

**REPORT OF THE SECRETARY OF HEALTH AND  
HUMAN RESOURCES ON**

**THE COMMONWEALTH'S  
POLICY OF MEDICAID  
ELIGIBILITY FOR  
ORTHODONTIC CARE**

**TO THE GOVERNOR AND  
THE GENERAL ASSEMBLY OF VIRGINIA**



**HOUSE DOCUMENT NO. 45**

**COMMONWEALTH OF VIRGINIA  
RICHMOND  
1996**





# COMMONWEALTH of VIRGINIA

Office of the Governor

George Allen  
Governor

Kay Coles James  
Secretary of Health and Human Resources

January 27, 1996

TO: The Honorable George Allen

and

The General Assembly of Virginia

This report contained herein is pursuant to House Joint Resolution 476,  
agreed to by the 1995 General Assembly.

This report constitutes the response of the Secretary of Health and Human  
Resources to this resolution and recommends the appropriate actions related to the  
Commonwealth's policy of Medicaid eligibility for orthodontic care.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Robert C. Metcalf".

Robert C. Metcalf  
Acting Secretary of Health and Human Resources



**Legislative Study Paper on HJR 476  
Orthodontic Care Coverage by Medicaid in Virginia**

**Preface**

House Joint Resolution 476 requested the Secretary of Health and Human Resources to study the feasibility of altering the current policies regarding Medicaid eligibility for orthodontic care. (see Appendix A) The suggested focus of alteration would be an evaluation technique which would include quantitative and qualitative criteria heavily weighted toward functional need. The Department of Medical Assistance Services, Division of Client Services, prepared this study with the assistance and expertise of a number of persons, agencies and groups involved with orthodontic care in Virginia. Additionally undertaken was an extensive review of the literature and a survey of orthodontic coverage criteria used by a sample group of similar agencies in other states. The questions asked in the surveys and the responses obtained are on file with the Department and are available upon request. DMAS Medical and Dental Consultants and other agency staff were instrumental in data-gathering and evaluation of information received.



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## EXECUTIVE SUMMARY

The General Assembly passed House Joint Resolution 476 (HJR 476), requesting a study be made by the Secretary of Health and Human Resources regarding Medicaid eligibility for orthodontic care. The Department of Medical Assistance Services (DMAS) Division of Client Services prepared this study, with assistance and expertise from providers and other payers, as well as literature reviews on the topic. Benefits and cost calculations were taken from Medicaid claims data.

A lack of consensus exists in the dental provider community regarding the reliability of the current criteria utilized in Virginia Medicaid policy for determination of orthodontic care eligibility. The mandate for orthodontic coverage is found in federal regulations related to Early and Periodic and Screening, Diagnostic and Treatment (EPSDT) benefits for individuals who have not reached their twenty-first birthday. Virginia has exercised its prerogative under EPSDT to set criteria for coverage. The criteria used in Virginia consist of a modified version of the Salzmann Index. The modification denies credit for esthetic anomalies and requires a 20 point score to certify a patient for orthodontic care.

Assumptions were made in the prologue to HJR 476 which dispute the use of Salzmann Index criteria as a valid evaluation tool; however, a search of the literature shows no well-documented superior process. In point of fact, the American Association of Orthodontists (AAO) is currently funding 2 studies to compare the tools currently available for measuring need for orthodontic care. The results of these studies are due in mid-1996.

In interviews with a number of "expert" orthodontists (as defined by referral from professional organizations, etc.), DMAS staff was unable to determine a consensus of opinion on the value of the current model.

Some tentative recommendations were put forth for making the review process contain "quantitative and qualitative criteria, and that such criteria be heavily weighted toward functional need" as recommended in HJR 476. In light of the AAO contracts with two researchers to evaluate measurement criteria available currently, the prudent course would seem to be postponing any decisions temporarily. If, or when, a recommendation is agreed upon by the professional associations, changes in current policy may be made.

Should the Secretary determine a need for immediate action on this matter, the above mentioned recommendations may be used in the deliberations of this issue.

## Introduction and Statutory Authority

The 1995 General Assembly passed House Joint Resolution 476 directing the Secretary of Health and Human Resources to study the current policy for orthodontic care. The recommendation contained in the resolution was that the study be designed to include a study of current policies and criteria vis-à-vis alternative quantitative and qualitative criteria, heavily weighted toward functional need. A suggestion was made in HJR 476 that any recommended alterations in the review process be implemented with evaluations being done by private sector Doctors of Dentistry who agree that they will not accept Medicaid patients for orthodontic care. This would not change the structure of the DMAS dental consultant pool.

