

# **DENTAL CARE FOR THE INDIGENT AND MEDICALLY INDIGENT IN THE STATE OF HAWAII**

*"... a strong America cannot neglect the aspirations of its citizens—the welfare of the needy, the health care of the elderly, the education of the young. For we are not developing the nation's wealth for its own sake. Wealth is the means, and people are the ends. All our material riches will avail us little if we do not use them to expand the opportunities of our people."*

John F. Kennedy in Second State  
of the Union message, Washington,  
D.C., January 11, 1962

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## FOREWORD

This report on dental care for the indigent has been prepared in response to Senate Concurrent Resolution No. 27, adopted during the 1967 Legislative Session. It is apparent that the problems of dental care in Hawaii are linked with the problems of health care services, including problems of shortages of professional personnel, new techniques of treatment, new demands for services and new methods of delivering service. In part, these changes reflect increased national and federal government attention on and concern for health care and health care services since the early 1960's. We have attempted to touch on some of these broader problems while at the same time indicating the pertinent situation in Hawaii.

We wish to thank the many organizations which helped in the preparation of this study--Hawaii Dental Service, Hawaii Office of Economic Opportunity, Hawaii State Dental Association, Honolulu Community Action Program and its Dental Task Force, the office of U.S. Representative Patsy T. Mink, Department of Health, and Department of Social Services. Representatives of these organizations were most helpful in assisting us to gather data. Certain individuals were also especially helpful--Mrs. May Tamura for her research help and for ordering and checking the footnotes and bibliography, Miss Jane Tsuchiyama and Mr. Stanford Kanno for their generous assistance in data processing.

Herman S. Doi  
Director

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## Chapter I

### INTRODUCTION

At the 1967 General Session of the Hawaii State Legislature several bills and resolutions were introduced relating to the general area of health, medical and dental care. They ranged from bills and resolutions which provided for the establishment of a state medical research center, to comprehensive health and health facilities studies. Two bills with substantive health implications which passed both houses and were signed by the Governor were Senate Bill 703, which became Act 215, the Waimanalo Health Services Project, and Senate Bill 998, which became Act 299, the Progressive Neighborhoods Program.

In the area of dental care and dentistry, the following bills and resolutions were introduced:

- |                                 |  |
|---------------------------------|--|
| Senate Bill 933                 | - relating to the licensure of dentists in the State   |
| House Bill 933                  | - substantially the same as Senate Bill 933  |
| Senate Resolution 83            | - requesting the Department of Social Services study and propose a plan for dental care for the indigent       |
| House Resolution 135            | - substantially the same as Senate Resolution 83   |
| Senate Concurrent Resolution 27 | - requesting the Legislative Reference Bureau study a dental care plan for the indigent and medically indigent |

Of the bills and resolutions dealing with the field of dentistry, only Senate Concurrent Resolution 27 passed. (The full text of this resolution is reproduced on the inside front cover of this report.)

All three resolutions relating to dental care: (1) indicated a concern for the high rate of tooth decay among the welfare recipient population in Hawaii with a low utilization rate, (2) noted the fact that the Department of Social Services had changed its method of providing medical services to the welfare population, and (3) noted that federal funds available under the Social Security Act were not being and might not be fully utilized by the State of Hawaii. The resolution finally adopted requested the Legislative Reference Bureau to cooperate with the Hawaii Dental Association, the Dental Service

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Corporation (sic), the State Department of Social Services, the State Department of Health, the Hawaii Office of Economic Opportunity, and the Honolulu Community Action Program. The resolution also asked that the study include consideration of (1) continuing and expanding the current system of dental clinic services; (2) providing a mixed system of clinics and an open panel or fee-for-services plan; and (3) complete conversion of the present system to an open panel or fee-for-services plan.

This recognition of the needs of the people of Hawaii is part of a history of growing interest in the general health and welfare of the people. It is in part a recognition that an individual cannot be free unless the conditions of his life enable him to be free. Not only must he be free from negative deterrents such as repressive political, economic, and social conditions, but he must in a positive sense be fully aware, fully educated, fully realized. Only when each individual can be fully developed can a society be fully developed.

The eighteenth-century philosophers who made equality a central term in our political vocabulary never meant to imply that men are equal in all respects. Nor do Americans today take such a view. It is possible to state in fairly simple terms the views concerning equality that would receive most widespread endorsement in our country today. The fundamental view is that in the final matters of human existence all men are equally worthy in our care and concern. Further, we believe that men should be equal in enjoyment of certain familiar legal, civil, and political rights. They should, as the phrase goes, be equal before the law.

But men are unequal in their native capacities and their motivations, and therefore in their attainments. In elaborating our national views of equality, the most widely accepted means of dealing with this problem has been to emphasize equality of opportunity.<sup>1</sup>

The people of the United States have committed themselves to furthering the welfare of the individual. It has become a well-accepted concept that the purpose of a democratic government is to serve the people. The emphasis on and the distinguishing of the individual is an outgrowth of placing value on each individual life with the belief that this will lead to social order and the good life, and that the society exists to enhance the well-being of the individual members rather than the members existing for the welfare of the society. The democratic ideal accepts this and proceeds further to the assumption that therefore each individual must have a say in how his individual destiny is to be achieved.

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One difficulty of the American approach to solving problems has been the tendency to avoid planning for the future and to offer solutions after problems are so widespread or so debilitating as to threaten the society itself. But when problems are solved only as they arise or are evident, the solutions often deal only with the manifestations of the problem and then often in scattered or fragmented fashion rather than meeting the source of the problem.

However, the American democratic commitment has been to an "open society", with each individual entitled to equal membership in the community. The questions and problems which arise are answered in the legislative halls, where the various forces of the community are gathered to allocate the resources and provide services for the community.

If we assume then, that concern for the individual means that all members of the community have a right to protection, a basic education, and good health, hardly anyone would dispute this. It is when it is suggested that everyone has a right to good health, irrespective of his ability to pay for it that challenges are raised. We are accustomed to providing tax funds for the education of all children in the community, or for highways, but we hesitate to provide public funds for the health care of everyone.<sup>2</sup> Perhaps we need a more complete understanding of health care. We are well accustomed to the expenditure of public funds for public health programs geared to the prevention and eradication of diseases which threaten the community as a whole, and we must also be prepared to acknowledge and provide for the individual's right to good health.

We have to decide on the issue of the right to health care. If we decide this in the affirmative, we then must decide how to assure that every member of society can receive good health care.

The United States has made certain affirmations about the responsibility of the community to its members. The community has agreed that certain services are of mutual assistance, such as programs of social insurance against the hardships of loss of employment, disability, and medical costs when we are old. Other programs are assumed because of the community's acceptance of its role in providing for the general good, such as educating the young, for the care of dependent children, for the disabled, and others.

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The social services. . .are largely the product of the twentieth century - a delayed response to the industrialism of the nineteenth century. The term is generally and loosely interpreted today to cover such public (or publically supported) services as medical care, education, housing, income maintenance in old age and during periods of unemployment, sickness, disability and so forth, child allowances, and a variety of specific services for particular groups of people with special needs, e.g., neglected children, unmarried mothers, the blind, mental defectives, young delinquents, discharged prisoners and other categories. All these services came apologetically into existence to provide for certain basic needs which the individual, the family, and the private market in capitalist societies were unable or unwilling to meet.<sup>3</sup>

Community responsibility has been translated into the many social services provided by government (federal, state, and local) for community members. The public has been willing to delegate this authority to its representatives in government in order to alleviate social ills and promote welfare, education, and health programs for the general well-being. These philosophies have resulted in a wide variety of government programs.

Before beginning a governmental program, when revising or reviewing an existing program, or when determining the need to continue an existing program, it is well to ask a few basic questions. Some of these questions might be:

- (1) How should the power and resources of the government be used?
- (2) What groups or what individuals should determine the distribution and use of the resources of government?
- (3) Given a limited supply of resources, should the emphasis be on reaching as many people as possible, or on reaching fewer people with better quality?
- (4) What effect will the distribution or redistribution of the resources of government have on the community as a whole?

The answers to these questions, and others which might be raised, will touch on the economic, political, and social structure of a community, and will affect these structures both on the short term and the long term. For instance, if the resources of government are used to encourage, establish, and maintain certain economic structures and organizations, this will affect the future of the community in which this occurs. Many decisions have already been made which

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divide the resources of government among various areas and segments of the community. Interestingly enough, the political structures have received the least encouragement, while the economic and social structures have received the most encouragement from government.

The question of dental care in Hawaii for the indigent and medically indigent is part of a larger question relating to the entire problem of health care. The whole area of health care is undergoing change, and dental care as a part of the health care picture is also undergoing change. These health care changes occur because of changes in medical, dental, and other professional health education, in biological and physical research and information, in hospital care, in relationships between the doctor and the patient, in population expansion and mobility, changes in family life, in ways of paying for health care, and certainly from the increased participation of the public in their expectation of and planning for public health care.

Each of these factors, as well as others, has an effect on the health care available now and in the future. They affect the institutions and facilities where care is given, they affect the primary and auxiliary personnel who are engaged in providing health care, they affect the way these institutions are built and maintained, and the way health personnel are trained and paid as part of a productive society.

Since World War II, the so-called revolution of rising expectations has affected not only the underdeveloped countries of the world, but the developed countries. Facilities and privileges once thought limited to certain groups of people have become a part of the general expectations of all segments of society. Where a first rate education or first rate health care were once assumed to be available only to those who could afford to pay extra premiums for them, these have now become generally expected by all members of society. Not only has it become a desire to obtain first rate medical care at times of serious illness, but also a desire to obtain and enjoy overall good health.

As an indication of one point of view of the growing public interest in good medical care, one author has this to say:

Adequate medical care is a fundamental human right. It is as much a necessity of life as food, shelter, clothing, or education. It is no less indispensable to the well-being of society than to the welfare of the individual. It is an essential component of any program for individual and social security.<sup>4</sup>



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While growing interest in medicine and medical care has led to an increasing demand for medical care from all segments of the population, there has also been increased interest on the part of the medical profession in the social and cultural aspects of health and medical care.

For example, in 1957 the Council on Medical Education and Hospitals of the American Medical Association revised its "essentials of an acceptable medical school" to add human behavior to its list of subjects required as "basic knowledge" in medical education. There have been parallel movements in nursing and dental education. In increasing numbers, sociologists, anthropologists, and psychologists have been added to the faculties of colleges of medicine, nursing, and more recently, dentistry.<sup>5</sup>

Where there had previously been a more specialized approach to medical care in the early part of the twentieth century, a broader approach was taken later.

The comprehensive approach to health care requires a broader perspective on health and disease, a more adequate conceptualization of human behavior as such, if it is to facilitate the organization of health resources to deal with the total health of the patient through the cooperative effort of specialists and allied personnel. It calls for integrated and continuing planning which incorporates prevention, rehabilitation, and long-term care as well as diagnosis and treatment of specific symptoms.<sup>6</sup>

We have then, the emergence of public awareness and increased expectations of health care which have come from a background of American political thought and ideals of individualism and equality, the rising expectations of minority groups and the deprived, spectacular advances in medical research and medical services which have brought medical treatment and health to new high levels, and a growing reliance on government to provide services which the private sector has not, is not willing, or cannot provide. Dental care for the indigent population of Hawaii thus forms a part of a total picture. It is logical, therefore, that we look at dental care as a part of a larger environment, and this broader point of view helps place it in proper perspective. Dental care for Hawaii's indigent population is part of the growing and changing field of health care; it is part of a total program of protection, education, and social service of the State of Hawaii for the benefit of the whole community; and the present level is a relatively new demand on the resources of the State and the private economy.

The Hawaii State Legislature has asked the Legislative Reference Bureau to study dental care. The Legislature found a need to review

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the needs and demands of various segments of the community, and to attempt to reconcile them with the total resources available. The Legislature wanted to review existing programs, both public and private; establish coordination with existing federal programs; and to whatever extent possible, fill in or supplement programs for dental care. This concern is part of the Legislature's continuing concern with the cost, delivery and quality of medical care for the indigent and medically indigent.<sup>7</sup>

This report, while it may interest various community groups, is primarily intended for the use of the Hawaii State Legislature when it must consider the problem of dental care for the indigent in Hawaii. It will give information regarding the need for dental care, what is presently being done to meet the need, and possible alternatives to fill the gaps.

## Definition of Terms

### Terms Applying to Prepaid Dental Care

administrative costs. Usually all overhead expenses incurred in the operation of a dental plan exclusive of costs of dental service provided. In some instances, promotional or educational costs are separated from this category.

approved services. 1. All services which are provided under a dental plan. In some plans, authorization must be obtained before approved service is provided; other plans make exception for treatment of emergency needs; still others require no prior authorization for any treatment approved under the program. 2. Dental services which meet quality standards maintained under a dental plan.

audit. A review of the insurer's records, transactions, and assets by outside specialists or by a specialized department of the insurer.

audit of treatment. An administrative or professional review of a participating dentist's treatment recommendations (preaudit), or the review of his reimbursement claims for services performed (postaudit).

authorized services. In programs where funds are limited, such as in public assistance programs, approved dental services which cannot always be rendered immediately but must be postponed because of temporary lack of funds.

beneficiary. A person eligible for benefits under a dental plan. Synonyms: eligible individual; enrollee; member.

benefits. Indemnities or services provided under a dental plan. Synonym: coverage.

capitation fee. A per-person charge made by the carrier for providing dental services to individuals or groups for a specified period of time. This average charge may be based on the number of persons actually using the plan or on the total number eligible to use the plan.

carrier. The party to the dental plan contract who agrees to pay claims or provide service. Synonym: insurer.

closed panel. In a prepayment plan: 1. A group of dentists sharing office facilities who provide stipulated services to an eligible group for a set premium. 2. Those dentists in a community who have agreed to provide services to prepayment plan beneficiaries at an agreed-upon fee for each type of service rendered.

