

Research Article

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PROGRAM EVALUATION IN OROFACIAL MYOLOGY:

Implications for Monitoring Patient Improvement, Profitability of Service and Marketing Your Practice

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INTRODUCTION

The importance of accountability has become a central theme in the medical delivery model. Hanson (1988) reports that clinical records must be complete, accurate and objective. Evidence of patient improvement is critical to the survival of rehabilitative therapies, including orofacial myofunctional treatment. Relatively few individuals have systematically assessed patient outcomes beyond the perfunctory quantification of length of stay or number of treatment sessions. And, even fewer have tied together patient outcomes with treatment charges. This article offers orofacial myologists a management tool to evaluate their programs, help define patient outcomes, gather and record data on an ongoing basis and design a personal marketing tool to enhance program development. With standardized definitions and data collection procedures, the efficacy of service and the credibility of our profession can be enhanced. Nelson (1987), in his article on research in orofacial myology, charges the therapist with the task of building research into clinical practice because of client accessibility as well as the potential to "improve clinical skills through systematic evaluation of treatment protocols" (p. 10). The same author also discusses issues related to research, including such variables as appropriate sampling procedures. The management report format eliminates this problem through inclusion of all patients in the data collection.

A retrospective analysis of 100, randomly chosen patients, over a ten year period was done in order to develop a data base for a sample management report for orofacial myology. These findings were then compared to findings published in the literature.

Program Evaluation

The Commission on Accreditation of Rehabilitation Facilities (CARF, 1976) has defined program evaluation as a "systematic procedure for determining the effectiveness and efficiency with which results following rehabilitation services are achieved by persons served" (p. 15). Statistics on services rendered are gathered on a regular and continuous basis rather than through random sampling. The goal of the program evaluation system is to improve program performance, community support for programs and allow maximum benefits to the patient.

The emphasis in program evaluation is on outcomes or results achieved, rather than the process of achieving those results. By designing specific program objectives, the degree to which all persons served achieve

those benefits can be assessed and recorded. A Management Report (see Appendix A) is an efficient way to record information gathered through the program evaluation system. The Oral Myofunctional Management Report is divided into the following areas:

Primary Measures assess relative changes in terms of percent of patients who completed the recommended program and/or attained a correct swallow, automatic swallow or tongue rest position. For Primary Measures, pre-set goals were established to help the evaluator determine whether the services being rendered were achieving the desired results. If there is a discrepancy in the goal versus the actual result, the therapist may need to alter treatment techniques, patient education strategies or motivators.

Client Descriptors define the patient population being served. This allows the provider the ability to analyze descriptive information about trends in patient profiles over time, and correlate this information with primary measures to determine interactions with treatment success; and eventually predict outcomes. Examples of frequently used patient descriptors include diagnoses, severity, complicating factors, length of treatment program and age groups served.

Amount of Progress allows for a comparison of overall patient-rated improvement with the clinician's assessment of patient improvement. Both the clinician and the patient rate progress on a 0-4 point scale (0 = no change or worse, 1 = slightly improved, 2 = moderately improved, 3 = greatly improved and 4 = completely remediated). By assessing this data, the clinician can obtain information regarding the patient's perception of his/her progress and the need for more patient education regarding the results of treatment.

Supplemental Information is any additional information or correlations that may be of interest to the clinician (e.g. noncompliance with treatment recommendations, lack of motivation, previous orthodontics or follow-up information).

Financial Information can provide data on the cost-effectiveness of services rendered. This may include average cost of service, coverage for services by specific insurance companies and profitability of the practice. Once profit margins are defined, the information gleaned from the financial section allows for the easy adjustment of fees charged for service.

Research Data Base

When initiating a Management Report format, it may be

prudent to perform a retrospective analysis of discharged patients in order to have a data base. A summary of the statistics gathered for this survey is contained in the Sample Management Report (Appendix A).

Subjects 100 subjects, 46 males and 54 females, ranging in age from 4 years to 48 years, were reviewed. Facts identifying specific patient characteristics are documented in section B, Client Descriptors.

Methods All charts were randomly selected from a ten year accumulation of discharged patient files. Each patient received an initial evaluation, a routine treatment program, final evaluation and four follow-up sessions occurring at one month, two months, six months, and one year posttreatment. Testing and treatment were completed by experienced orofacial myologists.