## Background

Since 1989, DMAS has provided comprehensive orthodontic care to individuals who have not yet reached their twenty-first birthday. This coverage is mandated, **when medically necessary**, by the federal regulations on Early and Periodic Screening, Diagnostic and Treatment (EPSDT) benefits (Reference 2). The determination of the criteria used to determine eligibility for orthodontic services is the prerogative of the state, as is the decision to require preauthorization for certain procedures. Virginia's State Plan for Medical Assistance authorizes the implementation of this program, and prior authorization is a means of containing costs and ensuring quality and appropriateness of care. Coverage is restricted to handicapping malocclusions and functional disability which are dental in origin. Treatment may be given only after an affirming opinion has been rendered by an orthodontist, and the DMAS dental consultant has reviewed the case and authorized the procedure and payment level.

DMAS expenditures for orthodontic care were \$1.2 million for fiscal year (FY) 1993, according to HJR 476. Claims for unduplicated recipients reached close to \$1.7 million for FY94. Budget projections for FY95 show a total of \$1.9 million, and \$2.4 million is anticipated for these expenditures in FY96 if the current reimbursement and utilization are maintained. The majority of the FY94 claims were paid to orthodontists, with approximately 3% of the total paid out to general dentists and pedodontists.

The categories of malocclusion were first defined in the 1890's by Edward H. Angle, known as the "father of modern orthodontics." His classifications defined normal occlusion in the natural dentition. This "normal occlusion" has been characterized, in fact, as an ideal normal. The definition of orthodontics adopted by the American Association of Orthodontists (AAO) in 1981 states "Major responsibilities of orthodontic practice include the diagnosis, prevention, interception and treatment of all forms of malocclusion of the teeth and associated alterations in their surrounding structures: the

design, application and control of functional and corrective appliances: and the guidance of the dentition and its supporting structures to attain and maintain optimum relations in physiologic and esthetic harmony among facial and cranial structures” (Reference 17).

Since Angle’s time, numerous attempts have been made to define dentition-related anomalies. There is no clear agreement within the dental profession on the correct procedure for evaluation of orthodontic problems. Few indices of criteria are available. The preparation of this report utilized a literature review relating to alternative evaluative processes. Surveys of providers and other payers were also used to gather information for this document.

The criteria for acceptance of Virginia patients for orthodontic care are based on a modification of the Salzman Evaluation Method (Salzman Index) described by J. A. Salzman, Handicapping Malocclusion Assessment to Establish Treatment Priority, American Journal of Orthodontics, 54:749-765, 1968. This set of criteria has been the basis of determining eligibility for orthodontic care since the Commonwealth began covering orthodontic services in 1989.

As noted in the DMAS Dental Manual, Appendix F, Page 1, “The teeth in malocclusion are assessed according to the criteria and the weights or point values assigned to them. The relative point values are based on clinical orthodontic experience from the standpoint of the usual contributory effects of various types of malocclusion on dental health, function and esthetics (Appendix B).

“The point values of the Handicapping Malocclusion Assessment Record forms were tested by orthodontists from various parts of the United States. They assessed dental casts of patients with untreated malocclusion of various degrees of severity. The scores obtained were found to show an extremely high correlation with subjective clinical ratings of severity of malocclusion of the same casts.”

DMAS modifications consist of:

1. The deletion of credit for poor esthetics. This single difference deletes 8 points from the original Salzman scale.
2. An additional 5 points are allowed toward the 20-point minimum when ortho-gnathic surgery is anticipated.

## Analysis of Orthodontic Care Coverage Under Medicaid in Virginia

Presently, DMAS is providing comprehensive orthodontic care **when medically necessary** for individuals who have not reached their twenty-first birthday, as mandated under the EPSDT benefit in federal regulations. Acceptance of patients for orthodontic care is based on a modification of the Salzmann Evaluation Method (Salzmann Index).

An index to evaluate a handicapping orthodontic problem should have the following requirements:

- 1) Should be simple, accurate, reliable and reproducible.
- 2) Should be objective in nature.
- 3) Must be able to differentiate between handicapping and non-handicapping malocclusions.
- 4) Should be usable either on patients or study models.
- 5) Should measure the degree of handicap.
- 6) Should avoid classifying "malocclusion."