For beneficiaries of plans using closed panels, choice of dentists is limited to panel members. Dentists must accept any beneficiary as a patient.

coinsurance. An arrangement under which the carrier and the beneficiary are each liable for a share of the cost of dental services provided. For example,

the dental plan may cover 75 per cent of the cost of a particular service and the beneficiary must pay the balance.

commission. A payment, generally a percentage of the premium, by a carrier to an agent or broker.

deductible amount. That portion of dental care expense which the insured must pay before the plan's benefits begin.

dental cooperative. A dental facility organized to provide dental services for the benefit of subscribers and not for profit. There is no discrimination as to who may subscribe, and each subscriber has equal rights and voice in the control of the cooperative. The operation of the cooperative usually rests with a lay board of directors elected by subscribers.

dental plan. Any organized method for the financing of dental care.

dental service corporation. A legally constituted organization which contracts with groups of consumers to administer dental care plans on a prepaid basis. These corporations are sponsored by state dental societies and operate on a nonprofit basis.

exceptions or exclusions. Dental services not provided under a dental plan. Orthodontic treatment, for example, is a frequent exclusion.

experience rating. Determination of the premium rate for a particular group partially or wholly on the basis of that group's own experience. Age, sex, utilization, and costs of services provided determine the premium.

fee for service. A charge for each treatment or episode of treatment performed.

fee-for-service plan. A plan providing for payment to the dentist for each service performed rather than on the basis of salary or capitation fee.

fee schedule. Maximum dollar allowances for dental procedures which apply under a specific contract.

fixed costs. Costs which do not change to meet fluctuations in enrollment or in utilization of services. For example: salaries, rent, business license fees, depreciation.

fixed fee schedule. A list of specified fees for services that will be paid to dentists participating in a dental plan.

free choice. A term applied to a dental plan that permits the insured to choose any licensed dentist to care for his dental needs.

group practice. A dental practice conducted by two or more dentists sharing business staffs, facilities, and services. Commonly, dentists operating under these arrangements consult freely with each other or work together in caring for patients, particularly if one or more of them are specialists. Income may be divided equally or prorated on an individual basis.

indemnity plan. A plan which provides payment to the insured for the cost of dental care but makes no arrangement for providing care itself.

loading. The amount included in the premium to meet liabilities beyond anticipated claims payments, to provide administrative costs and contributions to reserve funds, and to cover contingencies such as unexpected loss or adverse fluctuations.

loss ratio. The relationship between the money paid out in benefits and the amount collected in premiums.

open-end contract. 1. A contract which permits periodic re-evaluation of the dental plan during the contract year. If indicated by the re-evaluation, dental services may be deleted or added to achieve a balance between premium and cost of services provided. 2. A contract which sets no dollar limits on the total services to be provided to beneficiaries but does list the particular services which will be included in the plan.

open panel. A plan characterized by three features: 1. Any licensed dentist may elect to participate. 2. The beneficiary has choice from among all licensed dentists. 3. The dentist may accept or refuse any beneficiary.

participating dentist. Any duly licensed dentist with whom the dental plan has an agreement to render care to beneficiaries.

prepaid dental plan. A method of financing the cost of dental care in advance of receipt of service.

prorating. A clause in a contract with participating dentists wherein they agree to accept a percentage reduction in their billings to offset the amount by which the total cost of services provided exceeds the total premium received. A method of spreading a "loss" equitably among participating dentists.

quality evaluation (quality control). Procedures for checking the quality of dental care provided by participating dentists and for correcting any irregularities discovered.

reduced fee plan. A program in which the fees established for some or all services are lower than those usually charged by dentists in the community.

In some industrial plans, employers make lower fees possible by partially subsidizing the cost of providing care (for example, furnishing rent-free facilities and paying costs of utilities). In welfare plans with limited funds, dentists may in effect subsidize the programs by accepting lower fees than they usually charge.

reserve. Funds set aside by an insurer for a particular purpose.

retention. The part of the insurance premium kept by the insurance company or plan to cover its own administrative costs, commissions, earnings on capital, and other expenses.

risk. 1. The probable amount of loss foreseen by an insurer in issuing a policy. The risk is called preferred if the likelihood of creating a loss for the insurer is below the average and may warrant coverage at a lower than average premium rate. 2. The person or group insured.

self-insurance. Setting aside of funds by an individual or organization to meet his dental care expenses or its dental care claims, and accumulation of a fund to absorb fluctuations in the amount of expense or claims. The funds set aside or accumulated are used to provide dental benefits directly instead of purchasing coverage from an insurance carrier.

service plan. A plan which either provides dental services to the insured or makes some provision for dental care and pays the dentist for services rendered.

utilization. The extent to which a given group uses a specified service in a specific period of time. Usually expressed as the number of services used per year per 100 or per 1,000 persons eligible for the service, but utilization rates may be expressed in other ratios.

Source: U.S., Public Health Service, Prepaid Dental Care, A Glossary, Washington, D.C., 1965.

#### Usual, Customary, Reasonable Fees

usual fee. A "usual fee" is that fee regularly charged for a given service by an individual dentist to his private patients not within the coverage of any plan for dental benefits.

customary fee. A "customary fee" is that fee which is equal to the common usual fees charged by the greatest number of dentists (of the same specialty, if applicable) for the same service within the same specific geographic area or socio-economic area of a given community.

reasonable fee. A "reasonable fee" is that fee which even if in excess of the usual fee or the customary fee, as above defined, may, nevertheless, be justified by special or unusual circumstances attending the particular case for which such fee is charged.

Source: Hawaii State Dental Association, January, 1968.

## **Definition of Terms**

### **Terms Applying to Professional Dental Practice**

ancillary personnel. Persons employed by a dentist such as secretaries, receptionists, bookkeepers, or other clerical workers. This classification does not include dental assistants, dental hygienists, or laboratory technicians. See auxiliary personnel.

auxiliary personnel. Persons who assist dentists in the performance of dental services. By general usage includes chairside assistants, dental hygienists, and laboratory technicians, but excludes persons employed solely as secretaries, receptionists, or bookkeepers.

bitewing radiograph (X-ray). A specific type of X-ray picture which shows, simultaneously, the crowns of upper and lower posterior teeth and a portion of their roots and supporting structures. Generally used to diagnose the presence of dental decay in adjoining tooth surfaces.

bridge. A replacement for missing or extracted natural teeth, supported and held by attachments to restored (abutment) teeth and usually not removable.

care. The total of diagnostic, preventive, and restorative services rendered by a licensed dentist.

- A. Adequate care--1. May denote repair or oral damage and the placing of the mouth in a condition to prevent deterioration. 2. May denote the most desirable treatment for an individual, but frequently refers to the substitution of a less costly but satisfactory type of service.
- B. Comprehensive care--All dental services indicated for the restoration and maintenance of oral health. Usually excludes dental care solely for cosmetic reasons.
- C. Emergency care--Any dental services required in treating unexpected and urgent conditions such as acute infection, hemorrhage, or toothache.
- D. Incremental care--Services initiated at specific intervals of time to specific age groups in order to establish and maintain a state of oral health.

- E. Initial care--Services required for dental needs existing at time of enrollment in a plan for dental care or at the beginning of any dental treatment.
- F. Maintenance care--Services required to maintain oral health after the backlog of dental needs has been met.
- G. Minimal care--Generally includes only treatment of acute conditions of teeth and gums.

caries. dental. Decay of the teeth in which cavities are formed by the gradual decomposition and disintegration of natural tooth tissue.

cosmetic dentistry. Any dental service performed primarily to improve appearance.

DEF rate. Similar to the DMF rate but used for primary dentition (baby teeth), the letter (d) (which stands for decayed primary teeth indicated for filling) and the letter (f) (which represents filled primary teeth) have the same meaning as in DMF. The symbol (e), however, stands only for decayed teeth indicated for extraction--missing teeth are not counted for this rate, since they often cannot be differentiated from teeth lost through natural exfoliation.

DMF rate. For an individual, the number of permanent teeth (or for a group, the average number) which are (D) decayed (M) missing or indicated for extraction, and (F) filled. The DMF rate is a measure of the cumulative effects of dental caries and a useful means for comparing the lifetime dental decay experience of groups of comparable age.

denture. An artificial substitute for missing natural teeth and adjacent structures.

Complete denture--A dental prosthesis which replaces the lost natural dentition and associated structures of the entire maxilla or mandible.

Immediate denture--A dental prosthesis constructed for insertion immediately following the extraction of natural teeth.

Partial denture--An artificial replacement of one or more but less than all of the natural teeth and associated structures.

Fixed partial denture--A restoration of one or more missing teeth which cannot be readily removed by the patient or dentist; it is permanently attached to natural teeth or roots which furnish the primary support to the appliance, generally referred to as a bridge.

Removable partial denture--A prosthetic appliance which artificially replaces missing teeth and associated structures in a partially edentulous jaw and which can be removed from the mouth and replaced at will; it depends in part on the oral mucosa for its support.

diagnostic services. Procedures such as radiographs, clinical examinations, biopsies, blood tests, study models, and vitality tests which assist the dentists in determining the disease conditions present and the treatment required.



edentulous. Without any natural teeth; completely lacking natural teeth.

endodontics. That specialty of dental science concerned with the diagnosis and treatment of diseases of the pulp chamber and pulp canals.

filling. 1. The restoration of a tooth's form and function by the placing of suitable material in the prepared cavity of a tooth. 2. The formed material in place in a tooth. Commonly used restorative materials include both precious materials (gold) and nonprecious materials (silver amalgam, acrylic resins, and cements).

fluoridation. The adjustment of the fluoride content of a water supply as an aid in decreasing the incidence of dental caries. The optimum content is one part fluoride per million parts of water.

fluoride, topical application. The direct application of a solution of fluoride, to the crowns of the teeth as a measure for partially preventing the incidence of dental caries. Application is recommended on a routine basis through childhood and adolescence.

gingivitis. Inflammation of the gingival tissue (gums).

malocclusion. Abnormalities in the positioning and relationship of teeth.

oral pathology. The branch of dental science concerned with the study of diseases of the hard and soft tissues of the mouth.

oral surgery. The branch of dental science concerned with surgical procedures in and about the mouth and jaws.

orthodontics. The branch of dentistry concerned with the investigation of dento-facial development and with the detection, prevention and correction of abnormalities in the positioning of the teeth in their relationship to the jaws and of associated deformities and dysfunctions. Popularly, straightening teeth.

pedodontics. The branch of dental science concerned with the prevention, detection and treatment of dental disorders of children.

periodontics. The branch of dentistry devoted to the study, prevention and treatment of diseases of the gums and bones supporting the teeth.

preventive dentistry. The branch of dentistry devoted primarily to averting oral diseases and inhibiting the progress of diseases already present. Some elements of prevention are inherent in all branches of dental practice.

prophylaxis. The removal of calculus (tartar) and stains from the exposed surfaces of the teeth by scaling and polishing.

prosthodontics (prosthetics). The branch of dental science concerned primarily with providing artificial replacements for missing natural teeth.

public health dentistry. The branch of dentistry concerned primarily with the prevention and control of dental diseases and the promotion of dental health through organized community efforts.

pulp. The tissue in the center of the tooth containing the nerve and blood vessels.

pulpotomy. The partial removal of the pulp of a tooth, usually performed on children as a treatment after dental caries has penetrated to the pulp.

restorative (operative) dentistry. The branch of dental science primarily concerned with the restoring of damaged natural teeth to a satisfactory state of function, health, and esthetics.

root canal. A space within the root of a tooth normally containing pulpal tissue and connecting the main pulpal chamber with the apex of the root.

root canal therapy. A treatment for a tooth having a damaged pulp; usually performed by completely removing the pulp; sterilizing the pulpal chamber and root canals, and filling these spaces with inert sealing material.

space maintainer. An appliance constructed for the purpose of preventing adjacent and opposing teeth from moving into the space left by teeth lost prematurely; a method of preventing malocclusion.

specialist. A dental practitioner who limits his practice to a certain branch of dentistry, usually after special education in this branch. The officially recognized specialties are endodontics, orthodontics, oral surgery, oral pathology, pedodontics, periodontics, prosthodontics, and public health dentistry.

Source: U.S., Public Health Service, Speaking of Prepaid Dental Care, Washington, D.C., 1959 and U.S. Public Health Service, Prepaid Dental Care, A Glossary, Washington, D.C., 1965.

### Dentistry and Dental Personnel

Dentistry is that branch of the health professions responsible for maintaining and improving the health of the teeth and related structures. The early diagnosis and treatment of tooth decay, periodontal disease, malocclusion and other oral disorders are necessary to ensure the proper chewing of food, and they contribute to normal speech and facial appearance. Prompt detection

of oral cancer and other systemic conditions which manifest themselves in the mouth is necessary for the maintenance of general health.

Modern dentistry places great emphasis upon the prevention of dental disease, through such measures as fluoridation, and upon dental health education. Educational programs stress the importance of proper diet, correct oral hygiene practices, and the importance of regular dental examinations. Dental research, both basic and applied, is another increasingly important component of professional activity.

Dentists and three allied occupational groups--dental hygienists, dental assistants and dental laboratory technicians--constitute the dental work force.

### Dentists

Almost all dentists provide care to patients, primarily in private dental offices, but also in public and private clinics and hospitals, military installations, and other institutions. Diagnosis and treatment of existing oral diseases and abnormalities may involve the filling of decayed teeth, the treatment of soft and hard tissues surrounding the teeth, extraction of teeth, the making of artificial teeth and dentures, and straightening of teeth. The dentist may also provide preventive services including the topical application of fluorides, the scaling and polishing of teeth, and adjustment of the occlusion.

### Dental Hygienists

The dental hygienist is the only dental auxiliary who provides service directly to the patient and who, like the dentist, is required in each State to obtain a license to practice. The hygienist, working under the direction of the dentist, performs prophylaxes (scaling and polishing of the teeth), exposes and processes dental X-ray films, applies fluoride solution to the teeth of children, instructs individual patients in tooth-brushing techniques and proper diet as related to the teeth, and performs other duties in conformity with her training and licensing.

### Dental Assistants

The dental assistant's primary function, that of assisting the dentist at the chairside, includes preparing the patient for treatment, keeping the operating field clear, mixing filling materials, and passing instruments. Other duties involve exposing and processing X-rays, sterilizing instruments, assisting with laboratory work, ordering supplies, and handling the office records and accounts.

### Dental Laboratory Technicians

The dental laboratory technician is a highly skilled craftsman who performs many tasks involved in the construction of complete and partial dentures, fixed bridgework, crowns and other such dental restorations and appliances. Dentists are relieved of many time-consuming tasks by utilizing the skills of the technician to perform tasks such as waxing, investing, casting, soldering, finishing and polishing. The technician does not have direct contact with the patient, but performs his work in accordance with instructions received from the dentist.

Source: U.S., Public Health Service, Health Resources Statistics:  
Health Manpower, 1965.

## Chapter II

### THE SETTING

One of the expressions of increased public expectations for social and economic advance is in the field of health care. Part of the preamble of the constitution of the World Health Organization, signed by 61 nations in 1946 states:

Health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity.

The enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without distinction of race, religion, political belief, economic or social condition.

The health of all peoples is fundamental to the attainment of peace and security and is dependent upon the fullest cooperation of individuals and the States.

The achievement of any State in the promotion and protection of health is of value to all.<sup>1</sup>

This expression of the right to good health as a basic human right was further enunciated in Article 25 of the Declaration of Human Rights adopted by the United Nations General Assembly on December 10, 1948, which states that:

1. Everyone has the right to a standard of living adequate for the health and well-being of himself and his family, including food, clothing, housing and medical care and necessary social services and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control.
2. Motherhood and childhood are entitled to special care and assistance. All children, whether born in or out of wedlock, shall enjoy the same social protection.<sup>2</sup>

Dental health forms a part of the overall definition, and a recent World Health Organization report specifically states:

On the basis of this positive and unified concept of health, dental health becomes an inseparable part of general health and only gains meaning when considered in this context.<sup>3</sup>

Implementation of the goals of good health care for the entire population of a country has progressed further in some western European nations than in most other parts of the world. The first governmental medical care program in the modern world was begun in Germany in 1883, followed by Austria - 1888, Sweden - 1891, Denmark -

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1892, Luxembourg - 1901, and Norway - 1909. By 1940, 21 nations in the world had some form of compulsory governmental health insurance program in effect. By 1961, the number had risen to 53.<sup>4</sup>

Among the 53 countries providing some kind of health care, various kinds of programs existed. Some of the variables among government programs are:

1. The general approach or types of mechanisms used in executing the government program.
2. The manner in which those who provide the medical care service are reimbursed.
3. The segments and extent of the population covered, with programs based on residence, employment, coverage of dependents, or coverage of retirees.
4. The nature and extent of care provided.
5. The method of financing programs - all government programs being financed at least in part by taxation. The most common form of financing is by a percentage of payroll contribution by employees and employers, plus a government contribution.<sup>5</sup>

Presently, dental care is a common exclusion from health care coverage. In 1963, at least 16 nations excluded dental care entirely, or in some form, or in respect to adults. Seven more nations required at least part of the cost to be paid by the patient, usually by a sharing of the cost on a percentage basis (see Appendix A).<sup>6</sup>

The pattern of organization, delivery, and payment for dental services varies as a result of various social, economic, political, and demographic factors, the extent and nature of dental needs, and the existence and distribution of dental manpower. The pattern of delivery seems to fall into three categories:

1. Dental services provided by dentists and dental auxiliaries and financed by direct arrangements with the patient or through some form of organization of payment not involving government. In this group would fall prepayment plans, services organized by labour and other consumer groups and by private insurance companies or private philanthropic foundations, and other plans without any governmental participation.