Research Findings

PRIMARY MEASURES

Percent of patients who completed recommended program: Goal: 95%. Eighty-eight percent of the patients reviewed completed the recommended treatment program. Of the 12 that did not complete the program, 2 individuals moved from this geographical region and 10 were judged to lack motivation and/or parental support. These findings coincide closely with those reported by Robson (1963). His study indicated that 86.2% of the subjects attended all recommended appointments. Completion of treatment may be related to patient motivation and parental support. This is documented as a separate variable in the Supplemental Information section. It became apparent after reviewing the literature that our goal of 95% on this variable was inflated and that a realistic goal would perhaps fall between 85 and 90% due to variables beyond our control such as patient mobility and lack of motivation.

Percent of patients who understood correct tongue rest position and reportedly used it at least 90% of the time one year posttreatment. Goal: 90%. Eighty-eight patients out of 100 accomplished this variable. Six percent did not achieve a correct tongue rest position and 6% of the patients did not complete the entire treatment program. The pre-set goal of 90% was actually exceeded by 3% since six of the patients reviewed did not complete the program and should not have been counted as failing to accomplish this variable.

The importance of modifying tongue and lip resting postures for cosmetic as well as orthodontic benefits is documented by Case (1988) and Lowe et al. (1985). Although the literature abounds with statements supporting the importance of tongue rest posture treatment (Pierce, 1988; Proffit, 1978; and Brader, 1972), the actual remediation rate of inappropriate tongue rest postures is not found in the literature.

Percent of patients who attained correct swallow for liquids, solids and saliva. The goal of 90% for this variable was exceeded by two percent of the patients in the sample data base. It should be noted that one patient could swallow saliva correctly, but not other substances. This patient was placed in the group that failed to retain. There is a plethora of literature on the retention rate of correct swallowing patterns (Robson, 1963; Barrett, 1974;

Harden and Rydell, 1983; Andrianopoulos & Hanson, 1987). The potency of this variable seems very significant based on Andrianopoulos and Hanson's (1987) findings of decreased mean relapse rates of .56 mm in subjects who had received therapy and 1.96 mm for the control group. Barrett (1974) reports *at least* a 75% post-treatment success rate, with a range of 72-96% depending on the stringency of the definition of a correct swallow. In a study of 666 subjects, Robson (1963) reported an average total success rate of 78.1% when reevaluating the swallow less than six months to more than 31 months posttreatment. The variability in results indicates a need for more rigid definitions of *correct swallow* as well as the most efficacious time to evaluate the adequacy of retention.

Percent of patients retaining a correct automatic swallow one year posttreatment. The goal of 90% was met for this primary measure. Eight percent of the individuals did not achieve a correct reflexive swallow and 2% of the individuals did not complete the program. Adequacy of the automatic swallow was based on the procedure developed by Joseph Fitzpatrick cited in Barrett and Hanson (1974) where the patient was requested to count rapidly in reverse from 99 to 0 and water was squirted into the mouth by a syringe or squirt bottle. The correctness of the swallow was based on the following criteria (Barrett and Hanson, 1974).

Normal Swallow: Teeth closed and no indication of lingual pressure even at extraction sites or in areas where deciduous molars had been shed and permanent teeth had not yet erupted.

Satisfactory Swallow: Basically, the same as above except that some physical factor, usually malocclusion itself, prevented perfect performance, and thus the possibility of relapse was present. Anything short of the above performance was considered a therapy failure.

The results of a study by Robson (1963) of 666 subjects treated with Barrett's therapy program, revealed that 80.4% of the cases had permanency of the acquired correct swallow at least 31 months posttreatment. This coincides closely with the 84% reported by Christofferson (1970) in posttreatment investigation of the adequacy of automatic swallows in 25 patients. Using a more conservative definition of tongue thrust (i.e. tongue placed interdentially during swallow), Toronto (1970) cited in Barrett and Hanson (1974), reported a 96% success rate for liquids, solids, saliva and the squirt test. Our reported results of 90% for maintenance of correct automatic swallow at the 12 month recheck appears to be somewhere in the middle of the above-reported results.