As part of the study, DMAS staff reviewed literature on current orthodontic care and the validity and precision of various indices when used to determine the level of the handicapping malocclusion requiring orthodontic treatment. One paper in particular compared 4 indices: the Handicapping Labio-Lingual Index, Treatment Priority Index, Occlusal Index and the Handicapping Malocclusion Assessment Index (Salzmann) (Reference 18). The Salzmann Index proved to have some advantages over other 3 indices studied. It is considered highly reproducible and sensitive over the entire range of occlusions.

A reliable index to estimate the functional level of handicapping malocclusions has been difficult to establish. Many attempts have been made to create an index that would measure the degree of deviation from the normal occlusion to a malocclusion that is a **functional** handicapping malocclusion, resulting in diminished oral function. Many of the indices in the literature do not consider the psycho-social aspect nor the impact the malocclusion has on the patient's health and social well-being.

The Salzmann Index contains features that are appropriate in the assessment of a malocclusion, such as: rotations, missing teeth, overjet, overbite, crossbite, openbite and the anterior-posterior relationship of teeth. These factors are reliable in a malocclusion assessment and a rating of their presence can be reproduced accurately by multiple observers. Although the DMAS use of a modified Salzmann Index may lack the qualitative factor of aesthetics, it has been a useful and reliable tool in the process of

identifying the presence of handicapping malocclusions in the assessment of occlusion and function of teeth, under the current payment methodology.

In addition to the diverse opinions regarding indices for evaluation, the question of a correct definition of "handicapping malocclusions" has not been resolved. Salzman suggests "(age 12 to 16 years) Definition: Handicapping malocclusion and handicapping dentofacial deformity are conditions that constitute a hazard to the maintenance [of] oral health, and interfere with the well-being of the child by adversely affecting dentofacial esthetics, mandibular function, or speech." Another definition was provided by Frank Farrington, DDS, (Chairman of Pediatric Dentistry at the Medical College of Virginia School of Dentistry) during a telephone interview with one DMAS consultant. Dr. Farrington defined impaired function as:

- 1) the inability to bite or masticate properly
- 2) the inability to articulate speech properly, or
- 3) increased susceptibility to trauma.

He noted that impaired function can vary in degree of severity. Dr. Farrington indicated that all orthodontic problems should be assessed on the basis of function.

In "The Orthodontic Problem", Chapter 1 of Contemporary Orthodontics (Reference 17), a discussion of the need for treatment states the following:

"Protruding, irregular, or maloccluded teeth can cause three types of problems for the patient:

- 1) psychosocial problems relating to impaired dentofacial esthetics;
- 2) problems with oral function, including difficulties in jaw movement (lack of muscle coordination or pain), temporomandibular jaw disturbances, and problems with mastication, swallowing, or speech; and
- 3) problems of accentuated periodontal disease or tooth decay related to malocclusion."

It additionally remarks, "If the way you interact with other individuals is affected constantly by your teeth, your dental handicap is far from trivial." The determination, then, of the definition of a "handicapping malocclusion" takes on added dimensions.

Even the August AAO House of Delegates is seeking an answer to the dilemma faced by DMAS in determining an appropriate assessment tool. The AAO, at its 1994 convention, called for proposals for studies to research the validity and precision of the various indices currently in use for the determination of the need for orthodontic treatment. This resolution was a change from the previous dismissal of all indexing tools as unreliable.

The AAO held an Orthodontic Indices Consensus Conference in January of 1993. The group, convened from a cross section of geographic and practice sites, agreed on the need for indexing; however, there was no accord on the accuracy of current indices. The recommendation was made that the AAO fund a study to evaluate indices in use at present. This study is scheduled to be completed in mid-1996. The Salzman Index was not recommended to be included for further research because it cannot be used for very young children.

Salzman notes in an article in the American Journal of Orthodontics (53; 109-119; 1967) that approximately 95% of children in the United States have some degree of irregularity of dental occlusion. He cites the increase in awareness of orthodontic care and attributes it, in large part, to the provision of payment by third-party payers, including Medicaid. He continues this train of thought by saying "priorities will, of necessity, have to be established as objectively as possible in relation to the funds provided for orthodontic treatment..." Surveys published by the U.S. Public Health Services in the 1970s indicate that, in children and youths between ages 6 and 17, approximately 75% showed a noticeable deviation from the ideal (Reference 17).