## DENTAL CARE FOR THE INDIGENT

2. Dental services provided by dentists and dental auxiliaries who are partly or entirely remunerated by government, but who are not considered to be government employees.
3. Dental services provided by dentists and dental auxiliaries who are employed by the government.<sup>7</sup>

Another way to describe these categories is:

- (a) . . . a network of dental services staffed by salaried personnel covers the country. . . .
- (b) . . . dental services are provided under a private practice system, and the distribution of professionals in the country is governed by the law of supply and demand. More recently, systems of payment other than by direct arrangement between the patient and the dentist have been evolving. In these, the initiative is taken by the dental profession itself and by consumer groups which together have developed systems for group purchase of dental services with government playing only an advisory role. . . .
- (c) . . . countries [where] dental health services may be offered to large sectors of the population under different types of health insurance plans, financed to a greater or lesser extent from governmental funds. A large part of their services may be provided by private dental practitioners who have agreed to render services under pre-established conditions. In these countries government services with salaried dentists are usually reserved for selected groups, such as school children. Private practice usually has a significant role in rendering services to certain groups of the population, or in supplementing the dental care available through the health insurance plans.<sup>8</sup>

In all three patterns, there usually are some private services and some government services. "What varies is the contribution that each group makes to the total amount of dental health services produced in the country" (see Appendix B for several examples).<sup>9</sup>

The United States has also had a tradition of providing public medical care to the poor. As early as 1687, New York City had a physician for the poor, following the early patterns of the English Poor Laws. In 1811, a New York court held that the New York Poor Law of 1809 should not be construed so as to leave the poor "to the aid of private compassion or to perish".<sup>10</sup> In 1915, a social security committee of the American Medical Association drafted a model bill for compulsory health insurance. Although endorsed by the American Medical Association and introduced in various state legislatures,

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World Wars I and II intervened and concerted opposition developed. Several other attempts were made to introduce and consider comprehensive health programs at the federal level. Finally the Kerr-Mills bill passed in 1960, providing medical care for the aged if they could meet a means test to be established by each state.<sup>11</sup> Then in 1965 Medicare and Medicaid, Titles XVIII and XIX, were passed as Public Law 89-97. They are part of the Social Security Act with its amendments, and further amendments were made in 1967 in Public Law 90-248.

Medicare is one of the newest of the federal programs. However, since 1966 the Department of Health, Education, and Welfare operated more than two hundred separate programs in the field of health care and social welfare. (The programs which might apply more specifically to dental care are listed in Appendix C.)

Thus from the early attempts to care for the disadvantaged on a bare subsistence basis, and as the American society has become more complex, the systems of general welfare and medical care have become more complex. We now have such public services as education, housing, medical care, income maintenance in old age or during periods of unemployment, and special services for special groups like neglected children, unmarried mothers, mental defectives, and juvenile delinquents which have become a regular part of American welfare services.

It is interesting to note the relative roles played in health care by the private and public sectors of our nation. The role of environmental health and the control of communicable diseases, of the medical care of mariners, veterans, Indians, and the Eskimos has been a part of the role of the federal government. State and local governments have assumed some responsibility for the medical care of needy persons even before the medicare amendments to the Social Security Act in 1965.

From 1939 to 1959, the expenditures for health care averaged 75 per cent from private sources, 25 per cent from public sources.<sup>12</sup>

Dental care represents a major health problem in the United States, and throughout the world. A World Health Organization report notes that:

Diseases of the teeth and the oral cavity are a major community health problem and may cause severe suffering and inability to work, and may even require hospital treatment. It must be accepted that the general health of individuals is often adversely affected by dental infection.



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Until dental diseases are wholly preventable the most important factor in control is early treatment.<sup>13</sup>

Dental care in the United States has been the subject of many research projects.

Adequate dental care constitutes a widely prevalent and oft-deferred health need. A recent study has reported that the average 16 year-old had approximately ten untreated decayed teeth. Inadequate dental care is closely related to low income. Another study indicates that some three fourths of all families earning less than \$2,000 spent no money on dental care in the survey year. Less than one fourth of the families earning \$7,500 or over reported no spending for dental care.<sup>14</sup>

The 1965 study in the United States by the Bureau of Economic Research and Statistics of the American Dental Association gives detailed information of dental needs according to age, sex, income, education, size of city, region of the country, and length of time since last visit to a dentist. The report notes, however, that while the survey is similar in purpose and method to one conducted in 1952, "the present survey includes only first-visit patients".<sup>15</sup> It also cautions the reader of the further limitation that it is "a survey of dental patients and does not include persons who never go to a dentist".<sup>16</sup> Thus, those who perhaps are in greatest need of care are not represented in the sample, and conversely those who visit the dentist more often are overrepresented.

Although the 1952 survey and the 1965 survey are not strictly comparable, the summary tables show the total need for fillings remains relatively the same (2.9 and 2.9 for males; 3.1 and 2.9 for females), but that there is a considerable decline in the need for extractions (2.0 and 1.0 for males, 1.6 and 0.8 for females).

Dental caries, or decay, is a dental disease which affects most Americans during their life span. If neglected, decay destroys tooth structure until teeth are so diseased they must be extracted. Dental decay is the leading cause of tooth extraction up to 35 years.<sup>17</sup>

Both dental caries and periodontal disease can be arrested, or teeth repaired, if caught early enough. However, if left uncared for, disease will destroy teeth so they must be extracted and possibly replaced by artificial teeth. A 1965 study showed there are 20 million adult American men and women who had only artificial teeth, and an additional 90 million who had an average of 18 teeth either missing, filled, or in need of filling. Among this 90 million, almost 10 million had lost all 16 teeth from either the upper or lower jaw.<sup>18</sup>

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Both the American Dental Association and the U.S. Department of Health, Education, and Welfare studies have found certain relationships between such variables as age, sex, race, income level, and education. The two reports are not completely comparable because they are describing different conditions. The ADA report discusses the needs of first-visit patients; whether there is a need for filling, extraction, periodontal treatment, or dentures, or whether there is no dental need other than prophylaxis. The HEW study reports the number of decayed, filled, or missing teeth among American adults, rather than any dental needs these adults might have as a result of dental diseases or abnormalities. In both cases, these reports found a widespread incidence of dental disease, and a large amount of unmet dental needs among the entire population (see Appendix D for representative data). The two reports also note that adequate dental care is more often found in the higher income level groups. The HEW report notes it this way:

Thus, adults with higher income or education had more DMF teeth than less advantaged men and women, but judging from the greater number of teeth they had and the smaller number of decayed ones, their dental condition was nonetheless the better.<sup>19</sup>

Income, age, and length of time since the last visit to the dentist appear to be the variables which show the greatest influence on dental needs and dental care. Both reports would agree that:

Neither emergency nor expedient dental care will maintain oral health, but complete dental care entails continuity of attention, expenditure of money, and availability of dentists.<sup>20</sup>

The American Dental Association study concluded, however, that age was the single most influential variable in determining unmet dental needs. Next, the length of time since the last visit to the dentist was found significant, followed by income of patient.<sup>21</sup> It must be remembered that the population of this study was based on patients who were making their first visit to the dentist and might well be excluding patients at the low income levels who could not afford dental care. The report also reminded the reader that:

. . . the relationship between income and dental needs is not distinct from that between needs and length of time since last visiting a dentist, because of the close relationship existing between frequency of visits to a dentist and income. There is also some relationship between income and region of the country. Similarly, correlations of varying degree exist between other factors that have been related to dental needs in this report.<sup>22</sup>

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The question of the cost of health care is an important one to a governmental jurisdiction engaged in delivering such care. Since 1959, there have been marked increases in health care costs. These increases are a result of an increased population and general inflationary pressures, but more especially on greater demands by the population for more and better health care. With increased education, more urbanized living, and rising personal incomes, people are making increased demands for medical services, especially physicians' services. In 1966, the increases in the medical price index were the largest in 18 years. The medical price index is part of the consumer price index prepared by the Bureau of Labor Statistics of the United States Department of Labor. The Bureau of Labor Statistics compiles information on the cost of various items of a typical family budget. Medical costs are compiled as a part of the goods and services purchased. While the greatest increases were in hospital charges (16.5 per cent), physicians fees also increased 7.8 per cent from December 1965 to December 1966. These increases are in contrast to the 3.3 per cent increases in the consumer price index for the same period.<sup>23</sup>

Another way to look at health expenditures is at the expenditures in terms of the gross national expenditure (GNE). A study by the World Health Organization in 1963 of six countries selected for their variety showed the following:

Country	Year	(1)		(2)		(3)
		GNE (Millions) <sup>a</sup>		Expenditure on Health Services (Millions) <sup>a</sup>		Column (2) as Per Cent of (1)
Ceylon	1957-58	RS	5725	Rs	247	4.3
Chile	1959	Esc.	4115	Esc.	71 <sup>b</sup>	<sup>c</sup>
Czechoslovakia	1958	Kcs	--	Kcs	7152	--
Israel	1959-60	£I.	4716	£I.	250	5.3
Sweden	1956	K.	49106	K.	2414	4.9
U.S.A.	1957-58	\$	441249	\$	23173	5.3

Source: United Nations, World Health Organization, Paying For Health Services: A Study of the Costs and Sources of France in Six Countries, by Brian Abel-Smith, (WHO Public Health Papers No. 17), 1963, p. 55.

<sup>a</sup>Data rounded to nearest million.

<sup>b</sup>Organized services only and not capital development expenditures.

<sup>c</sup>Inapplicable.

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The study indicates four countries had relatively the same proportion of the gross national expenditure going into health services. If capital development and current operating expenditures, direct and indirect, are calculated per capita, the United States appears to have the highest health expenditure, but it does not have the lowest infant mortality rate, and therefore, by at least one common measure, does not have the best health care.<sup>24</sup>

The population and other vital statistics for these same six countries are as follows:

	Ceylon	Chile	Czechoslovakia	Israel	Sweden	U.S.A.
Mid-year estimated population (thousands)	9625	7465	13565	2061	7454	177825
Per cent population under 15	40.7	37.2	27.7	36.1	22.9	31.0
Per cent population over 65	1.9	4.0	8.8	4.7	11.6	8.7
Live birth rate	37.0	35.4	16.0	26.8	14.1	24.1
Infant mortality rate	57.5	119.6	25.7	30.3	16.6	26.4

Source: United Nations, Abel-Smith, Paying for Health Services, p. 38.

Greater expenditures on health care have come from the increased demand for these services. Several factors have contributed to the increased demand for all types of health care services. These include the changing age composition of the population--the United States has an increasing number of young people and old people, who have greater need for medical services than young and middle age adults. The public health measures of the 19th and early 20th century helped extend the age span of life and to reduce infant and child fatalities from the contagious diseases of childhood. Diphtheria, whooping cough, typhoid and poliomyelitis have been brought under control. Other developments such as a better educated and more urban population change the demand also. These groups tend to seek more health service than a less educated, rural population.<sup>25</sup>

Another factor in the growing demand is the increased ability to pay for medical services either because of higher incomes or through third-party payment arrangements. These third-party payments would

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include government public assistance programs as well as private health insurance programs. The growth of private health insurance has been phenomenal. In 1946, the first year after World War II, there were 42,000,000 persons who had some form of health insurance. By 1965, 156,000,000 people (four-fifths of the civilian population), had some sort of private hospital insurance, and 146,000,000 had some surgical protection.<sup>26</sup>

These added demands for medical care have not been met by the necessary increase in the supply of medical care personnel, professional and nonprofessional. The number of physicians in private practice has not kept up with population growth, and the demands for physicians in Viet Nam has taken an additional 20 per cent into the armed services.

Although the number of dentists serving the civilian population increased between 1950 and 1965, the ratio of active nonfederal dentists to civilian population declined from about 50 dentists per 100,000 civilians to 45 per 100,000 (see the following table).

DENTISTS IN RELATION TO POPULATION:  
SELECTED YEARS, JULY 1, 1950 THROUGH 1965

Dentists and Population	1950	1955	1960	1965
Total dentists <sup>1</sup>	87,164	94,879	101,947	109,301
Total population (thousands) <sup>2</sup>	152,271	165,931	180,684	194,583
Dentists per 100,000 population	57.2	57.2	56.4	56.2
Active nonfederal dentists	75,313	76,087	82,630	86,317
Resident civilian population (thousands)	150,790	162,967	178,153	191,890
Active nonfederal dentists per 100,000 civilians	49.9	46.7	46.4	45.0

Source: U.S., Public Health Service, Health Resources Statistics: Health Manpower, 1965, p. 46.

Notes: Total dentist data--Bureau of Economic Research and Statistics: Distribution of Dentists in the United States by State, Region, District and County. Chicago. American Dental Association. 1966 issue (to be published) and prior annual issues. Adjustment for current year graduates made by Division of Dental Health, Public Health Service.

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Bureau of Membership Records: American Dental Directory. Chicago. American Dental Association, 1966. Also prior annual editions.

Active dentist data--Estimates prepared by the Division of Dental Health, Public Health Service.

Population data--U.S. Bureau of the Census: Population estimates. Current Population Reports, Series P-25, No. 327, February 1966.

<sup>1</sup>Excludes graduates of the year concerned, but it includes all other dentists, active or inactive.

<sup>2</sup>Includes all persons in the United States and in the Armed Forces overseas.

The demand for dental services has resulted in eight new dental schools being established since 1950, while others have expanded, so that there has been a 20 per cent increase in the total number of dentists graduating. At the same time, the number of dentists specializing in one of the eight dental specialties has doubled.<sup>27</sup>

With regard to the distribution of dentists in the United States, the western states and northeastern states had the highest ratios of dentists per 100,000 civilians, and the southern and southwestern states had the least favorable ratios of dentists to civilians. Hawaii ranks high with a favorable ratio of 65 active dentists per 100,000 civilians. These active dentists in Hawaii tend to be located in the urban areas of the State.

### NUMBER OF NONFEDERAL DENTISTS AND RATE PER 100,000 CIVILIANS JULY 1, 1965

Location	Civilian Population in Thousands	Number of Nonfederal Dentists		Rate Per 100,000 Civilians	
		Total	Active	Total Dentists	Active Dentists
United States	191,890	102,174	86,317	53	45
District of Columbia	787	755	628	96	80
New York	18,032	14,250	11,891	79	66
Oregon	1,894	1,473	1,251	78	66
HAWAII	648	459	418	71	65
Washington	2,929	2,025	1,847	69	63
Massachusetts	5,309	3,767	3,063	71	58
Minnesota	3,549	2,456	2,018	69	57
Utah	986	596	565	60	57
Connecticut	2,821	1,863	1,590	66	56

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Source: Adapted from Health Resources Statistics: Health Manpower, 1965, p. 47.