Patient Descriptors

Diagnostic Categories: For this particular survey, four diagnostic categories were considered to be sufficient, and yielded the following percentage of patients in each category: 54% revealed an anterior tongue thrust, 1% a unilateral thrust, 44% a bilateral thrust, and 1% a mandibular thrust. These statistics were compared to the find-

ings in Barrett's (1974) study of 1,000 consecutive cases, where he categorized his subjects according to eight classifications of thrusting (i.e. incisal, full, mandibular, bimaxillary, open, closed, unilateral and bilateral). Our category of anterior tongue thrust was a combination of Barrett's and Hanson's categories of incisal and full thrust. A comparison of findings between percentages in the four categories is as follows:

Classification	Keatley/Coulson	Barrett
Anterior thrust (incisal & full)	54%	73.8%
Unilateral thrust	1%	1.3%
Bilateral thrust	44%	3.9%
Mandibular thrust	1%	1.8%

The largest discrepancy occurs in the category of bilateral thrust with only 3.9% of Barrett's subjects revealing this pattern. Obviously, the characteristics of our patient population were quite different, and perhaps our definition as well as the collapsing of Barrett's classification system yielded these discrepant findings.

Complicating Factors

Numerous complicating factors may contribute to tongue thrusting. The percentage of patients manifesting complicating factors in the four designated areas in our management report are as follows:

Parafunctional Habits Parafunctional or oral-related habits were divided into four categories and were differentiated from other factors that were considered to be physically or structurally related (i.e. allergies, enlarged tonsils, etc.). Some patients manifested multiple extra-oral habits. The specific percentages of patients with parafunctional habits are as follows:

Lip Licking:	60%
Lip Wedging (lower lip wedged under upper incisors)	56%
Leaning Face on Hand	24%
Fingernail Biting	46%
Mouth Breathing/Open Lips Rest Posture	80%

Descriptions of parafunctional habits as well as their detrimental relationship to tongue thrusting is abundant in the literature (Hanson and Barrett, 1988); however, the literature does not provide the actual percentage of patients with these habits in the first four subcategories listed above. The relationship between mouth breathing and the development or retention of tongue thrust was well documented by Hanson and Cohen (1973).

Articulation Disorders

The three categories of articulation disorders that were documented in the management report yielded the following incidence rates - sibilants, /s/, /z/, /sh/, (48%); interdental production of lingua-alveolar sounds, i.e. /t/ and /l/ (28%); and other sounds such as affricates and glides, i.e. /r/ and /j/, (9%).

The relationship of tongue thrust to the articulation problems described above were noted by Hanson and Barrett (1988), Overstake (1970) and Stansell (1969); however, the precise incidence for the various sound categories are not reported in the literature.

Digit Sucking

A substantial number of patients surveyed were still sucking their thumbs or fingers when referred for treatment. Eighteen percent of the patients surveyed engaged in thumb sucking and 16% in finger sucking for a total of 34%. Information in the literature indicated a history of digit sucking in approximately 55% of the subjects with tongue thrust (Fitzpatrick, 1974; and Andersen, 1963), but no statistics were found for the number of children still manifesting a digit sucking habit when oral myofunctional treatment was begun. The consensus is that, clinically, a "small percentage" of thrusters have a history of digit sucking, but it is still regarded as a foe to effective treatment of deviate swallowing (Barrett and Hanson, 1974).

Postural Alignment and Physical/Structural Problems

Forward head and neck alignment, scoliosis, short-upper lip, short lingual frenum, allergies and enlarged tonsils and adenoids are frequently apparent in individuals with oral myofunctional disorders. The highest incidence was found in the categories of forward head and neck alignment with 88%, and short-upper lip with 84%. Allergies were present in 58% of the patients, short lingual frena occurred 50% of the time and enlarged tonsils and adenoids 10%. The involvement of physical therapists has enlightened the orofacial myologist about the incidence of a forward head and neck alignment and scoliosis in those individuals with tongue thrust. Unfortunately, this has not been addressed in the literature, other than in a World Health Statistics report that documents an 88% rate of abnormal cervical or thoracic function in individuals requiring orthodontic treatment. The presence of short-upper lip and short lingual frena are implicit in these patients through the various treatment exercises documented to remediate these problems (Barrett and Hanson, 1974; and Ingervall and Elisson, 1982); but again the precise number of subjects with these problems is scant, if non-existent, in research. Fifty-eight percent of the patients reviewed reported allergies on their case history. Moyers (1971) reports a positive relationship of allergies to tongue thrust, and Weimert and Gottlieb (1986) reported that 22% of patients referred from orthodontists, had symptoms of "allergy-nasal congestion, rhinorrhea, and sneezing" (p. 15). Weimert's study was directed toward airway obstruction and facial growth rather than tongue thrusting, however. Hanson and Cohen (1973) found inconsistent relationships between allergies and tongue thrust. Most of the research that has been devoted to allergies has looked at the relationship of allergy to mouth breathing and dental-facial development rather than its effects on tongue thrust. It will be the task of the orofacial myologist to gather statistics on the relationship and/or effects of allergies as they relate to orofacial myofunctional disorders.