An introduction to the scoring instructions in the draft of Salzman's Index notes, "This assessment record (not an examination) is intended to disclose whether a handicapping malocclusion is present and to assess its severity according to the criteria and weights (point values) assigned to them. The weights are based on tested clinical orthodontic values from the standpoint of the effect of the malocclusion on dental health, function and esthetics... Etiology, diagnosis, planning, complexity of treatment, and prognosis are not factors in this assessment..."

Dental occlusion varies among individuals according to tooth size, shape, tooth position, timing and sequence of eruption, dental arch size and shape, and patterns of crania-facial growth. From this, the literature states "the normal in oral physiology is always a range, never a point." For the orthodontist, ideal occlusion is an admirable goal; but it is usually a therapeutic impossibility. Correction of orthodontic malocclusions may have health benefits; however, it is recognized that only a small percentage of the population has a malocclusion or facial irregularities that are life-threatening (Reference 20).

Lack of consensus among providers may be a function of goals of the specialty practice making the decision. While an orthodontist may have the goal of reaching as close to "ideal" (0 points) as may be attainable, a generalist would more frequently be satisfied with purely functional "normalcy."

A review of the assessment document currently being used was made. The data, when calculated with all variables including esthetics, presented a "worst-case" score of 62

points. The decision to pay for services needs to be based on a realistic placement of the functional deviation in this continuum of “normalcy”. The decision required will be how many points denote a handicap in a score which may be from 0 to 62 points.

In publicly funded dental care programs, an index to evaluate the degree of severity of the handicap associated with dental malocclusions or dento-facial disturbances is necessary to identify those patients whose needs are medically necessary and who should be considered for treatment funded by Medicaid dollars.

The orthodontic program under Medicaid is not designed to pay for cosmetic changes that do not impact function sufficiently to create a handicapping malocclusion. There are other state-funded programs, such as the cleft palate program administered under the Department of Social Services, which may deal with such facial deformities and the associated cosmetic and functional handicapping malocclusions. Coordination with local social service agencies may provide a means of referral for patients who might be covered under these other programs.

Currently, orthodontic models submitted to DMAS by providers are examined by the Orthodontic Consultant. Points are scored according to the Salzmann Index. Each patient is given a numeric score based on the point level assigned for each orthodontic defect. For example, each wide space between 2 teeth is given 1 or 2 points, depending upon position (Appendix B). When the evaluation is complete, all points are totaled to produce the score.

The following criteria are used for determining approval for orthodontic treatment (full banded treatment):

1. Twenty points are necessary to qualify for acceptance and payment by DMAS.
2. Points are not awarded for esthetics. Thus, the 8 points for handicapping esthetics, as used for the unmodified Salzmann Index, are not permitted.
3. Five of the 20 points may be awarded for surgical orthodontics. The provider is requested to specify that ortho-gnathic surgery will, or may be, necessary at the time he submits the request for preauthorization.

A survey of 670 claims processed by this method during 1995 showed a maximum modified Salzmann score of 44. At the other end of the spectrum, there was one submission (denied) which had NO Salzmann points awarded. 11.3% of the claims surveyed achieved a score of 10 points or fewer. An additional 22.4% fell below the 20 point minimum. 13.4% of the claims submitted were allowed at the 20-point minimum, 43.6% were in the 21-30 point range and 8.7% of the claims rated 31-40 points. Only 4

claims (0.6%) exceeded that number, with 1 claim each at 42 and 43 points and 2 claims at 44 points.

### 1995 Claims Surveyed

Modified Salzmann Score	Percent of Claims Surveyed
≤ 10 points	11.3 %
11-19 points	22.4 %
20 points	13.4 %
21-30 points	43.6 %
31-40 points	8.7 %
>40 points	0.6 %

In this sampling of 670 claims, increasing the number of points required would result in the following percentages of additional requests denied:

### Increase in Denials based on Increase in Minimum Score

Minimum Score	Additional Denials
21 points	13.4%
22 points	13.4% + 9.7% = 23.1%
23 points	23.1% + 5.9% = 29.0%
24 points	29.0% + 5.5% = 34.5%
25 points	34.5% + 5.5% = 40.0%

It must be noted that the Salzmann Index is for permanent dentition. Requests for orthodontic treatment should not be submitted until the majority of the permanent teeth have erupted. A closer adherence to the Index in the initial provider's evaluation could achieve some cost savings in the program by eliminating expenses of casting, etc. A proper evaluation by the Orthodontic Consultant can be effected best by submitting only valid candidates for review.