Every year since 1963, the United States Congress has tried to increase the supply of medical personnel by appropriating funds for loan and scholarship programs, and for the construction and expansion of health training facilities.<sup>28</sup>

Even with intensified training efforts, however, there still can be relatively little confidence that the complement of medical and related personnel will be numerous enough any time soon to relieve the pressures of demand . . . the belief is widespread that significant manpower shortages will plague the nation's health industry for years to come.

This expectation of continuing personnel shortages is why students of the problem place so much emphasis on the desirability of finding ways to increase productivity in the medical field.<sup>29</sup>

The scope of the increases in health care costs has caused increased government concern. A Report to the President on Medical Care Prices indicated the medical care index had risen 6.6 per cent in 1966, the largest rate of increase in 18 years.<sup>30</sup> Another publication showed this increase continued at an even more accelerated pace in 1967.<sup>31</sup> Although medical care prices and the consumer price index had been rising together, their rates of increase have differed (see Appendix E). Certain components of the medical care index have risen more than others. Between 1957 and the end of 1965, the three highest were hospital charges, which rose 53.5 per cent to an index of 153.3, physicians' fees, 21.5 per cent to an index of 121.5, and dentists' fees, 17.6 per cent to an index of 117.6.<sup>32</sup> General price increases are also reflected in the medical care index, for in 1966 the consumer price index also rose at a rate of 3.3 per cent, the largest rate of increase in 15 years.<sup>33</sup>

Rather than slackening off, or even continuing at the same rate, it appears the medical care index is accelerating at an even greater rate, with the rate from June 1966 to March 1967 for hospital charges rising at a 25 per cent annual rate, and the rate for physicians' fees at a 7.9 per cent annual rate.<sup>34</sup> Witnesses at the U.S. House of Representatives Ways and Means Committee hearings on the 1967 amendments to the Social Security Act testified that hospital costs might go up at a rate of 15 per cent a year for the next few years.<sup>35</sup>

There is mixed reaction as to whether Titles XVIII and XIX of the 1965 amendments to the Social Security Act, popularly called Medicare and Medicaid, were responsible for a substantial part of the

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increases in medical care prices. It is true that the sharpest accelerations of prices have come about since the effective date of Medicare. Some of the explanation for increased hospital costs may be that with the need for better accounting procedures to meet federal requirements, hospitals may have found their charges were not reflecting their true costs.<sup>36</sup> Physicians and other medical personnel in short supply may be raising their fees because of continued increases in demand. While the fees set by medical personnel are not entirely governed by the market place supply and demand, when demand continues at a high level and the shortage of medical personnel continues, prices will go up.

Some easing of the situation has been accomplished by the increasing productivity of physicians and other medical workers. There is reason to believe medical workers are using their time more productively in dealing with patients because of the advances in medical science, the increase in capital equipment and the use of auxiliary personnel, and the new ways of grouping of medical workers into partnerships and group practice which makes possible the more efficient use of time and personnel.<sup>37</sup>

The greatest expansion of the federal government in the field of health care has come since the end of World War II. In 1965, Social Security Act amendments (Public Law 89-97) expanded, revised, and improved health care services, including the first nationwide medical care program based on age regardless of income level. Congressional intent was expressed this way:

In order to provide a more effective Kerr-Mills medical assistance program for the aged and to extend its provisions to additional needy persons, the bill would establish a single and separate medical care program to consolidate and expand the differing provisions for the needy which currently are found in five titles of the Social Security Act.<sup>38</sup>

The amendments provided:

- (1) Medical care for all persons over 65 years of age, with an additional program of voluntary health insurance for which the individual paid \$3.00 and the government contributed \$3.00;
- (2) Revised and improved benefits under Old Age, Survivors, and Disability Insurance;
- (3) Expanded services for maternal and child health, crippled children, and mentally retarded, including 5-year project



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grants for health services for needy children of school or preschool age;

- (4) Revised and improved medical assistance services to those eligible under the various categories of public assistance--Old Age Assistance, Aid to the Blind, Aid to the Disabled, Aid to Families with Dependent Children, and Medical Assistance to the Aged.<sup>39</sup>

Title V of the 1965 amendments to the Social Security Act provided for special project grants for comprehensive health services to pre-school and school age children in areas where there are concentrations of low-income families. The intention is to identify and prevent the further development of adverse conditions which can handicap the child throughout his life. The services can provide screening, diagnostic and preventive services, treatment, correction of defects and aftercare, and can include dental care. The federal government will supply up to 75 per cent of the project costs.<sup>40</sup> The projects are administered by the Children's Bureau of the Department of Health, Education, and Welfare, and are closely integrated with Title XIX services in the same area.

Two new Titles, XVIII and XIX, specifically expanded health care services. Title XVIII became effective July 1, 1966, and Title XIX became effective January 1, 1966.

Title XVIII covers the more familiar aspect of Medicare for the aged by providing hospital and nursing home care for the aged with an optional contributory insurance program for doctors' and related services. By making this medical service a part of the Social Security system, it becomes a prepayment plan so the benefits are a purchased right when the individual is over 65 and is most apt to need costly hospital care.<sup>41</sup> The beneficiaries of the program are given the choice of obtaining medical care from any participating person or institution, without the intervention of the federal or state government.

Title XIX is not a prepayment or contributory plan, but is like general public assistance programs financed in part by the federal government and in part by the states. In order to receive federal matching funds, however, the states must take action to develop new medical assistance programs. Priority must be given to persons already receiving assistance under public assistance programs such as aid to families with dependent children (ADFC), and aid to the aged, the blind, and the disabled (AABD). These groups must be given at least the minimum coverage of inpatient and outpatient hospital services, other laboratory and X-ray services, skilled nursing home care

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for adults, and physicians' services before health care can be expanded to include the medically indigent.

Medical assistance under title XIX must be made available to all individuals receiving money payments under these programs and the medical care or services available to all such individuals must be equal in amount, duration, and scope.<sup>42</sup>

Although Title XIX became effective January 1, 1966, states may continue current programs until July 1, 1975. By that date, the states must have a program to give medical care to all medically indigent as well as those receiving help under public assistance programs, or forfeit their share of federal funds.<sup>43</sup>

If a state intends to participate in this expanded Title XIX medical care program, by July 1, 1967 it must have extended the following five services to all persons receiving public assistance:

- (1) Inpatient hospital care;
- (2) Outpatient hospital care;
- (3) Other laboratory and X-ray services;
- (4) Skilled home nursing services for individuals 21 years old and over;
- (5) Physicians' services.

Between July 1, 1967 and July 1, 1970, these services can otherwise be provided by the state with federal financial assistance under existing Titles I, IV, X, XIV, and XVI, the current public assistance programs. After January 1, 1970, there will be no federal funds available under these titles for medical services. In order to get federal funds for medical services, the state must then meet the standards of Title XIX. The major features of these standards are that the state must:

- (1) Have only one agency administering its Title XIX medical care programs;
- (2) Establish its level of eligibility for medical indigency so it will not reduce the recipient below the level of money payments in the state;

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- (3) Pay the deductible costs and cost sharing provisions required under Title XVIII (Medicare) for those persons receiving public assistance money payments.<sup>44</sup>

Another way to highlight the effect of Title XIX is to set it out by a timetable:

- (1) January 1, 1966 - effective date of Title XIX. State may go under it as of this date.
- (2) July 1, 1967 - if the state chose to go under Title XIX, it must provide at least the five basic medical care services to all persons receiving public assistance.
- (3) January 1, 1970 - Full Title XIX standards must be met if federal matching funds are to be secured.
- (4) July 1, 1975 - comprehensive medical care services must be made available to the medically indigent as well as to all persons receiving public assistance.<sup>45</sup>

The intent of these provisions is to establish comprehensive medical care for those persons already receiving assistance from the state, as well as to make this care available to those persons who would be impoverished by costly medical expenses, or who would be unable to pay for costly medical care. The amount of matching funds available from the federal government for a state's medical care program ranges from 50 per cent to 83 per cent, depending upon the per capita income in the state.

These broadened provisions for medical care services resulted in greatly expanded programs in some states. After a year from the effective date of the 1965 amendments, Congress reviewed the programs available in the states and made further modifications in the Social Security Act. The amendments were passed as HR 12080, and on being signed by President Johnson on January 2, 1968, became Public Law 90-248.

In the 1967 amendments, Congress placed limitations on the amount of matching or sharing of the cost of state medical care programs for the medically needy. The report of the Committee on Ways and Means indicated that the House of Representatives committee was "disturbed over the trend in the programs of some states to reach into the middle-income group in defining who is medically needy",<sup>46</sup> and felt that a few of the states' programs "go well beyond your committee's intent and what your committee believes to have been the intent of the

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Congress".<sup>47</sup> Therefore, the new amendments set limitations on federal participation, but leaves the option to the state to go beyond the federal suggested programs, at the state's own expense. The limitation is that by January 1, 1970, federal funds will not be available for medical care assistance for families whose income exceeds 133-1/3 per cent of the highest amount paid to a family of the same size under the Aid to Families with Dependent Children (AFDC) program. In order to allow states to adjust their programs gradually, this figure is 150 per cent for the period July to December 1968, and 140 per cent for January to December 1969.<sup>48</sup> States have also been required, effective July 1, 1969,

. . . to train and use subprofessional staff, with particular emphasis on the use of welfare recipients and other persons of low income, as community service aides for the kinds of jobs appropriate for them in the public assistance, child welfare, and health programs under the Social Security Act.<sup>49</sup>

The 1967 amendments expanded the kinds of medical services required as a condition for approval of a state's Title XIX program. The state has the option of providing the five basic services previously specified, or to provide any seven from the following list of fourteen:

- (1) Inpatient hospital services;
- (2) Outpatient hospital services;
- (3) Other laboratory and X-ray services;
- (4) Skilled nursing home services;
- (5) Physicians' services;
- (6) Medical care, or any other type of remedial care recognized under state law, furnished by a licensed practitioner within the scope of his practice as defined by state law;
- (7) Home health care services;
- (8) Private duty nursing services;
- (9) Clinic services;
- (10) Dental services;

## DENTAL CARE FOR THE INDIGENT

- (11) Physical therapy and related services;
- (12) Prescribed drugs, dentures and prosthetic devices and eyeglasses;
- (13) Other diagnostic, screening, preventive, and rehabilitative services;
- (14) Inpatient hospital services and skilled nursing home services for individuals over age 65 in an institution for mental diseases.<sup>50</sup>

Two other important amendments relating to the delivery and payment of medical services are that the states are required to allow the medically needy the free choice of any institution, agency or person for their medical care, and that the medically needy can be given payments directly for their medical care rather than the payments going to the suppliers of medical service.<sup>51</sup> These provisions do not absolve the single state agency from the responsibility for administering Title XIX programs, for a state may still set certain standards of medical care, and may set rates of payment for service. It is possible, therefore, that there may be some suppliers of medical care who are unable to meet standards or who are unwilling to provide services under a state plan.

Another feature of the amendments provides for 75 per cent federal financial participation in the administrative and training expenses for medical personnel and supporting staff for Title XIX programs. A single state agency must still be the responsible agency, but it may contract with another agency to provide services without losing federal matching funds.<sup>52</sup>

Further amendments in 1967 extended the duration of grants to states under Title V for projects in low-income areas for maternal and infant care, for the health care of school age and preschool children, and for comprehensive dental health care for children. The Committee on Ways and Means report especially noted:

By the time children enter school, 90 to 95 percent are in need of dental attention. The average child on entering school has three decayed teeth. According to the American Dental Association, obtaining dental care for children is related to family income, the educational level of the parents, the effectiveness of dental health education and the extent to which a community has organized a dental care program for its children.

## THE SETTING

Comprehensive services may include casefinding, screening and referral, preventive services and procedures, diagnosis, health education, remedial care and continuity of service through recall and followup. Projects would have to include preventive services, treatment, and aftercare to the extent required in regulations of the Secretary.

Any meaningful effort to solve the dental health problem must concentrate a major share of attention, and of resources, on the dental health of children. For these diseases, which begin in childhood, can also be most successfully and economically treated and prevented in these formative years. It is obvious, also, that the child who receives adequate dental health protection will have a better chance of maintaining high standards of health throughout his adult years.<sup>53</sup>

Grants for health services, including dental health of children in low-income areas, are authorized on a project basis until July, 1972. Within these special project grants, authorization for up to 75 per cent of the cost of comprehensive dental care for children is provided.

. . . Payments for treatment would be limited to children from low-income families.

Because of the magnitude of the problem of providing dental care to children of low-income families, your committee will expect that the projects will not only provide dental care, but will also study various methods of organizing community dental health programs, including ways of increasing the efficiency of dentists through the use of assistants and auxiliary personnel.<sup>54</sup>

After July 1972, lump sum amounts will be granted directly to the state, but the state will be expected to provide comprehensive health care programs for maternity and infant care and children and youth in low-income areas.

## Chapter III

### PROGRAMS IN HAWAII

Hawaii has a large number of programs that provide dental care. This is particularly necessary in Hawaii, for Hawaii's children, and presumably adults, have a high rate of dental decay.

Two studies conducted by the dental division of the State Department of Health have given evidence of extensive dental caries. In 1957 to 1959, a survey of 96,000 school children found the caries rate one of the highest in the United States (see also Table 1, Appendix F).<sup>1</sup> This DMF (decayed, missing, filled) rate can be interpreted as the average number of permanent teeth attacked by dental caries at a given age, or as a percentage of erupted permanent teeth attacked by caries at a given age (see 1958 rates on Table 2, Appendix F).

A later study of 1,064 fifth grade children in 1958 showed 97 per cent of the children had dental caries and that the average child had 7.2 decayed, missing, or filled permanent teeth. This means 70 per cent of the average fifth grader's 10 erupted permanent teeth had already been attacked by caries. The averages were:

Decayed	2.7
Missing	.2
Filled	<u>4.3</u>
DMF Total	7.2 <sup>2</sup>

In order to remedy this health problem, many programs already exist in Hawaii. One program is aimed at making the public aware of the need for good dental care, primarily through the dental education program in the public schools. A staff of dental hygienists with the State Department of Health provide dental inspections, topical application of fluoride for children in grades 2, 5, and 8, dental consultations, classroom toothbrush practice, and general dental health education. Other programs are primarily treatment programs to restore dental health. (See Table 3, Appendix F for an outline of the various programs available.)

In Hawaii, the dental services available for the indigent population can be delineated according to how the services are delivered, or according to who pays for these services.

On the island of Oahu, dental services are delivered at three dental clinics associated with hospitals, Maluhia, Queen's, and

## PROGRAMS IN HAWAII

St. Francis, at ten state administered part-time clinics, and at two offices of a private foundation.