Enlarged Tonsils and Adenoids

The positive relationship of tonsillar or adenoidal hypertrophy and its relationship to the retention and/or development of tongue thrust in children was documented by Moyers (1958), Strang and Thompson (1958), and Hanson and Cohen (1973). Weimert and Gottlieb (1986) reported, however, that tonsils "do not commonly cause true airway obstruction" (p. 20). Fewer than 1% of Weimert's patients underwent tonsillectomy for reasons of airway interference. Only 10% of the patients reviewed in this survey revealed hypertrophy of the tonsils and/or adenoids.

Severity of Thrust

All clients evaluated in this survey had a tongue thrust. Eight percent had a mild to moderate thrust with the tongue pressing against the lingual surfaces of the incisors, and 92% had a severe thrust with the tongue protruding beyond the cutting edges of the teeth. These results are compared with those of Hanson and Cohen (1973). In a longitudinal study, 178 subjects were evaluated for severity of the thrust at different points in time. Fifty percent of those subjects were classified as having a mild to moderate thrust with the tongue pressing against the lingual surfaces of the teeth at 8 years 2 months, and 39% were considered to have a severe thrust with the tongue protruding beyond the cutting edges of the teeth at the same age. Perhaps the patients in our data base were more severe since they had been referred by dentists and orthodontists specifically to have their tongue thrust problems remediated. Seventy-eight percent of our patients were at least eight years or older.

Occlusal Information

The literature abounds with studies discussing the interrelationship between tongue thrust and malocclusion (Hanson and Cohen, 1973; Mitani, 1976; Lowe and Johnston, 1979; Andrianopoulos and Hanson, 1987). But the percentage of patients manifesting specific occlusal problems in relationship to severity of tongue thrust was not noted in the literature. Since this survey was done retrospectively over the past ten years, we were unable to gather consistent pre- and post-occlusal information for this data base; but a standard definition of the three primary occlusal types occurring in patients reporting for orofacial myofunctional treatment is provided as a starting point. 1) Overjet: Horizontal measurement between the labial surface of the lower incisor and the incisal edge of the upper incisor. 2) Openbite: Vertical distance between the incisal edge of the lower incisor and the incisal edge of the upper incisor. 3) Overbite: Vertical dimension between incisal edges of upper and lower anterior teeth.

The potency of this variable seems very significant based on Andrianopoulos and Hanson's (1987) findings of decreased mean relapse rates of .56 mm in subjects who had received therapy and 1.96 mm for the control group.

Length of Treatment

The length of treatment is dependent on many factors (e.g. age of the patient, complicating factors, motivation

and parental support). Barrett and Hanson (1974) report that their average patients complete the formal portion of their program in approximately eight weeks. Both Pierce and Straub report an average treatment time of six to eight weeks. Without exception, treatment programs are followed by a number of recheck sessions, usually up to one year posttreatment. Our survey substantiated that 42% of the patients required 1-9 formal treatment sessions, 46% required 10-15 structured treatment sessions, and 12% of the patients required 16 sessions or more.

Age Groups

Percentage of patients in each age group is as follows:

3-7 years	22%
8-12 years	18%
13-19 years	48%
20-40 years	8%
Over 40 years	4%

This information was kept for descriptive purposes only, and no correlations were done to evaluate degree of success for a specific age group. However, this would be the ultimate goal once the program evaluation is computerized. This type of analysis done previously by Robson (1963), cited in Barrett and Hanson (1974), found only a 68% success rate in children who started treatment under the age of 7. It has been many years since his analysis was published and perhaps a more recent study correlating age with successful retention rates would be beneficial. The issue of age related to spontaneous self-correction has been thoroughly documented in the literature (Andersen, 1963; Hanson and Cohen, 1973; Barrett and Hanson, 1974). Patients below the age of eight in this survey were referred by dentists and/or orthodontists, and were determined to have occlusal problems that would *probably* not resolve without treatment. Pierce's article (1988) deals with specific considerations for treating the young child.