The inclusion of "transitional dentition" in the payment schedules accounts for approximately \$434,000 in Fiscal Year 1994. In addition, payments for minor treatment for tooth guidance and minor treatments to control harmful habits in unduplicated recipients accounted for about \$67,000 in claims paid. Thus the treatment of malocclusions of permanent dentition accounted for approximately \$1.2 million dollars (Appendix C).



Surveys of persons, agencies and groups involved with orthodontic care in Virginia did not produce a consensus regarding the value of the Salzman Index in establishing a credible evaluation standard.

#### Survey of practitioners and professional groups

Some of the responses to queries regarding factors determining provision of care bear out the early predictions that provision of care would be based primarily on the ability of the orthodontist to be assured of payment. Suggestions included a greater emphasis on function, but no better index was offered. Of the 10 “expert sources” queried, only 3 respondents voiced opinions on the use of the modified Salzman Index (1 positive, 2 negative). The additional 7 sources either had no comment or were unfamiliar with the Salzman Index. Several respondents recommended a “team” or “panel” review. Current practice provides for evaluations to be made at DMAS by the Dental Consultant and Orthodontic Consultant in collaboration with the Director of Medical Support.

#### Survey of other payers

Four private payers were surveyed. Only 2 cover orthodontic care. One has a lifetime maximum payment of \$1,000 regardless of reason for surgery, whether cosmetic or medically necessary. The other plan does not pay for cosmetic treatment. Neither plan requires pre-authorization (Reference 13).

#### Survey of other Medicaid programs

- 1) **Arizona** covers only medically necessary treatment. No quantitative review is done by the program; they rely on the medical judgment of the orthodontist.
- 2) **Indiana** currently covers only medically necessary treatment. A Dental consultant makes a final determination based on standards of practice. The state is looking at methods of cost containment. A proposal is under review to eliminate coverage of orthodontic services unless there are problems with nutrition.
- 3) **Oregon** covers only cleft palate or cleft lip. Under a previous severity measurement protocol, the practitioner would mark a checklist (“similar to Maryland’s”). If the minimum level of points was reached, it then was submitted to the Dental Consultant for approval of services. The Oregon Health Plan now requires looking at diagnosis/treatment pairs. While the previous protocol was in place, providers seemed to prefer the checklist to the previously mandated submission of casts and full-mouth x-rays.

## Findings and Recommendations

### Payment Method Determination

Virginia's use of the Salzmann Index was initiated in an attempt to build objectivity into procedures some professionals might consider cosmetic in nature. Any general dentist perceiving a potential problem in the dentition of a candidate for orthodontic services is required to refer the patient to an orthodontist before forwarding a preauthorization request to this agency. Once a request for consultation is received, the DMAS Dental Consultant (a pedodontist) works with the Orthodontic Consultant and the Director of Medical Support to determine eligibility for coverage. The requisite level of 20 points on the modified Salzmann Index has come under scrutiny during the past several years. This may be due, in part, to a failure to consider the modifications made to the original Salzmann Index. The points needed for approval, therefore, would appear to be much lower than the number necessary for certification under plans which use the original Salzmann Index (Reference 13). Lack of access to a proven better tool has resulted in the continued use of this Index.

Should DMAS maintain the Salzmann Index for evaluating orthodontic handicapping malocclusions, consideration is being given to raising the score. A suggested level would be 25 points. The quality of care would not be affected by this change; however, this may approximate true functional handicapping malocclusion assessment more closely than the current approach. A projected negative factor in such a change may be an increase in the number of appeal hearings resulting from the denial of orthodontic services. This potential problem may be overcome by requiring additional documentation to be presented, along with the original casts and documentation, in any appeal. Involvement of the provider is essential to an accurate presentation of the facts and would reduce the number of "frivolous" appeals.

### Recommendations for Orthodontic Review Process

Some tentative recommendations for consideration include, but are not limited to:

- 1) Continue to use modified Salzmann Index, but require a higher score and/or additional documentation such as photographs of the affected area in addition to casts and x-rays.
- 2) Continue to use modified Salzmann, but add additional modifications. One suggestion is to delete the clause, "2 points for each visible crest of the interdental papilla of spaced maxillary teeth from canine to canine" from the DMAS Dental Manual in Appendix F, page 1, paragraph 4. Deletion of this criterion will aid in

screening out “cosmetic” requests and restrict services to conditions which impair dental function and are, thus, medically necessary. This modification would lead to about a ten-percent reduction of the number of orthodontic cases approved annually, without compromising current quality of care received by Medicaid recipients.