Maluhia Hospital has a dental clinic located at 1027 Hala Drive in the Palama district of Honolulu, and also has a mobile dental unit which travels to the rural areas of Oahu. Numerous complaints are received by the Community Action Program representatives on the operation and quality of dental care at this mobile unit. For example, two months before the unit goes to a particular district, the welfare clients are notified of its arrival by the mailing of a notice with their welfare checks. Then the mobile unit parks near a school and the children of families receiving welfare assistance are sent to the dentist during school hours. The Community Action Program representatives found that the welfare clients felt this identifies and isolates their children, and is not a way to help their children achieve the respect of their peers or their own self-respect. Then too, the dentist serving on the mobile unit was a man nearing the mandatory retirement age and the welfare clients believed he gave substandard dental care. Whether these beliefs were justified or not, they are important factors determining whether or not the welfare clients use the mobile unit. Other reported problems appear to be that the mobile unit is in operation only 10 months of the year, and that it is inadequately scheduled in the areas it serves. Often it moves on to another area before it has finished the dental care of the population in an area. It has a large area and population to serve, and it takes the mobile unit 14 to 18 months to cover its prescribed route.<sup>3</sup> The operation and supervision of Maluhia Hospital and its mobile unit were shifted from the City and County of Honolulu to the State by Act 97, Session Laws of Hawaii 1965, but even as late as November 1967, the State gave no supervision to the dental operations.

Queen's Hospital and St. Francis Hospital have dental clinics which are a part of the teaching and treatment functions of the hospitals. In order to provide the interns who serve at these clinics with a wide range of learning experiences, the clientele of the clinics is often chosen to assist in the learning experience. As a result, while some patients of the clinics may receive more comprehensive treatment where there is any particular teaching benefit to be gained, other patients are not accepted for treatment. Patients who are also attending the St. Francis Hospital outpatient medical clinic for treatment are usually given some priority over other dental patients who seek treatment. Approximately 80 per cent of the patients at the St. Francis Hospital dental clinic are clients of the Department of Social Services, but not all DSS clients are accepted for treatment, particularly if their need is only routine care.



## DENTAL CARE FOR THE INDIGENT

The Strong-Carter Dental Clinic, located at 810 North Vineyard Street in the Palama district, and at 3165 Waialae Avenue in the Kaimuki district, is principally funded by the Strong Foundation of Hawaii. In 1966, the Strong-Carter Clinic received \$120,000 from the Strong Foundation, \$6,250 in a grant from the State of Hawaii, and \$3,300 in patient fees. It served 4,912 individuals at an average cost of \$26.31.<sup>4</sup> This clinic has been in operation since 1920, when it was established to provide "dental care for the medically needy children of Honolulu whose parents were unable to pay for the services of a private dentist".<sup>5</sup> The founder of the clinic, Mrs. Helen Strong Carter, was also instrumental in establishing and maintaining a school for dental hygienists. The clinic provides comprehensive dental services for children, with emphasis in recent years on dental education and interceptive orthodontics. The clientele is limited to children whose families cannot afford the services of a private dentist, from preschool years through the sixth grade. Most of the children served come from metropolitan Honolulu, but recently, some rural families have been given dental care.<sup>6</sup>

In the last two years, new government-sponsored clinics have been established to service Project Head Start, primarily in the rural districts of Oahu. They are located at:

Waimanalo	Nanakuli
Waiahole	Waipahu
Kahaluu	Halawa
Wahiawa	Kalihi Valley
Waianae	

The establishment of these clinics helped bring into focus the lack of dental care available to the indigent, and the use in some instances of government-paid dentists in clinic settings to meet this need. The clinics are funded by the federal government through the Economic Opportunity Act for Project Head Start. The clinics provide dental care to preschool children enrolled in Head Start programs as part of the general medical care given the children. For the first year of operation, after all Head Start children were cared for, the clinics gave dental care to Head Start siblings and to Job Corps members. The clinics have been established with the assistance of the State Department of Health, in setting up the facilities, and arranging for space in school buildings or other state buildings. They are operated through a contract arrangement with the State Department of Health. Dentists are hired at an hourly rate on a part-time basis to provide dental care at these clinics.

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Soon after Head Start programs began, the first maternity and infant care project opened in Nanakuli. As part of a comprehensive maternity care plan for low-income women, it gave comprehensive dental care for pregnant women, including dentures in some cases. Three additional clinic locations have since been opened, but dental services have been provided in the private dentists' offices for Hilo, Hawaii and Palolo, Oahu patients in this program.

In one program, the Hawaii State Dental Association was instrumental in getting a legislative expression of intent that dental service be delivered through private dentists rather than at a government clinic. This occurred in a committee report to Act 215, Session Laws of Hawaii 1967 (Senate Bill 703), "A Bill For An Act Making An Appropriation For A Waimanalo Children and Youth Health Services Project". This Act set up a comprehensive health services program including medical and dental care for children and youth in the Waimanalo area. The House of Representatives Standing Committee Report No. 910 from the Committee on Appropriations allowed contractual arrangements to be made with pediatricians to operate clinics, but required that "Dental care will be on a fee-for-service basis".<sup>7</sup> This meant the State Department of Health could contract for pediatric services in a clinic setting, but that the offices of private dentists were to be used for dental care. Since no dentists had their offices in the Waimanalo area, it would mean the children would have to be transported to the nearest towns with private dental offices--Aiea, Hahaione, Waikeolu, Kailua, or Kaneohe. A total of \$333,333 was authorized for this program--\$83,333 in state funds, and \$250,000 in federal funds.

When describing dental care programs according to who pays for dental services, program payment for dental care for the indigent is accomplished by means of federal, state, and private funds. The federal government has certain dental care programs available primarily under the Economic Opportunity Act, the Elementary and Secondary Education Act, the Mental Retardation Facilities and Community Mental Health Centers Construction Act, the Vocational Rehabilitation Act, the Older Americans Act, and the Social Security Act. The federal government and the State share the funding of programs under these acts. The major source of private funds in Hawaii comes from the Strong Foundation.

When the 1965 amendments to the Social Security Act were passed, funds were made available to states which would set up comprehensive health programs for indigents. Hawaii submitted a program for indigent medical care, but not a comprehensive dental care program for the use of Title XIX funds. The medical care program under Title XIX

## DENTAL CARE FOR THE INDIGENT

was submitted by the Department of Social Services and approved by the federal government in March, 1966, effective retroactively to January 1, 1966. The Department of Social Services then asked for legislative authorization and funds for a dental care program in the 1967 State Legislative Session. This request came at the same time that the Hawaii State Dental Association was urging the Legislature to provide Title XIX dental care for indigents on a fee-for-service basis, as well as urging the Legislature to close existing government dental clinics. Instead, the Legislature asked the Legislative Reference Bureau to study present dental care programs available and to report to the 1968 State Legislature.

Dental care provided by the State falls under several categories in the state budget, with some services being supplied through the Department of Health, and some through the Department of Social Services. The following is an outline of the services available:

### A. Department of Health

#### 1. Division of Dental Health

- a. Carries out a program of dental education primarily at the public schools. Includes dental inspections and referrals by dental hygienists, and topical application of fluoride to the teeth of 2nd, 5th, and 8th grade children in the public schools.
- b. Manages and supervises under contract nine dental clinics for the Office of Economic Opportunity Project Head Start. Also two clinics on Oahu for the Department of Health Child Health Services programs, and occasional neighbor island clinics for these same programs.
- c. Has administrative responsibility for the dental care offered at Maluhia Hospital and mobile unit, and all state hospitals and state medical facilities.

#### 2. Child Health Services

- a. Funds are available for dental care under programs for Crippled Children, Maternity and Infant Care, and Children and Youth projects. The care is delivered both through state-operated clinics and through fee-for-service at the private dentist's office.

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### B. Department of Social Services

#### 1. Economic assistance

- a. Payments are made to hospital clinics, or on neighbor islands to private dentists on a fee-for-service basis, for the indigent and medically indigent under programs for Aid to the Aged, Blind, and Disabled, Aid to Families With Dependent Children, Child Welfare Foster Care, and General Assistance. For 1967-68, approximately \$50,000 was available for dental care.

#### 2. Vocational rehabilitation

- a. Funds are available for dental care as part of the rehabilitative process.

#### 3. Corrections Division

- a. Dental care is provided the wards and prisoners in confinement at the Hawaii Youth Correctional Facility and the Hawaii State Prison system.

While occasional Department of Health dental clinics are held on the neighbor islands, most dental services on the neighbor islands are provided in private dental offices on a fee-for-service basis. The Department of Social Services, which administers the general medical care program for indigents, has adopted a fee schedule for dental procedures, and pays the private dentist on this basis. At the hospital clinics in Honolulu, the Department pays at a rate of \$2.25 per procedure. The Department budget has not yet included funds for dentures or bridges, unless a physician has certified that such dental work is essential for physical health.

The policy which the Department of Social Services is working toward is to provide dental service on a fee-for-service basis in the private dentist's office. This follows their general medical care policy, for the system of government physicians was terminated on January 31, 1967. The statement of the Department's policy was given in a letter to the chairman of the State Senate Committee on Public Health, Welfare, and Housing on March 29, 1967, when the State Legislature was considering the various resolutions regarding dental care.

## DENTAL CARE FOR THE INDIGENT

A community group which has had particular interest in dental care programs for the indigent has been the Honolulu Community Action Program councils. The Honolulu Community Action Program Dental Task Force was formed, with representatives from each Community Action Council, from the Hawaii State Dental Association, the State Departments of Health and Social Services, the Legislative Reference Bureau, and from United States Representative Patsy T. Mink's office. Monthly meetings were held to identify and describe the programs available, and to explore problems and possible solutions.

In November, 1967, the Honolulu Community Action Program Dental Task Force reached agreement on the position it wanted to take on dental care programs before the State Legislature in 1968. The group which endorsed the statement consisted of the Community Action Council members. (This statement is included in Appendix G.) The Community Action Council representatives at the meetings were anxious that the present dental clinics in rural areas be kept open, and were hopeful that the services of the clinics could be expanded. As noted in their statement, they indicated:

A conclusive answer on the future of the State's present involvement in dental clinic operations should be postponed until the effects of fee-for-service can be evaluated, as in rural areas it is highly possible that clinics will not only have to be maintained but expanded in the future--if dental manpower shortages continue to exist in outlying communities.

They wanted the present clinics to continue in operation as long as there were no private dentists serving a particular area, or not enough dentists, so that the Project Head Start children would continue to receive dental care. They were concerned that with the need so great, reducing any of the existing services would aggravate the problem. As noted in their statement, there was interest in the possibility of expanding the present clinics to again include Head Start siblings, and perhaps in the future to include adults. It was hoped there could be dental services where they were visible and close to the people in need, especially in rural communities where there is a shortage of dentists. (See Appendix H, map of Oahu, for the spatial distribution of dentists on Oahu.)

The scope of service desired by the Honolulu Community Action Committee was defined as comprehensive dental care. This was defined in a letter from the chairman of the Committee on Dental Care for Organized Groups of the Hawaii State Dental Association as:

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. . . dental care given to a patient by a dentist in his usual patient-doctor manner, with careful diagnosis and good quality treatment over a reasonably given length of time with continuous patient dental education.

It would include these services:

- Examination
- Prophylaxis
- Fluoride application
- X-ray films as required
- Restorative dentistry
- Oral surgery
- Endodontics
- Periodontics
- Crown and bridge
- Prosthetics
- Space maintainers.<sup>8</sup>

Orthodontics, the dental procedure to position teeth, often primarily for cosmetic purposes, but also sometimes necessary for general physical health, was not endorsed by the HCAP Committee.

Although it is not a program for low-income groups, a separate program which should also be described is one which provides dental care for the children (up to age 19) of state employees. This program provides dental care on a cost sharing basis. The State pays \$16.80 annually for each employee's child who has not reached age 19. The following is an outline of the dental benefits:

### I. Diagnostic services

- a. Initial examination 100% paid
- b. X-rays as required through state fund
- c. Cleaning once every 12 months

### II. Oral surgery

- a. Extractions 50% co-payment: half paid
- b. Post-operative treatment by state fund, half
- c. Other oral surgery procedures to supplement medical care plan paid by patient

### III. Restorative dentistry

- a. Fillings (amalgam, synthetic porcelain and plastic restorations) "

## DENTAL CARE FOR THE INDIGENT

- b. Gold restorations when necessary to save the tooth
- c. Crowns when necessary to save the tooth
- IV. Endodontics 50% co-payment: half paid
  - a. Pupal therapy by state fund, half
  - b. Root canal filling paid by patient
- V. Periodontics
  - a. Surgical treatment of gums "
  - b. Occlusion correction
- VI. Prosthetics
  - a. Bridges
  - b. Partial dentures "
  - c. Complete dentures
- VII. Space maintainers "

The dental care is delivered in private dental offices on all islands. The program is administered by the Hawaii Public Employees Health Fund through the Hawaii Dental Service. The Hawaii Dental Service is the carrier through which the dental care program is arranged. In the period since the program began on January 1, 1966, the following costs and charges have been incurred:

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	January 1, 1966- June 30, 1966 (6 months)	July 1, 1966- June 30, 1967 (1 year)	July 1, 1967- December 31, 1967 (6 months)
<u>State paid into fund</u>	\$280,225.40	\$587,780.90	\$307,283.20
<u>Charges</u>			
Total	\$233,705.75	\$833,375.57	N.A.
HDS paid out	149,539.00	519,598.66	N.A.
Per child	\$ 7.02	\$ 23.88	N.A.
HDS paid out	4.50	14.88	N.A.
<u>Number of enrollees</u>			
Employees	13,616	14,666	N.A.
Children-beneficiaries	33,369	34,987	N.A.

Source: Hawaii Public Employees Health Fund, January 1968.

The Hawaii Dental Service is of particular interest to the State's consideration of a dental care program because the Hawaii State Dental Association wants dental service delivered through this organization. Hawaii Dental Service was incorporated in February 1962, according to the requirements of Act 69, Session Laws of Hawaii 1961. It was incorporated "as a body corporate for non-profit purposes for defraying or assuming the costs of dentists and dental surgeons and contracting on behalf of dentists and dental surgeons to furnish such services. . . ."9

The Hawaii State Dental Association and the Hawaii Dental Service have proposed to the Department of Social Services that the Hawaii Dental Service be used as the carrier for dental care for indigents under the Title XIX program of the Social Security Act. Given an estimated state indigent population total of 24,000--8,500 adults and 15,500 children--the Hawaii Dental Service has given the following estimated costs for the Oahu indigent population only:

Program with no prosthetics such as space maintainers, <u>bridges - partial or full</u>	Program including prosthetics such as space <u>maintainers, bridges</u>
Children (each) \$64	\$ 67
Adults (each) 95	158



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It is a program without orthodontics, and would be delivered in the private offices of dentists throughout the State.

If all persons eligible to receive dental care were given care from the Department of Social Services clientele, the total cost would approximate \$1,640,000 for the less complete program, and \$2,380,000 for the comprehensive program. These cost figures do not represent what the actual costs would be, however, because not all persons eligible would make use of the available program. As an example of this lower utilization estimate, when the Hawaii State Dental Association and the Hawaii Dental Service proposed a program of dental care to the Department of Social Services in September 1967, they estimated a utilization rate of 40 per cent for children and 30 per cent for adults. At that time, their estimated cost for a comprehensive dental care program was approximately \$890,000.<sup>10</sup>

## Chapter IV

### CONCLUSIONS AND POSSIBLE FUTURE DIRECTIONS

In 1967 the Hawaii State Legislature reviewed various health programs and recognized a need for further information about the dental care available for the indigent and medically indigent in Hawaii. It is important that decisions regarding the kind, level, and scope of state dental care services be made and later reviewed by the State Legislature. One of the functions of a legislature is to focus attention on community needs and to act as the allocator of resources among competing community demands. The demands for dental care programs which were focused on the 1967 Legislature came predominantly from two community groups--the Hawaii State Dental Association and the Honolulu Community Action Program. While both groups expressed agreement on the need for state subsidies for dental care programs, conflict arose over the method of delivering this care. The Hawaii State Dental Association wanted care delivered on a fee-for-service basis, based on the dentists' usual and customary fee, which would have meant closing the existing government-operated clinics. They also urged the use of the Hawaii Dental Service as the fiscal agent for an indigent dental care program. In the case of a proposed Nanakuli-Waianae neighborhood health center, the Dental Association made the following proposal:

1. The Association reiterates the previous statements such as free choice of dentist, fee-for-service basis, comprehensive dental care, high quality dentistry with Hawaii Dental Service participation for tested efficiency and quality.
2. If this is not feasible, then a combination of private practitioner participation with the dental clinic being utilized. That is, with a provision for the free choice of dentists for those patients who so desire. These individuals who want to break away from the stigma of clinical attendance and subsequent apathy, those who have the initiative to seek help as other private individuals do by choice. Yet, this clinic will provide care for the rest in the proximity.
3. That the clinic could be so provided and programmed that private practitioners in a more distant location may provide services at the facilities on a fee-for-service basis.