Amount of Progress

Subjective information was gathered regarding the perception of overall progress. The categories of overall patient-rated improvement, and overall clinician-rated improvement were put on the management report. Since this survey was done retrospectively, no data was available regarding the patient's rate of improvement, but that will be gathered in the future according to the 0-4 point scale ranging from no change or worse, to complete remediation. The clinician-rated improvement scale revealed the following percentage of patients falling into each category:

No change or worse	4%
Slightly improved	2%
Moderately improved	4%
Greatly improved	22%
Completely remediated	68%

The literature regarding success ratios in treatment were documented previously from a clinician's viewpoint, but perhaps, some of the most significant information in this

section is gleaned from the patient's perception of improvement or lack thereof. This will signal the clinician for the need for better patient education regarding results of objective measures.

Supplemental Information

Percent of patients coming for evaluation only (not following up on recommended treatment): Eight percent of the patients initially evaluated did not follow up on all recommended services. Similar information was gathered by Robson (1963). He reported that 86.2% of the 166 subjects studied kept all therapy appointments.

Percent of patients who had orthodontics prior to the initiation of treatment: Forty-six percent of the patients surveyed had orthodontic treatment prior to the initiation of orofacial myofunctional treatment. The current trend points to a more preventative attitude by referral sources. Over the past five years dental professionals have tended to refer patients for orofacial myofunctional treatment prior to the initiation of orthodontics. A controlled study that evaluates average rates of movement of teeth in individuals with and without oral myofunctional treatment would be of interest.

Percent of patients who showed lack of motivation and/or parental support: Ten percent of the 100 patients studied revealed lack of motivation and/or parental support. One patient lacked parental support but was highly motivated and completed the program successfully. Zimmerman (1988) reported that the clinician must have the ability to help initiate and maintain patient motivation since it is a "necessary ingredient to the learning process," and can affect the ultimate success or failure of therapeutic intervention. He sees motivation as being in constant fluctuation and must necessarily change to "affect and maintain successful behavior change" (p. 47). Zimmerman also advises the clinician of several motivational strategies. He encourages establishing motivational roots at the initial evaluation and using clinical photography, charting of progress by the patient, involving the family as an essential supporter, using cosmetic and aesthetic factors as motivational catalysts for a correct swallow and tongue rest position. Zimmerman stresses the importance of breathing through the nose because of its role in filtering out foreign airborne particles (Graber, 1967) and purports that explanations regarding nose breathing and the role it plays in humidifying and warming the air can be motivational to the patient. Pritchard (1966) also discusses the habitual drying of the anterior gingiva in true mouth-breathers, which augments the formation of calculus on the teeth and can lead to periodontal problems. Zickefoose (1988) advocates the use of audio and video recordings in the evaluation and treatment of orofacial patterns as a means of increasing motivation.

Follow-Up: Ninety percent of the patients returned for recommended follow-up sessions at two months, four months, six months, and one year posttreatment.

Financial Information

This survey evaluated the average total charge per patient, average amount reimbursed by insurance and

surplus exceeding total cost (profits). The average total charge per patient will vary depending on location and number of treatment sessions required. The average amount reimbursed by insurance was 35% over the past ten years. There appears to be a recent increase in the amount of reimbursement for oral myofunctional treatment. A data base of individual insurance carriers that reimburse for this service can be maintained. Benkert (1986) provides a comprehensive review of insurance information and carriers. Profits can be obtained by deducting total expense from total income so that the clinician can adjust fees based on income and expense information. Although this information is kept by most individuals in practice, a management report provides access to it on an ongoing basis and allows for easy interpretation of the data. Since there is no mandate in our profession of regulatory guidelines in relationship to charges, this information is useful only for the individual clinician.

Marketing Your Practice with a Management Report

A mission is a reason for existence that starts with the customer (Drucker, 1974). The management report for oral myology can assist the clinician in identifying users of service in terms of pertinent characteristics (such as age). Also, referral sources can be listed in the data base for easy accessibility of reporting, updated patient progress and research findings. If the management report indicates that a professional referral source is sending limited types of patients to your service, providing educational information regarding the full range of services offered (e.g. digit sucking, various types of occlusal problems and articulation disorders) may broaden referrals. The management report is a professional way to convey patient outcome and the clinician's success rate of treatment. The clinician accomplishes several of Philip Kotler's (1984) strategies for successful personal contacts by making available in writing a description of services, types of individuals served, benefits gained by patients and follow-up information on services rendered. Beyond the management report, a computerized letter can be generated that identifies how many patients have been seen from a particular referral source, the types of complications most prevalent in these patients, their success rate and future predictions of patient success. Communication is a successful key of productive personal marketing, and the management report is an objective method which conveys results.

Summary

The development of a management report format and the ongoing collection and analysis of patient outcome data validates basic theories in orofacial myology. Research in our field has advanced beyond the descriptive stage, but needs to be collected with an eye toward consistency of definitions, nomenclature and standards of measurement. With the epidemiological statistics from the World Health Organization (reporting that 70% of the pediatric population needs orthopedic or orthodontic care), objective documentation of information related to

orofacial myofunctional disorders is important. The format presented in this paper suggests a starting point for clinicians and researchers. By performing a retrospective survey on 100 patients and comparing that data with previous research, we were able to determine areas where additional data collection would further substantiate the efficacy of oral myofunctional treatment. Although many of the variables surveyed showed comparable results to those documented in past research, the number of patients surveyed was frequently inadequate, complicating factors were not considered, and the results outside of the therapy session were not available.

This format allows the clinician to revise the primary measures, patient descriptors and supplemental information that is gathered on an ongoing basis. Computerization of data will allow for correlations between variables and provide predictive information about which patients will benefit most from treatment. A national networking system is the next step in standardizing data and improving program efficiency. Once data is collected, available information may be used for marketing services and educating insurance companies to promote more consistent payment for services.

ORAL MYOFUNCTIONAL PROGRAM EVALUATION MANAGEMENT REPORT

A. PRIMARY MEASURES	GOAL	DATA (Total # of Patients)	
1. % of patients who completed recommended program	95%		
2. % of patients who understood correct tongue rest position & correctly used it at least 90% of the time	90%		
3. % of patients who attained correct swallow for liquids, solids & saliva	90%		
4. % of patients who attained correct automatic swallow	90%		
B. PATIENT DESCRIPTORS (N =)	DATA	DATA	
1. Diagnosis		3. Severity of Thrust	Pre Post
a. Anterior (Full/Incisal) Thrust.....	.....	a. 0 = no thrust (no tooth contact).....	.....
b. Lateral Tongue Thrust.....	.....	b. 1 = moderate (linguadental contact).....	.....
c. Bilateral Thrust.....	.....	c. 2 = severe (beyond cutting edges of teeth).....	.....
d. Mandibular Thrust.....	.....	4. Occlusal Information	
2. Complicating Factors		a. overjet (mm).....	.....
a. Parafunctional Habits.....	.....	b. open bite (mm).....	.....
1. Lip licking.....	.....	c. overbite (mm).....	.....
2. Lip wedging.....	.....	5. Length of Treatment	
3. Leaning on hand.....	.....	a. 1-9 sessions.....	.....
4. Fingernail biting.....	.....	b. 10-15 sessions.....	.....
5. Mouth breathing.....	.....	c. > 16 sessions.....	.....
b. Articulation Disorders.....	.....	6. Age Groups	
1. Sibilant.....	.....	a. 3-7 years.....	.....
2. Interdental.....	.....	b. 8-12 years.....	.....
3. Other.....	.....	c. 13-19 years.....	.....
c. Digit Sucking.....	.....	d. 20-40 years.....	.....
a. Thumb.....	.....	e. > 40 years.....	.....
b. Fingers.....	.....	
d. Postural Alignment & Physical Structural Problems.....	.....	
1. Fwd head/neck alignment.....	.....	
2. Scoliosis.....	.....	
3. Short upper lip.....	.....	
4. Short lingual frenum.....	.....	
5. Allergies.....	.....	
6. Enlarged tonsils/adenoids.....	.....	
C. AMOUNT OF PROGRESS			
Overall Patient Rated Improvement		Overall Clinician Rated Improvement	
a. No change or worse.....	.....	a. No change or worse.....	.....
b. Slightly Improved.....	.....	b. Slightly Improved.....	.....
c. Moderately Improved.....	.....	c. Moderately Improved.....	.....
d. Greatly Improved.....	.....	d. Greatly Improved.....	.....
e. Completely Remediated.....	.....	e. Completely Remediated.....	.....
D. SUPPLEMENTAL INFORMATION		E. FINANCIAL INFORMATION	
1. % of patients coming for eval. only (not following-up on recommended treatment)	.....	1. Average total charge per patient...	.....
2. % of patients who had orthodontics....	.....	2. Average amount reimbursed by insurance.....	.....
3. % of patients who showed lack of motivation/parental support.....	3. Surplus exceeding total costs.....
4. Follow-up: % patients consistently returning for follow-up services.....		

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