- 3) Continue to use a modified Salzman Index at the current score of 20, but require significant functional disability (physical or mental) be proved with detailed clinical medical documentation of functional disabilities.
- 4) Continue use of modified Salzman. Require provider to submit evaluation of case, using modified Salzman Index. Provider may be compensated for evaluation procedure, but case evaluations not generating a score of at least 20 points would not be accepted for review by DMAS. This would restrict cases for review to only those which have a probable chance of coverage. It would allow more effective use of DMAS Consultants’ time.
- 5) Discontinue use of the Salzman Index in establishing eligibility. Continue preauthorization of Orthodontic requests using only the Medical Necessity criteria as defined by the Code of Federal Regulations and DMAS policy.
- 6) Discontinue Orthodontic program as currently structured, but process requests for services under DMAS Cosmetic and Congenital Malformations policies and criteria.

#### Additional Considerations

- 1) Removal of the need for Orthodontic consultations on simple space maintainers could result in savings of time, money and orthodontic consultations. Savings would be realized in several ways.
  - a) More timely attention to the spacing problem may minimize the need for later Orthodontic procedures.
  - b) Low cost of treatment by general dentists or pedodontists for this service does not justify the additional expense of Orthodontic consultations by an additional practitioner and DMAS consultants.
- 2) Coverage for transitional dentition should be removed from the fee schedule. Since the requirements provide Orthodontic services for permanent dentition only, there is no general justification for submission of these transitional claims. Extreme cases would be individually considered only when approved by the Director of Medical Support.

- 3) Denial of payment for those services of the submitting provider associated with required documentation for requests when:
- a) the casts show that dentition is not permanent, or
  - b) the score on the modified Salzmann Index is below 10. Any orthodontist provider of services should be able to make these determinations by reviewing the requirements and scoring outline in the Dental Manual. This change would allow a more timely consideration for valid submissions and place the onus for accurate preliminary screening on the requesting provider.

#### Final Recommendation

It would be premature to implement any changes until an evaluation of screening techniques is completed by the American Association of Orthodontists. The findings of the study will give solid guidance for future actions. The citizens of the Commonwealth have been well served in the area of Orthodontic services for eligible recipients. A short wait for all the facts to be gathered should not create a decrease in the quality of care for Medicaid recipients.

The determination and implementation of any changes in the current process are major undertakings. The advice of the dental community should be considered after all the facts are clarified. It is recommended that DMAS encourage an on-going dialogue with members of the dental provider community and their state and national professional organizations.

It is also recommended that an attempt be made to reach a consensus on the definition of a “handicapping malocclusion”. Consideration should be given to whether psycho-social factors should be given a weight in the definition.

## References

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2. Kozlowski, Bruce U. DMAS Program Policy Decision Memorandum for Medicaid MPDM 91-012, Reimbursement for Orthodontic Services: July 28, 1991
3. Department of Health & Human Services, Health Care Financing Administration Medicaid Letter 92-52, Payment for Orthodontic Treatment When Eligibility Expires Before Treatment Is Completed; September 4, 1992
4. Medicaid Dental Manual, "Covered Services and Limitations", Chapter IV, pp. 18-21, Revision date 5-20-92
5. Medicaid Dental Manual, "Salzmann Evaluation Method", Appendix F, pp. 1-9, Revision date 6-1-89 (Contains reprint of Salzmann article from Am. J Orthodontics 54 (1968), 752-760)
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8. "An Orthodontic Policy Problem" Staff paper - overview of history of DMAS use of modified Salzmann Index, with recommendations
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10. Analysis of quality of care issues which may occur due to possible proposed changes: May, 1995
11. Adiele, Moses, and Sorensen, H. W. Memo: Recommendation for Change in Medicaid Manual: January 13, 1994
12. Survey of 670 "gradable" claims, derived from Medicaid dental evaluations for orthodontic procedures, January 1 to May 3, 1995

13. Summary of policy and guidelines used in Orthodontic Care Eligibility, by third party providers and other states' Medicaid agencies. Interview/survey conducted by Division of Client Services personnel during May of 1995, documentation appended
14. Summary of Medical Necessity indicators used to determine need of Orthodontic Care, Compiled interviews/surveys of persons, agencies, programs or groups involved with Orthodontic Care in Virginia, conducted by DMAS Medical Consultant during May of 1995, documentation appended
15. Orthodontics Expenditure Forecast for Calendar Years 1995 and 1996, based on statistical analysis of Medicaid claims data.
16. Salzman, J.A. "Malocclusion severity assessment" Am. J. Orthodontics 53 (1967),109-119
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18. Contemporary Orthodontics (1986) Pub. C.V. Mosby Co., St. Louis, Mo.: pp. 2-12
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20. American Association of Orthodontics Memo describing "Orthodontic Coverage Under Medicaid" with attached surveys (2) of coverage, by state, dated November 4, 1991
21. "Request for Proposal" (regarding Orthodontics Indices), Result of Resolution (44-94 MASO-Indices) adopted at the 1994 AAO House of Delegates, October 5, 1994

### **Contact**

N. Moses Adiele, M.D., M.P.H., FAAFP  
 Director of Medical Support, Virginia Department of Medical Assistance Services

## **Appendix A**





LD6791384

HOUSE JOINT RESOLUTION NO. 476

Offered January 18, 1995

Requesting the Secretary of Health and Human Resources to study Medicaid eligibility for orthodontic care.

Patrons—Nixon, Baker, Cox, Crouch, Hamilton and Orrock; Senator: Martin

Referred to Committee on Rules

WHEREAS, the Commonwealth of Virginia spent \$1.2 million on Medicaid payments for orthodontic care in fiscal year 1993; and

WHEREAS, the Department of Medical Assistance Services establishes policy determining eligibility for such care; and

WHEREAS, the current criteria are based on a rating system developed Dr. J.A. Salzman in 1968; and

WHEREAS, the Salzman index contains factors that are inappropriate, arbitrarily weighted, unreliable and/or are not reproducible; and

WHEREAS, the Salzman index is wholly quantitative, thereby excluding consideration of important qualitative factors normally associated with orthodontic care; and

WHEREAS, use of the Salzman index results in the denial of eligibility to persons with severe functional orthodontic needs, but approval for persons with mostly cosmetic needs; and

WHEREAS, it should be the objective of the Commonwealth to implement the most equitable and efficient system of eligibility possible; now, therefore, be it

RESOLVED by the House of Delegates, the Senate concurring, That the Secretary of Health and Human Resources be requested to study and implement appropriate administrative actions required to alter the Commonwealth's current policy of Medicaid eligibility for orthodontic care to include quantitative and qualitative criteria and that such criteria be heavily weighted toward functional need. Any altered policy shall require that evaluations be provided by private sector Doctors of Dentistry who agree not to accept Medicaid patients for orthodontic care; and, be it

RESOLVED FURTHER, That the Secretary of Health and Human Resources report her findings and actions to the 1996 Session of the General Assembly by December 1, 1995, as provided in the procedures of the Division of Legislative Automated Systems for the processing of legislative documents.

LD6791384

HI476

1/18/95 16:56

Official Use By Clerks			
Passed By		Passed By The Senate	
The House of Delegates			
without amendment	<input type="checkbox"/>	without amendment	<input type="checkbox"/>
with amendment	<input type="checkbox"/>	with amendment	<input type="checkbox"/>
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Date: _____		Date: _____	
_____	Clerk of the House of Delegates	_____	Clerk of the Senate



## **Appendix B**



Manual Title	Chapter	Page
Dental Manual	App. F	169
Chapter Subject	Page Revision Date	
Salzmann Evaluation Method	6-1-89	



## APPENDIX F SALZMANN EVALUATION METHOD

752 *Salzmann*

*Am. J. Orthodontics*  
October 1968

The teeth in malocclusion are assessed according to the criteria and the weights or point values assigned to them. The relative point values are based on clinical orthodontic experience from the standpoint of the usual contributory effects of various types of malocclusion on dental health, function, and esthetics.

The point values of the Handicapping Malocclusion Assessment Record forms were tested by orthodontists from various parts of the United States. They assessed dental casts of patients with untreated malocclusion of various degrees of severity. The scores obtained were found to show an extremely high correlation with subjective clinical ratings of severity of malocclusion of the same casts.

### INSTRUCTIONS FOR SCORING

The assessor should score 2 points for each affected maxillary incisor and 1 point for each affected maxillary posterior tooth and for each affected mandibular anterior and posterior tooth.

Fig. 3 shows the division of the dentition for scoring. The maxillary anterior segment includes the four incisors only. Two points should be scored for each deviated maxillary incisor and 2 points for each visible crest of the interdental papilla of spaced maxillary teeth from canine to canine.

The mandibular anterior segment also includes the four incisors, for which only 1 point is scored for each deviated incisor tooth and 1 point for each visible

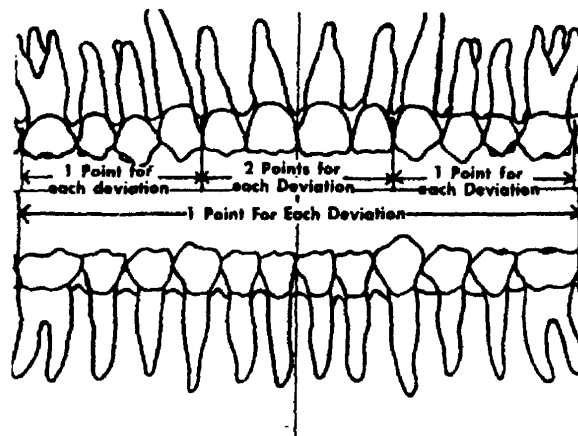


Fig. 3. Division of dentition for scoring. The anterior sections include the four incisors only. The posterior sections include the canines, first and second premolars, and first molars. The second molars may be used when the first molars are missing; otherwise, they are not included in the assessment. Score 2 points for each deviated maxillary incisor. Score 2 points for each visible crest of a maxillary incisor papilla. Score 1 point for each maxillary posterior tooth deviation. Score 1 point for each deviated mandibular anterior and posterior tooth. Score 1 point for each visible crest of a papilla of spaced mandibular incisors and for each spaced posterior tooth when both its mesial and distal papillae crests are visible.



## **Appendix C**





# ORTHODONTICS, CY 1994

M. Lupien N:\Exec\Ortho		PAYMENTS	RECIPIENTS	PROVIDERS	COMMENTS
MINOR TREATMENT FOR TOOTH GUIDANCE					
08110	REMOVAL OF APPLIANCE THERAPY	\$30,776	203	41	Dental consultants believe that these procedures performed
08120	FIXED APPLIANCE THERAPY	\$28,795	162	44	are almost always appropriate.
	<i>SUM (UNDUP PROVIDERS AND RECIPS)</i>	<i>\$59,571</i>	<i>330</i>	<i>70</i>	
MINOR TREATMENT TO CONTROL HARMFUL HABITS					
08210	REMOVAL OF APPLIANCE THERAPY	\$0	0	0	Dental consultants believe that these procedures performed
08220	FIXED APPLIANCE THERAPY	\$7,700	76	21	are almost always appropriate.
	<i>SUM (UNDUP PROVIDERS AND RECIPS)</i>	<i>\$7,700</i>	<i>76</i>	<i>21</i>	
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COMP ORTHO TREATMENT-TRANSITION DENTITION					
08460	CLASS I MALOCCLUSION	\$206,800	182	24	The term "transitional" implies that the procedure is being
08470	CLASS II MALOCCLUSION	\$203,923	187	34	performed on baby teeth. If the procedures is absolutely
08480	CLASS III MALOCCLUSION	\$23,600	20	11	necessary, it could probably be delayed until the teeth
	<i>SUM (UNDUP PROVIDERS AND RECIPS)</i>	<i>\$434,323</i>	<i>389</i>	<i>42</i>	are permanent. This is the advice of the dental consultant.
COMP ORTHO TREATMENT-PERM DENTITION					
08560	CLASS I MALOCCLUSION	\$392,687	337	64	Dental consultants believe that recipients with these
08570	CLASS II MALOCCLUSION	\$661,066	541	67	conditions are highly functional and as many as 70% of the
08580	CLASS III MALOCCLUSION	\$121,600	100	34	procedures are performed for cosmetic reason.
	<i>SUM (UNDUP PROVIDERS AND RECIPS)</i>	<i>\$1,175,353</i>	<i>975</i>	<i>77</i>	
	<i>TOTAL SUM (UNDUP PROVIDERS AND RECIPS)</i>	<i>\$1,676,947</i>	<i>1,766</i>	<i>139</i>	<i>Summary: Dental consultant believes that Salzman Evaluation Scale used for ortho pre-authorization at DMAS may be adjusted to reduce authorization for cosmetic services and conserve public resources.</i>