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Secondly, on an hourly basis only after the above had been tested over a given length of time and found unsuitable.

In conclusion, the Hawaii State Dental Association is willing to participate in this OEO program, with its health service, as an essential feature of corrective social action, as a component on the War on Poverty.<sup>1</sup>

The Community Action group was primarily interested in increasing the existing level of care, and vigorously resisted attempts to reduce care or to close existing government clinics.

The Hawaii State Dental Association was also concerned that federal money available for dental care under Title XIX of the Social Security Act was not being fully utilized by the State, and it was alarmed over the trend toward providing dental care to indigents by means of government dental clinics. It viewed the continuance and expansion of clinics such as those sponsored by the Office of Economic Opportunity for Project Head Start children and their siblings as a threat to private enterprise.

The Legislature postponed resolution of the conflicting demands by directing that a study of the matter be made, and the Legislative Reference Bureau was asked to cooperate with various agencies and report to the 1968 Legislature. These agencies included the Department of Social Services, the Department of Health, the Hawaii State Dental Association, the Hawaii Dental Service, and the Honolulu Community Action Program. Each of these groups was vitally interested in the problem, as a recipient or a deliverer of dental service. One of the groups interested in more and better care for low-income families, the Honolulu Community Action Program, formed a special dental committee to gather information on dental needs and services. The state departments involved, the dental organizations, and the Legislative Reference Bureau cooperated with this committee to develop an understanding of the problem. Monthly meetings were held, and a position paper was issued by the HCAP Dental Committee (see Appendix G).

The problems involved in medical and dental care for the indigent and medically indigent are complex. Although there has been statutory recognition of the concept of community responsibility for the care of all members of the community ever since the Elizabethan Poor Laws, there remains a large proportion of the community that believes that individual effort and hard work are the answer to every need. Therefore, these segments of the community believe

## CONCLUSIONS AND POSSIBLE FUTURE DIRECTIONS

any lack of success is due to lack of diligence, bad habits, or other human weaknesses which could be overcome with the proper attitude and effort. Persons who hold these beliefs do not understand why disadvantaged people cannot find and hold a job, and thus provide themselves with the necessary food, shelter, clothing, education, and health care. The advantaged individual has little understanding of the kinds of technical and social skills that are required in today's job market, often because he has unconsciously assimilated the necessary technical and social skills which are characteristic of the middle and upper income groups through a long process of education and socialization. The poor are the persons who do not possess these skills or cultural orientation, and they have had little opportunity to acquire such skills.

Recent studies of the poor and their life situation have shown there exists a culture of poverty which can be described as having the following, as well as other characteristics: unemployment and underemployment, overcrowded living conditions, reduced access to general community facilities, higher death rates and lower life expectancy, and lower levels of physical and mental health. Associated with these characteristics are low educational achievement, the variable so closely correlated with low income.<sup>2</sup>

There has been increased recognition of the connection between ill health and poverty. The differences in health between the upper income groups and the poor are marked.

The poor are particularly prone to certain diseases, especially those associable with poor housing or the lack of immunization. They are more likely to suffer from accidents characteristic of hazardous occupations and from mental disability. Thus, the U. S. National Health Survey, 1957-58, found the following variations in number of days of disability according to income class:

	<u>Below \$2,000</u>	<u>\$2,000- \$4,000</u>	<u>\$4,000- \$7,000</u>
Restricted activity days per person	32.4	20.5	16.5
Bed disability days per person	12.2	7.8	6.9
Days in hospital per hospitalized person	11.7	8.5	7.2
Days of work-loss due to injury per usually working person	3.8	2.4	1.1

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The somewhat poorer health of the poor may be due to the fact that superior health--in the aggregate--is purchasable. Having less to buy health with, the poor have less health. Better health among the higher income groups may also result from better knowledge of hygiene among the educated. Ill and disabled persons are more likely to be unable to earn a good living. Whatever the reason, there is a demonstrable statistical connection between low income and poor health. This connection appears to hold even when age is held constant in the comparisons and when diseases and disabilities not broadly known as linked to income are compared by income level.<sup>3</sup>

It seems then, that as people are poor they cannot afford the proper nutrition and medical care; as they get sick, they lose time at work or lose their jobs and thus get poorer.

The vicious cycle is complete: the poor lose more time from productive activity because of illness, which in turn deprives them of the income necessary to improve their health through better food, more adequate housing, and preventive and corrective medical care.<sup>4</sup>

Since the dental care programs now provided by the State (and if any expansion or contraction of these programs is contemplated) are intended for the indigent and medically indigent, it is also necessary to understand the attitudes toward health held by the poor. The poor live in a different culture from most of the community. In this culture of poverty, the attitudes and beliefs held and the knowledge and values possessed may be different from those of the middle and upper income groups. The general condition of poverty can be characterized as one having limited alternatives, and a condition of powerlessness, deprivation, and insecurity.<sup>5</sup> An understanding of these cultural problems is significant when preparing or carrying out any kind of health assistance program.

The poor have different attitudes toward sickness than do other groups in our society. They tend to disregard lesser aches and pains, to delay seeing a doctor, and this often accounts for their more serious and more prolonged illnesses.<sup>6</sup>

In almost every phase of health care and behavior, the poor behave differently from the middle class and more affluent sectors of American society. They have higher prevalence rates for many diseases, including schizophrenia. They have less accurate health information. Illness is defined differently. They are less inclined to take preventive measures, delay longer in seeking health care, and participate less in community health programs. When they do approach health practitioners, they are more likely to select subprofessionals. And, under the care of professionals, they are apt to be treated differently from better-off patients.<sup>7</sup>

## CONCLUSIONS AND POSSIBLE FUTURE DIRECTIONS

As their general health beliefs differ, so do their attitudes toward dental health. They often regard dental decay and the loss of teeth as inevitable, and a condition over which they have no control. Less concern is given to disease prevention, and thus the prevention of dental caries is not a high priority item.<sup>8</sup> There is also a vague or incomplete understanding of the relationship between preventive dental care and good dental health.

In order to reach the poor with a dental care program, it is not enough to merely have such a program in existence.

. . . efforts to improve the health of the economically deprived will be significantly affected by the extent to which existing knowledge of health behavior is used and extended. It may be necessary, for example, not only to make health care accessible, but actually to carry it to the neighborhoods and doorsteps of the poor--in other words, to make a present of it rather than simply being willing to supply it. It must be made available in such a way that one need not choose between continuous, preventive health care and other essentials. Findings of communications research should be brought to bear on the problem of informing the poor of facts of both good medical care and the services to which they have a right. Most important of all, a community's poor must be psychologically and socially absorbed into its structure, so that health care becomes their unquestioned right rather than something which is dispensed as charity and sought reluctantly.<sup>9</sup>

The American Dental Association has been aware of the great need for dental care for the poor, and at its annual meeting in 1966 made some significant recommendations regarding a dental care program for children. (The complete text of these recommendations is found in Appendix I.) The Association also noted that:

. . . because of the special nature of dental diseases, the development of a dental program for children should have priority call on the nation's resources so that the prevention and control of dental diseases in the younger age groups would contribute most significantly and effectively to the dental and total health of the nation.

The advancing levels of dental and total health in the United States, combined with the increasing public acceptance of the philosophy that all citizens have the right of access to health facilities and services, have brought uniquely to the attention of the nation the need for the development of a national dental health program for children.

The social and legislative trends of the past decade have created a special environment and urgency for the exercise of leadership and responsibility by the nation's dentists in recommending a practical and constructive program which would guide community, state and nation

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in preventing and controlling dental diseases on an organized, economical and realistic basis which would be acceptable alike to the public and to the dental profession.

The United States, of all of the well-developed countries of the world, is the only one which does not now have a dental care program for children in operation.<sup>10</sup>

The concern of the Association has been centered on a program for children with the thought that if dental health can be achieved with children, it is much easier to maintain a healthy condition rather than to try to restore dental health to adults after long neglect. In order to achieve this, the Association recognizes the need for close cooperation between private dentists and government. The Association sees the following elements as the functions of the private and public sectors in programs of dental care:

### Private

- (1) The majority of dentists practice in private offices, carrying on chairside care;
- (2) The majority of families take care of their own dental care and payment for this care; and
- (3) Private insurance companies and dental service corporations now provide prepayment plans for a portion of the population.

### Public

- (1) Community-wide programs such as fluoridation of water supplies and dental health education in schools; and
- (2) Providing dental care for children whose families are indigent or medically indigent.

At the time the president-elect of the American Dental Association testified on the Social Security Act amendments of 1967, he supported legislation to implement a children's dental care program by establishing pilot programs to provide the necessary actuarial and operational experience.<sup>11</sup> The amendments became Public Law 90-248, signed by President Johnson on January 2, 1968, and Section 510 provides for such special project grants for dental health for children, especially in areas with concentrations of low-income families. The American Dental Association has made marked efforts

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to work with government at all levels to meet the great need for dental care.

Any report or outline describing the variety of dental care programs available in Hawaii, and the various places where dental care is delivered will indicate the overlapping and uncoordinated nature of these programs. Three different state departments--Health, Education, and Social Services--are involved in the delivery of dental care to the indigent. Funds for the programs these departments administer come from six different federal acts, matched by state funds. Within the federal acts, separate titles can be the source of dental care program funds, i.e., Titles II, V, and XIX of the Social Security Act. Within one department, the Department of Health, the authority for administering dental care falls upon both the Children's Health Services Division and the Dental Health Division. The State also has government-employed dentists providing dental care for the persons under its jurisdiction in state hospitals and corrections facilities. Also, since the passage of Act 97 in 1965, the State has authority over all public hospitals. While the State Department of Health has had responsibility for the administration of the Maluhia Hospital dental clinic and mobile unit, it has not exercised the necessary supervision.

Delivery and payment systems also vary. On the Neighbor Islands, the State pays dentists on a fee-for-service basis, with the Department of Social Services, the Department of Health and the Department of Education's clients, and Project Head Start's children all receiving care in the offices of private dentists. The fees paid are on the basis of a negotiated fee schedule, and these negotiated fees have sometimes differed among the different programs. On Oahu, dental care is delivered at three hospital clinics, a mobile clinic, eleven part-time state-operated clinics and occasional state-operated neighbor island clinics, and two private foundation clinics. Care by dental interns at the hospital clinics is paid for by the State for its clients at a rate of \$2.25 per procedure; the dentists at the state-operated clinics are paid at an hourly rate; and the private foundation pays its dentists a monthly salary.

The scope of care available varies from primarily emergency care available to adult clients of the Department of Social Services, to interceptive orthodontics available to children eligible for care at the Strong-Carter Dental Clinic. The administration of the various programs is carried out directly by state departments, by contract arrangements, and by buying services from hospitals.



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There is almost no attempt to coordinate a full health care program, including medical and dental care, except in some of the newer programs such as the maternity and infant care project, the mentally retarded program, or the Waimanalo children and youth project.

National attention has been focused on new efforts to establish full health care for the indigent with the new Office of Economic Opportunity program for neighborhood health centers. Here the concept is to present a complete health care center in areas where there are concentrations of low-income families, in order to bring quality health care into the immediate neighborhood of those who need it most. Plans are being drawn up and funding is being sought from the Office of Economic Opportunity for such a health care center for the Nanakuli-Waianae area.

The problems of delivering dental care to the indigent are made even more difficult because large concentrations of the indigent live in the rural areas of Hawaii. Although there is no breakdown of the location of the welfare population currently known to the Department of Social Services on the Neighbor Islands, on the island of Oahu the population breakdown by census tracts shows large concentrations in the Nanakuli-Waianae area and on the Windward Oahu shoreline (see Appendix H). Large concentrations of the indigent also live in a narrow corridor of the city of Honolulu from Kapalama up into Kalihi Valley. As shown on the map accompanying Appendix H, there are a limited number of private dental offices in rural Oahu. This means the Department of Social Services clients have a 20- to 50-mile journey one-way to a dental office in the city. Public transportation from the rural areas to the city is limited and expensive if an entire family has to travel to the city for dental service.

A concept which should be considered and discussed is the concept sometimes called "free choice", "fee-for-service", or "open panel". There is an often expressed contention that the poor cannot be drawn into the mainstream of society unless they are accorded the same right of selection of medical and dental care facilities, shopping facilities, etc. as middle and upper income groups. Another way of saying this is that they should be allowed to go to any physician or dentist they wish, rather than being required to attend certain physicians or dentists who have been appointed to serve the welfare clients. A free choice system gives a wider choice of health facilities to the indigent person and allows a broader range of choices, it serves him poorly if he cannot find medical

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or dental care facilities in close proximity to his home, or if he receives poor service compared with the private patient. A genuine desire to accord the indigent the same choice and quality of health care as the more affluent must be balanced with a realistic understanding of the particular social, cultural, and physical setting of the indigent, and of the professional groups which serve the indigent. Will the free choice of dentists for indigents who live in rural areas mean they get no care at all? For those living in rural or urban areas, will free-choice mean the indigent patient is not given a regular appointment at the dentist's office, or if given an appointment, must wait until the private patients have been served? If these conditions occur, other opportunities and alternatives must be offered.

If the legislature's goal is to provide more and better dental care to the indigent, the problem is how to achieve that goal. The major problems appear to center on the cost of the program, how to deliver the care, and how best to administer the program, including the extensive outreach and follow-up which is necessary to assure full utilization of the program.

In general, given limited funds, the Legislature might explore the possibilities of the following:

- (1) Limit eligibility to the program to certain persons, most probably to children.
- (2) Allow for low utilization rates, i.e., of all the persons who are eligible for the program, assume that only a limited number will actually apply for and get service. However, utilization statistics are often lacking or inadequate.
- (3) Mandate the fluoridation of community water supplies in order to reduce dental decay. This possibility should be explored more fully, for it has resulted in marked reductions in dental decay in various communities. Current professional opinion favors fluoridation, especially since it is part of the general emphasis on preventive health care.
- (4) Limit the benefits available under the program by providing for:
  - (a) A minimum deductible amount which the dental patient pays, or a maximum amount beyond which the State will not pay.

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- (b) Co-insurance, where the patient pays a percentage of the total cost, or where there are surcharges on special procedures like orthodontics. This type of program would be similar to the program for state employees under the Hawaii Public Employees Health Fund.
  - (c) Payment of only certain procedures which would be agreed upon as comprehensive care by the state agency administering the program and the professional dental association.
- (5) Explore alternate methods of delivering and paying for dental care rather than solely in private office settings. The government agency which would be responsible for the program could:
- (a) Negotiate with single dentists or with a group of dentists for a dental care plan with a fee schedule or on a per patient basis.
  - (b) Negotiate with private insurance companies for a dental care plan. This would be similar to a plan through the Hawaii Dental Service, but would be carried by a private insurance firm. (See Appendix J for statistics on the coverage of insurance companies and dental service corporations.)
  - (c) Negotiate a dental care plan with the Hawaii Dental Service. Proposals for such a program have been under consideration by the Department of Social Services. The Hawaii Public Employees Health Fund has negotiated a dental plan with the Hawaii Dental Service, as well as medical plans with Hawaii Medical Service Association (HMSA) and with Kaiser Foundation.
  - (d) Assist private dentists or a group of dentists to set up office or clinic facilities in areas which are now poorly served. This should probably be explored on a total health care program basis rather than only for dental care.
  - (e) Rent facilities in neighborhood health centers to Hawaii Dental Service or to the Hawaii State Dental Association, which would then arrange for the services of private dentists to provide dental care.

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- (f) Continue and expand existing dental care clinics now operated by the State Department of Health to include all indigent children and adults living in the immediate area.

These alternatives will have to be carefully explored in order that programs will continue to meet federal standards so that federal funds will not be jeopardized, and that the full cooperation of all organizations involved will be achieved. It is important that all groups concerned work cooperatively, for each group has important contributions to make to a successful program. Without the Community Action Program groups, knowledge of needs and essential communication and follow-up with the dental patients would be lacking. Without the state agencies, essential technical knowledge of federal programs and administrative controls would disappear. And the cooperation of the professional dental association is vital to deliver the dental care, and to help provide standards of quality care. All groups together can produce new and innovative means of improving the dental health of the indigent and the medically indigent in Hawaii.

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## APPENDIX A

### DENTAL CARE EXCLUSIONS

Among the nations with health care coverage, dental care was often excluded.

Australia, Albania, Denmark - excluded entirely

New Zealand - excluded adults

Netherlands, Spain, Sweden, Turkey - excluded some forms

Some nations required payments for dental services by patients, with a sharing of the cost on a percentage basis.

Belgium - 25 per cent

Chile - 15 per cent

France - 20 per cent or an established fee schedule

Iran - approximately 30 per cent

West Germany - approximately 30 per cent

Netherlands - almost 50 per cent

United Kingdom - 10 per cent (1954)

Source: J. F. Follmann, Jr., Medical Care and Health Insurance, A Study in Social Progress (Homewood, Illinois: Richard D. Irwin, Inc., 1963), p. 22.



## APPENDIX B

### ORGANIZATIONAL PATTERNS OF DENTAL HEALTH SERVICES IN VARIOUS COUNTRIES

#### Brazil

Dental health services in Brazil are considered to be the responsibility of the individual, the community, the state and the central government, in that order.

The population is estimated to be approximately 70 million and the number of dentists 25,000, which gives a ratio of one dentist to 2,800 inhabitants. There are dental assistants, laboratory technicians and a very small number of dental hygiene auxiliaries in the health services. New legislation is being considered to allow the use of auxiliaries in a more extensive way.

In Brazil there is no division or section for dentistry at the central level in the National Department of Health. There is however a dental section in a federal service, the Special Public Health Service Foundation (SESP Foundation). This service was initiated in 1942 with the financial and technical co-operation of the United States Government. The financial assistance decreased gradually every year and eventually the Brazilian Government took over the total financing of the Service.

The SESP Foundation gives curative, preventive and educational services to some underdeveloped areas of the country around the Amazon, San Francisco and Rio Doce valleys. It also gives advice to several state services. Dentistry is represented in its three levels of organization: central, regional and local.

The service is well orientated and makes extensive use of surveys for planning and evaluation. School services are organized on an incremental basis and auxiliary personnel (dental hygiene auxiliaries) are used to make topical fluoride applications. The SESP Foundation has carried out several research studies and has provided field training for dentists studying public health dentistry at the School of Public Health of Sao Paulo University.

The other governmental dental services in the country are in general the responsibility of the governments of the various states and do not usually receive support from the Federal Government. These services are under the Secretary of Health but sometimes the school services are under the Secretary of Education. Examples of this situation are found in the states of Guanabara and Sao Paulo. The School Dental Service of Sao Paulo is the largest in Brazil and has 1,870 dentists. Municipal services also exist in some states.

A large number of dental health services are provided by social security institutions supported by the Government, employees and employers, and by special services supported only by employers and employees. The bulk of dental treatment in the country is provided, however, in individual offices and is financed privately.

Community water fluoridation programmes are increasing and now include 71 communities and two million of the population. Topical uses of fluoride are becoming more widespread.

#### Malaysia

The governmental policy is to provide dental treatment for the following classes of population: (a) school children between 6 and 10 years old; (b) if possible, children above 10 years old; (c) pre-school age children; (d) expectant mothers; (e) hospital cases; (f) very poor members of the general public who draw less than M\$100 per month. This policy, with slight variations, is also followed in the State of Sabah and Sarawak. Other population groups have to obtain their own dental treatment from private dentists.

The population of the country is approximately 10 million. There are about 300 university qualified dentists, and the Government employs about 200 of them. Two hundred school dental nurses (New Zealand pattern) are employed by the Government only, and work under professional supervision, mostly in the Federation of Malaya and Singapore. There are 80 dental technicians employed by the Government.

Dental services are provided in about 350 government dental clinics and in about 100 private practice clinics. Governmental services are mostly free, but those who can afford it pay a small fee. There are no general health insurance schemes but some small insurance schemes have been organized by individual private firms for their staff and are paid by the firms.

#### New Zealand

Legislation in New Zealand provides for a large measure of social security including free medical services for all sections of the community and dental care for children and adolescents up to 16 years of age, for the patients of psychiatric hospitals and other chronically ill and indigent persons. All social security benefits and medical and dental services are financed from direct taxation.

The population numbers 2,594,420. The professional resources consist of 924 dentists, approximately 400 dental technicians and 965 school dental nurses. The number of dental attendants is not known. Seven hundred and eighty-six dentists are in private practice, 48 are employed by the Department of Health, 42 by the University Dental School, 23 by the hospitals, 23 by the Armed Forces and two by research institutions. The ratio of practising dentists to population<sup>1</sup> is approximately 1:2,600.

The dental health services in New Zealand fall into two main categories: those rendered by dentists in their own offices on a private basis, and the public dental health services which fall into three groups: the public hospital dental service, the Armed Forces dental service, and the national dental service.

The public hospital dental service (which is supported by the Government) provides dental treatment free, or at low fees, for persons of limited income. Only five major hospitals, as yet, have a dental department employing full-time dentists although most other hospitals have individual arrangements with private practitioners to carry out necessary treatment for hospital patients. This service is at present under review. In addition to the general hospital dental service, the Department of Health provides dental care, either by salaried dentists or by arrangement with private practitioners, to the patients of the psychiatric hospitals administered by the Department.

The Armed Forces dental service provides free dental treatment to the regular members of the Armed Forces. The dental administration of all three branches, Army, Navy and Air, is centralized in the Director of Dental Services who is an army dental officer.

The national dental service which is provided by the Government and financed from general taxation, is administered on behalf of the Minister of Health by the Director of the Dental Division of the Department of Health acting under the delegated authority of the Director General. It is the major public dental health service in New Zealand and provides free dental treatment (with the exception of specialist treatment) for children up to the age of 16 years. It is organized in two sections:

(a) A school dental service available to pre-school children and to all others attending primary or intermediate grade schools, that is, children from two and a half years of age up to approximately 13 1/2 years.

(b) A dental service for adolescent children, at present up to the age of 16 years, with provision for extension of the age-group at the discretion of the Minister.

The school dental service, which is provided in the precincts of the schools, is staffed by school dental nurses who are trained and supervised by dentists employed by the Government.

The dental service to adolescents is provided in two ways: to a very small and diminishing extent by government-employed dentists operating in departmental dental clinics, but in the main by private dental practitioners, who contract with the Crown to treat the children on a fee-for-service basis after they leave the school dental service and until they are 16 years of age.

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<sup>1</sup>Excluding 432,000 children who are treated by school dental nurses.

Treatment for children which is beyond the scope of school dental nurses is (apart from specialist treatment) also provided by private dental practitioners on a similar fee-for-service basis.

### Sweden

The principles of free trade and freedom in choosing and practising a profession are generally accepted in Sweden. A person registered as a doctor or dentist is free to practise his profession wherever in the country he chooses and as a private practitioner is free to charge the patient according to his own scale of fees. On the other hand, hospital and medical services (general and specialist services) have long been considered to be of vital importance, and at the same time to be so expensive for the majority of the population that there is general agreement that the community--through central and local governmental bodies--should organize and provide them free or at low cost for everyone who wants to make use of them. Since some decades ago, the philosophy is the same with regard to dental health services. Thus, private practice and public health services exist side by side in the dental as well as in the medical field.

The population in Sweden is now (1964) about 7.6 million people. The number of dentists in practice (private or public) is about 5,700, which means that the dentist-to-population ratio is 1:1,340 for the whole country. In the three biggest cities, the ratio is 1:1,900, while in the northern part of the country the ratio is between 1:1,900 and 1:2,500. All dentists have an academic education. There are no dentists of a lower grade and no school dental nurses. Dental auxiliaries of the dental hygienist type are entitled to work under the supervision of a dentist, but up to now no courses have been arranged for these auxiliaries. Practically all dentists have one chairside assistant--in some cases maybe more. There is one dental technician (trainees not counted) to about three dentists.

The major part of the dental health services for adults is provided by private dental practitioners under direct financial arrangements with the patients. Most of the private dentists are general practitioners, only a small number are specialists. Some private practitioners are working part-time to give care to schoolchildren or patients in different institutions, their services being paid for by central or local government bodies.

The fees for medical services are covered to a great extent by the national health insurance. The same is true of the dental treatment of pregnant and nursing women and the hospital dental services. A plan for inclusion of most of the dental care in the national health insurance scheme is being worked out by a parliamentary committee. It will probably be put into practice within a few years.

About one-third of the Swedish dental profession is working in the Dental Public Health Service (DPHS). These services are organized by the regional hospital authorities (the county councils) under the supervision of the National Board of Health, a governmental agency which comes under the Ministry of Health and Social Welfare. Practically all dentists in the DPHS are working full time and their salaries paid by the authorities mentioned (a combination of fixed salary and remuneration in proportion to the work that has been produced).

Most of the dental care of children is carried out under the DPHS, only a relatively small number of children are treated in private practice. Adults can also have dental treatment under the DPHS which is open for all irrespective of age and income. About 60% of the annual working time of the dentists under the DPHS is devoted to the dental treatment for children. Treatment for children is free, but persons over 15 years of age have to pay their treatment according to a fixed scale of fees which is low (less than half, maybe only one-third of the fees charged by private dentists). Many patients try to have treatment under the DPHS but in most polyclinics the waiting time is very long. There are, in all, about 880 polyclinics for general dental treatment.

The dental hospital services form a part of the DPHS. These have been organized in 30 main hospitals and accept inpatients as well as outpatients, referred to them by doctors or dentists in private practice or in the DPHS.

Also orthodontic services, mainly for schoolchildren, are organized and provided by the DPHS. There are at present 38 polyclinics for orthodontic services alone.

The costs of the DPHS are covered partly by subsidies from the national budget, partly by contributions from the municipalities, partly by patients' fees and partly (to more than 50%) by the regional hospital authorities (county councils). The total annual costs now amount to about 150 million Swedish crowns (US\$30 million).

The teachers' polyclinics in the dental schools are organized by the Government and are provided by salaried personnel. Patients in these polyclinics pay the same fees as patients in the DPHS.

The dental services for military personnel are also organized by the Government through the military health service. The treatment is carried out partly by employed dentists, working part-time, and partly by young dentists liable to military service.

### Switzerland

In Switzerland the responsibility for the organization of odontostomatological social services is delegated to the cantons and even in some cases to the communes. These services play a supplementary role to private practice and are offered to patients in the low-income groups, on a reduced scale of fees.

The population of Switzerland is six million and the number of dentists is approximately 2,800. The dentist/population ratio is therefore roughly 1:2,400, and is considered insufficient. The situation is a little better in the cities than in rural areas, but the demands of the urban clientele for dental treatment (gold fillings, complicated types of prosthetic work, treatment of periodontal diseases, etc.) are also greater.

Legislation for practice varies from one canton to another. Recently in Zurich the dental technicians have obtained the right to limited practice on patients in that canton and there are approximately 50 of them officially exercising this right.

In the majority of the larger cities there is a social dental clinic for adults. In each larger city there is also a dental clinic taking care of children at least up to the age of 15 and sometimes of young adults who are still studying. In Basle, Bern, Geneva and Zurich the dental schools play an important social role in providing services to low-income groups.

The state clinics cannot generally meet the demand for treatment. The situation is sometimes a little better in the children's clinics, since the Government usually makes a special effort to provide this type of clinic rather than clinics for adults.

The government clinics and the dental schools charge fees to the patients (except in the case of indigents) according to a scale of fees which is always low, but varies from one canton to another.

In communities where there is no state clinic, the dentists in agreement with the Government take care of the low-income patients. The scale of fees is established for all Switzerland by arrangement with the Swiss Dental Society. The community or canton pays all or part of the fees according to the financial circumstances of the patient.

There is no automatic insurance by the State (Confederation) other than for individuals with a handicapping malformation. Treatment of Swiss citizens and their children (as well as foreign residents under certain conditions) who have this type of malformation is paid for out of invalidity insurance funds. The specialists are paid according to a scale of fees established in accordance with the Swiss Dental Society.

In general, the types of health insurance to which a large proportion of the Swiss population is affiliated do not cover the fees for conservative dental treatment but include those which are related to care of diseases of the oral cavity. Accident insurance which also covers a large proportion of the Swiss population covers expenditures related to the treatment of facial injuries such as fractures of maxillary bones and fractures or loss of teeth.

## United Kingdom

The population of 53,662,600 is distributed as follows: England and Wales 47,022,700, Scotland 5,204,500, and Northern Ireland 1,435,400. The ratio of dentists to population in England and Wales and in Scotland is about 1:3,500. This includes dentists working as general practitioners, for local authorities, in hospitals, and in dental schools. There are a small number of dental auxiliaries and dental hygienists.

No one may practise dentistry until registration after a course of education and training approved and regulated by the General Dental Council. Education is made available in university dental schools and is partly and mainly financed through the University Grants Committee and through the hospital service of the National Health Service. The National Health Service Act empowers health ministers to make arrangements for making dental care available to the whole population and especially to the pre-school child and expectant and nursing mothers (priority groups). The Education Act places a statutory duty on local education authorities to inspect the dental condition of schoolchildren and provide special arrangements for their dental care.

Support is given financially and otherwise to dental health education and to methods of prevention, e.g., water fluoridation. This field of dental health is the responsibility of local health, education, or water authorities.

A very small proportion of dental practitioners practise on an entirely private basis and are remunerated directly by their patients. Dental practitioners in the General Dental Services of the National Health Service may also practise privately. Apart from education and registration there is no government control.

The main body of dental practitioners practise in the General Dental Services of the National Health Service. They provide accommodation, equipment and materials, and are remunerated partly from government funds and partly by the patients. As an exception, children and adolescents up to the age of 21 and expectant and nursing mothers have their treatment paid for entirely out of government funds.

The fees are based on items of treatment and are, in the main, fixed. The patient's share is also fixed by regulations.

In certain parts of the dental health service, dental care is provided by dental practitioners under full-time contract to the regional hospital boards. They are remunerated by an annual salary increasing according to years of service to a maximum. The hospital service provides principally the organized specialist dental services and for this treatment patients do not have to pay. Salaries and running costs are paid from government funds.

The local education and health authorities (regional) have special dental services for school children and priority groups respectively. Finance for these services is provided partly from local taxation (rates) and partly from government grants. Patients receive free treatment under these services. Dental officers are employed by the local authorities and paid an annual salary increasing according to service to a maximum. There are twelve "health centres" and in these 16 salaried dental practitioners provide general dental services. These centres are financed by government funds.

The source of government funds for the General Dental Services and the hospital dental services is national taxation, and the specific amount to be used for dental purposes is voted in the estimates for the National Health Service. The sources of funds for the local authority dental services are two: local taxation (rates) and government funds. Expenditure by local authorities is taken into consideration in fixing the aggregate of general grants from the Government (Exchequer Grants to Local Revenues). Expenditure is met by these grants but specific funds may not always be allocated.

The Government is also responsible for various administrative expenses including those of the central departments and their regional administrative authorities.

## United States of America

Dental health services in the USA are considered to be the responsibility of the individual, the community, the state and the nation, in that order. The role of government is supportive, not direct, and participation by government is usually limited to grants-in-aid and consultation. Personal dental services are provided largely through private arrangements between dentist and patient but the over-all dental public health activities are provided by voluntary agencies and government at all levels--local, state and national.

Dental treatment is generally provided in individual offices and is financed privately. The number of people covered by pre-paid dental care systems with third-party financial participation is increasing rapidly. Special populations, such as the indigent, the chronically ill, the aged and other groups are provided with care by different agencies at all levels of government, often without direct cost to the patient. Specialized services, such as treatment for cleft lip and palate, are also often provided by government at reduced or no cost.

There are about 180 million people in the USA and 100,000 dentists, so the dentist/population ratio is roughly 1:1,800. There are eight dental assistants for every 10 dentists, and the ratio of dentists to hygienists and technicians is eight to one and three to one, respectively. The general population is considered to be urban, suburban and rural, in that order, with a decreasing number of rural residents each decade. The largest centres of population are found in the north-east and north-central parts of the USA.

Public dental health services are provided at the national, state and local governmental levels. Local services are provided through health departments, public and private school systems and by voluntary agencies. It is at this level that most of the health education, preventive procedures and dental care is financed. Community water fluoridation programmes are very widespread, including more than 2,500 communities with a total population of 60 million. Topical uses of fluoride in schools, and other programmes organized in private offices are quite widespread.

All of the 50 states have dental health divisions as integral units of state health departments. In general, they function as co-ordinators of the dental activities in the state, and in all instances they provide consultation and dental health education services. In certain states, treatment services are provided to selected populations, usually children. Approximately seven million dollars are expended annually by state health agencies for dental public health activities.

At the national level there are fairly large programmes of support for dental health programmes and for research through a system of financial grants, technical assistance and consultation. In addition, federal agencies such as the Public Health Service, the National Bureau of Standards, and the Veterans Administration conduct direct programmes of research and training and provide care for special populations classed as beneficiaries of the Federal Government. The US Public Health Service expends approximately \$60 million annually for the support of its dental public health and research programme.

The American Dental Association has an extensive dental health education programme and itself conducts and supports research and study in certain areas. Many of the larger state dental societies also have public educational programmes.

Source: United Nations, World Health Organization, Expert Committee on Dental Health, Organization of Dental Public Health Services (WHO Technical Report Series No. 298), 1965, pp. 32-42.

## APPENDIX C

### PROGRAMS AND SERVICES OF THE U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE WHICH HAVE RELEVANCE TO DENTAL CARE SEPTEMBER 1966

#### Public Health Service

Measuring America's health--the National Center for Health Statistics collects and reports statistical information on all aspects of health.

National Institutes of Health--includes the National Institute of Dental Research which is concerned with disorders of the oral cavity, including tooth decay.

Dental materials and technology--new dental materials have rigorous clinical testing to assure their safe and effective use by practicing dentists.

Dental epidemiology--the study of dental disease in specific population groups provides clues to factors which may produce disease and to methods to control it.

Hill-Burton health facilities program--grants to help build and improve hospitals and other kinds of health facilities.

Schools for the health professions--construction grants to schools of medicine, dentistry, and five other health professions.

Dental manpower and facilities--the Division of Dental Health studies the nation's need for dentists and administers grant programs to increase both the size and productivity of the dental profession.

Dental care for preschool children--to combat dental disease in underprivileged preschool children, the Division of Dental Health works with the Office of Economic Opportunity to plan dental care as part of the Project Head Start programs.

Continuing education for dentists--design of postgraduate courses, using such new methods as programmed instruction by teaching machines will improve dentists' opportunities for continuing education.

Dental care administration--to help Americans meet the cost of dental care, the Division of Dental Health offers advice and consultation about dental insurance plans.

Grants for applied dental research--research grants administered by the Division of Dental Health encourage and support applied research to improve dental health and services.

Control of dental disease--consultation, assistance and information are provided to health agencies and civic and professional organizations on ways to attack the most common dental problems.

Closed-chest cardiac resuscitation--the closed-chest cardiac resuscitation program supports instructor courses for physicians, dentists, and nurses and practical application courses for selected laymen in this lifesaving technique.

Health manpower--studies of health manpower requirements, and expansion of training facilities for all types of health manpower, professional and auxiliary.

Health professions educational improvement grants--awards are made to schools of medicine, dentistry, osteopathy, podiatry, and optometry to help them improve the quality of their teaching programs and to help relieve the manpower shortage in these fields.

Health professions student scholarships--health professional schools are granted funds to provide scholarships for full-time students who could not complete their education without financial assistance.

Health professions student loan program--funds are awarded to schools of medicine, dentistry, osteopathy, and optometry to be used for loans to students who need assistance in paying for their education.

Dental surpak program--by means of a mail survey, the dentist can participate with his State or local health agency to determine whether his X-ray unit contributes to unnecessary radiation exposure of the public.

#### Social and Rehabilitation Services Administration\*

Grants for basic rehabilitation services to disabled persons--a program designed to provide State vocational rehabilitation agencies with funds to support their basic services for disabled persons.

Crippled children's services program--grants are made by the Children's Bureau to State health agencies for treating crippling conditions in children. States with a high child population and low per capita income receive proportionally larger grants.

Maternal and child health services program--grants are made to State health agencies to promote the health of mothers and children, especially in rural areas and in areas suffering from economic distress.

Special project grants for maternity and infant care--provides funds to improve the quality of maternity care as a way of preventing prematurity and certain other known causes of mental retardation.

Grants for health services to school and preschool children--special project grants to provide health services to children of school and preschool age, particularly in areas with concentrations of low-income families. The services include screening, diagnostic and preventive services, treatment, correction of defects and aftercare, including dental services.

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\*In the 1967 reorganization of DHEW, the Welfare Administration and Vocational Rehabilitation Administration were consolidated.



Aid to families with dependent children--States receive federal grants for aid and services to children up to age 21 in families deprived by the death, desertion, disability or unemployment of a parent.

Aid to the permanently and totally disabled--grants are made to states for aid to people over 18 who cannot support themselves because they have a permanent and total physical or mental impairment.

Old age assistance--grants are made to states for aid and services to needy men and women 65 years and older to help them attain or continue the ability to care for themselves insofar as practicable.

Aid to the blind--grants to the states for aid and services to the needy blind of all ages.

Medical assistance program--since January 1, 1966, grants have been available to states for programs that provide comprehensive, high quality medical services to children and adults in low-income families.

Medical assistance for the aged--grants to states for medical services to citizens who are 65 or over and whose income and resources may be sufficient for their maintenance needs but insufficient for necessary medical services.

Source: U.S. Department of Health, Education and Welfare, Programs and Services (Washington: U.S. Government Printing Office, September, 1966), passim.

## APPENDIX D

### DENTAL NEEDS UNITED STATES, 1960-62

Number of dentulous men and women, by number of decayed, missing, and filled (DMF) teeth: United States, 1960-62

Number of decayed, missing, and filled teeth	Men	Women	Number of decayed, missing, and filled teeth	Men	Women
	Number in thousands			Number in thousands	
Total-----	43,933	46,763	16-----	2,116	1,879
0-----	331	234	17-----	1,880	2,028
1-----	380	333	18-----	1,836	2,148
2-----	480	265	19-----	1,932	2,212
3-----	949	434	20-----	1,769	2,344
4-----	834	1,008	21-----	1,968	2,139
5-----	838	732	22-----	1,897	1,859
6-----	968	835	23-----	1,878	2,382
7-----	1,093	842	24-----	2,227	2,675
8-----	978	1,007	25-----	1,811	2,795
9-----	1,320	1,203	26-----	1,714	2,604
10-----	1,652	1,237	27-----	1,249	1,928
11-----	1,508	1,207	28-----	1,030	1,568
12-----	1,504	1,372	29-----	950	767
13-----	1,741	1,358	30-----	597	626
14-----	1,552	1,500	31-----	513	547
15-----	1,625	1,840	32-----	833	858

NOTE: Filled teeth include only teeth with satisfactory fillings. Decayed teeth include not only teeth with caries but also filled teeth with carious lesions or defective fillings. Missing teeth include both missing and nonfunctional teeth. DMF is the total of these three categories. Third molars are included in the count.

Mean number of decayed, missing, and filled teeth among dentulous white men and women 18-34 years of age, by family income: United States, 1960-62

Family income	Men				Women			
	Total DMF teeth	Decayed	Missing	Filled	Total DMF teeth	Decayed	Missing	Filled
Under \$2,000-----	13.1	3.1	5.0	5.0	13.1	1.6	5.8	5.7
\$2,000-\$3,999-----	14.4	2.4	5.4	6.6	14.7	2.8	6.4	5.4
\$4,000-\$6,999-----	16.0	2.0	6.1	8.0	17.6	1.4	6.9	9.4
\$7,000-\$9,999-----	16.9	1.3	6.1	9.5	18.9	1.2	6.5	11.2
\$10,000 and over-----	16.5	1.4	4.6	10.5	18.5	0.7	6.1	11.7
Unknown-----	15.0	2.0	6.0	7.0	15.1	1.8	5.7	7.6

NOTE: Filled teeth include only teeth with satisfactory fillings. Decayed teeth include not only teeth with caries but also filled teeth with carious lesions or defective fillings. Missing teeth include both missing and nonfunctional teeth. DMF is the total of these three categories. Third molars are included in the count.

Mean number of decayed, missing, and filled teeth among dentulous white men and women 18-34 years of age, by education: United States, 1960-62

Education	Men				Women			
	Total DMF teeth	Decayed	Missing	Filled	Total DMF teeth	Decayed	Missing	Filled
Under 5 years-----	7.6	3.4	3.6	0.6	10.1	2.9	5.2	2.0
5-8 years-----	13.6	2.5	7.3	3.8	14.2	2.7	8.3	3.3
9-12 years-----	16.2	2.4	6.2	7.6	17.3	1.7	6.7	9.0
13 years and over-----	16.0	0.9	4.4	10.7	17.3	0.8	4.9	11.5
Unknown-----	12.1	0.5	4.4	7.2	16.5	0.8	6.2	9.6

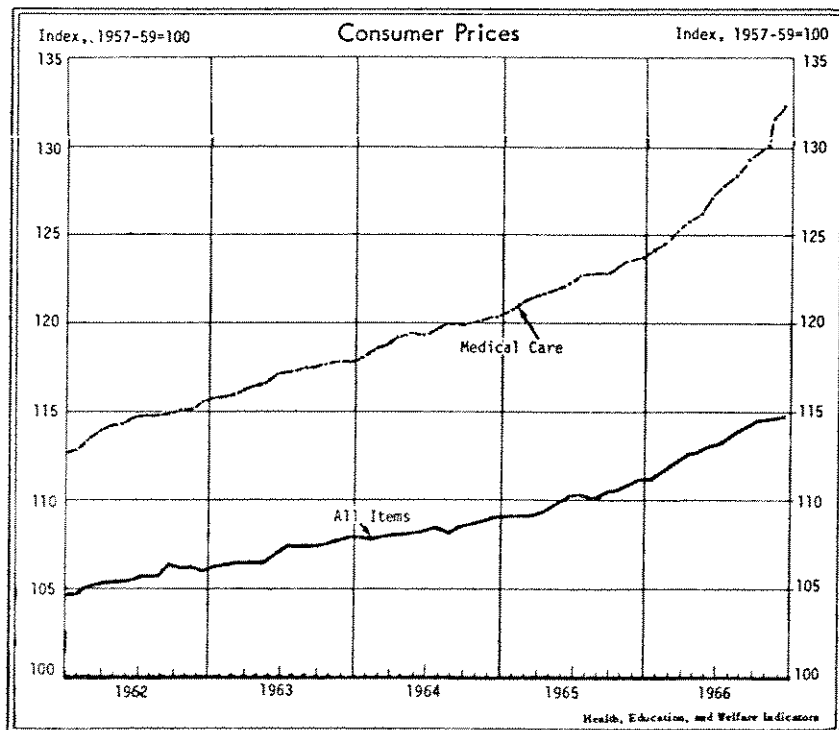
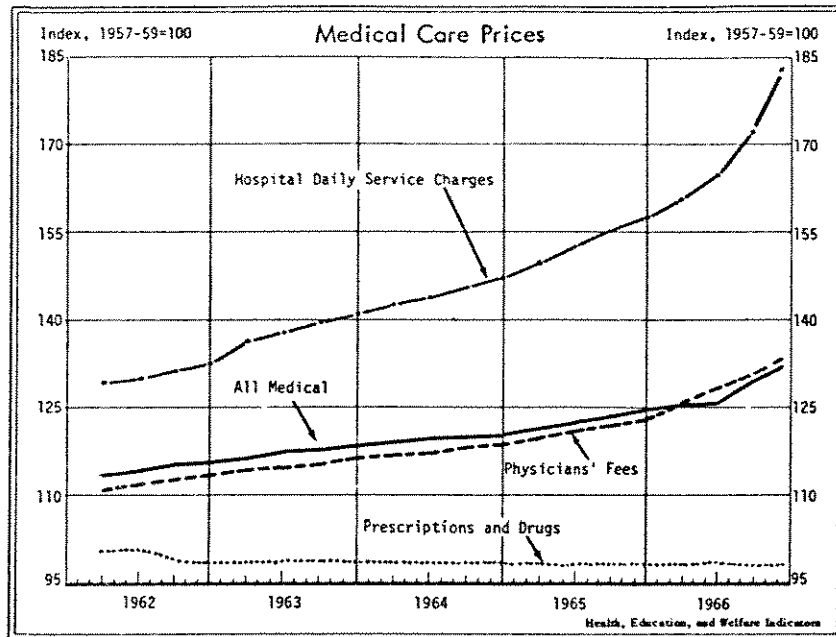
NOTES: Where categories are not listed for a specific race-sex group, the sample size was too small for reliable estimates to be presented.

Filled teeth include only teeth with satisfactory fillings. