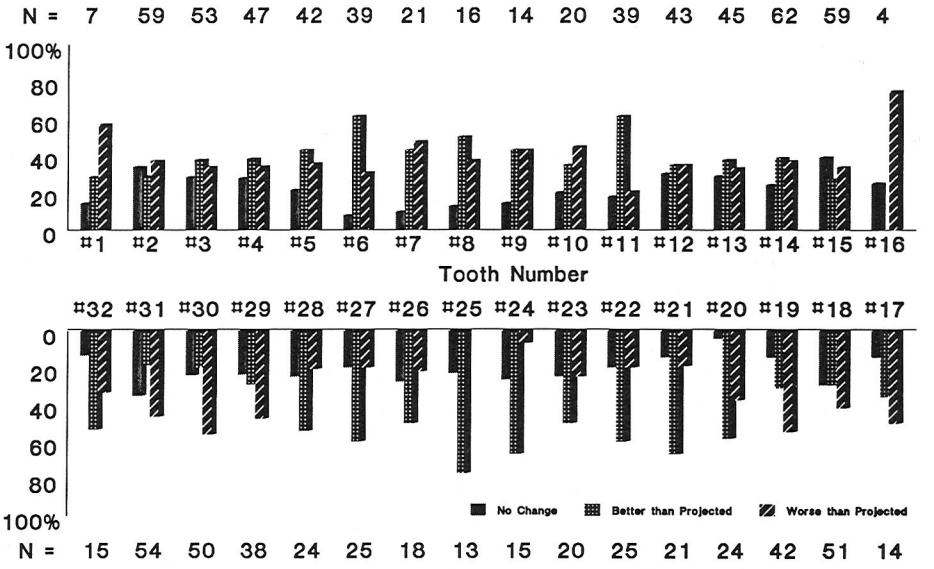

Figure 3: Prognosis versus outcome of individual teeth, excluding teeth with initial good prognosis.

tionable and hopeless teeth. The prognosis categories in this study are in agreement with their criteria, with the following exceptions: Hirschfeld and Wasserman stated that a furcation involvement (among other things) would render a tooth questionable. Prognosis in this study was not downgraded immediately to questionable due to furca involvement unless it was a Class III furcation or a deep Class II furca with difficult access for maintenance care. This paper's questionable prognosis category was in basic agreement with Becker et al.'s questionable category, but the hopeless prognosis was somewhat more lenient. A Class III furcation in this study did not necessarily make it hopeless, as it did in Becker's.

There are other major differences between this study and many others that mention prognosis as part of their paper. Conclusions were drawn in most other studies based on an initial and final examination or on data drawn from two distinct points in time. Prognosis development utilized all data collected at each recall prior to the 5 and/or 8 year interval. This method promoted a much more dynamic decision-making process, mimicking that used in clinical practice. Prognoses were more accurately projected from 5 to 8 years than from initial to 5 years, perhaps because we were using this dynamic decision-making process, which provided us with more data for projections at 5 and 8 years than we had initially.

There are a number of potential weaknesses in this study. The information presented represents the experiences of only

one periodontist. Although the assignments of prognoses at the 5 and 8 year intervals were blind to previous assessments, one cannot rule out that personal biases regarding the patients' status may have influenced the assignment of prognoses. While a concerted effort was made to follow the same criteria to assign prognoses at initial, 5, and 8 years, it is reasonable to assume that certain criteria were viewed differently now than they were years ago. Although this assumption has the potential to distort the data, it should be pointed out that this type of decision-making process mimics that routinely used in clinical practice. Another potential problem is that while the baseline severity and scope of treatment were relatively the same for the entire population, there was a wide age range and the effects of gender, if any, are unknown.

The selection of consecutive patients from recall over a 2-month period may have resulted in a population healthier than normal. These patients were fairly compliant with maintenance care, but most had less than ideal home care. Again, this study was in agreement with Hirschfeld and Wasserman's statement that the Well-Maintained group kept their teeth despite gingival inflammation, mobility, and residual pocket depth.[4] In general, the present study is not in agreement with statements such as "when the performance of home care is acceptable . . . the prognosis is better . . . ",[1] or "the most important factor in the prognosis for the dentition affected by periodontal disease is the degree of oral cleanliness that the patient can and will maintain after therapy."[17] The lack of optimal home care in patients in this study was overcome, apparently, by the frequency of maintenance therapy.[19]

This study supports, with some notable exceptions, the statement that prognosis depends on the general trend of the case.[4] In some patients there did not appear to be a trend. One patient, for example, had a tooth with a poor prognosis which was eventually lost, a tooth that initially had a good prognosis that was lost, and a tooth with a questionable prognosis that improved to a good prognosis. This, perhaps, can be taken as evidence of Haffajee's site-specific disease mechanism, in which the disease process in one area may be completely different and unrelated to another area.[3]

The ultimate fate of teeth initially labeled as hopeless varied a great deal. There were 14 teeth initially labeled as hopeless, but not extracted due to the patients' desire to maintain them. Eight of these teeth were eventually extracted and seven of them seemed to have no adverse effect on the adjacent teeth prior to their extraction. This observation, in agreement with deVore et al.'s recent paper,[10] makes one question the old tenet that it may be important to sacrifice certain teeth or individual roots of multi-rooted teeth in order to enhance the prognosis of the periodontium.[22] There were six other initially labeled hopeless teeth that the patients refused to have extracted and all were found to be stable and functional at 5 years. In fact, 25% of all teeth initially labeled as hopeless were retained and ultimately reclassified as having a good or fair prognosis. These percentages are close to those in the Becker et al. 1984 paper[9] and this study supports their statement that determining prognosis for a hopeless tooth is a difficult task and many teeth remain in function for long periods of time.

When evaluating the average prognoses of the teeth studied at each interval (Table 4), it appears that the prognosis of the group and the individual prognosis categories remain stable. On closer examination, however, the prognosis of the individual teeth shift frequently, (Figures 2 and 3) and it is not uncommon for the prognosis categories themselves to change (Table 5).

Table 5 points out that prognoses categories shift frequently from one to another. Of all the different classifications, the good prognosis category is the only group in which we were consistently correct in our projections. We were not nearly as successful in predicting fair prognoses. If a category shift is made, it most frequently changes to a good prognosis, perhaps because the circumstances that lead one to label a tooth with a fair prognosis are not so overwhelming that maintenance care cannot overcome them. This might not be the case in an unmaintained group. The poor prognosis category also typically improved over what one initially expected, probably for the same reason. The problems associated with the teeth assigned the poor prognosis were too severe for maintenance to completely overcome and, therefore, they ended up evenly divided between good and fair. A questionable tooth in this study never retained a questionable prognosis; the prognosis either improved or the tooth was lost.

Table 6 was developed from a concern that the data from Table 5 might be misleading because only 39% of the study population was seen for 8 years. Although this table demonstrates that there are some differences, it can be seen that the prognosis trends of the two sub-groups closely approximate each other during the initial to 5-year period. One might speculate that these two groups would continue to mirror each other, and comparisons of the initial to 5 year, 5 to 8 year, and initial to 8 year data might be valid even though different patients were involved. Although these assumptions appear logical, comparisons of these two groups should be viewed cautiously.

When projected prognosis versus actual outcome on individual tooth type is evaluated, (Fig. 2) the results of the maxillary arch are almost a mirror image of the results of the mandibular arch. While there may have been some effect by the changing denominators in the study population, in general, it appears that the clinical criteria (Table 1) used to project prognoses are effective in assigning prognoses for anterior teeth, and to a lesser extent, bicuspids. These same criteria, however, do not seem to be anymore predictive than a coin toss for posterior teeth.

Figure 3 suggests that it is much more difficult to project the prognoses of individual teeth when they are other than good. In almost all instances, we were more likely to be incorrect in our projections than to be correct. Again, one

could conclude from these data that assigning individual teeth prognoses based on the criteria listed in Table 1 is less than effective.

Further work is needed to determine how each of the prognostic indicators in Table 1 relate to the success or failure of our projection. Should certain criteria be weighted more heavily than others in our projection? For example, should furcation involvement downgrade a prognosis more than root proximity? Are there other key characteristics that should be added to the list? Are there common denominators associated with teeth that change prognosis? Do teeth that serve as abutments require more rigid standards when evaluating prognosis due to increased functional demands? The answers to these and other questions will require further evaluation of the data.

It is a fact that periodontal therapy is effective. Periodontally involved teeth can be retained for years in health, comfort, and function.[4-8,14,16] If the tooth has little periodontal involvement and is initially assigned a good prognosis, then it appears that we are generally correct with our projection. When other prognosis categories are initially assigned, we find that often our projections are incorrect. Until we are better able to project prognosis, frequent periodontal maintenance and reevaluation visits are essential.

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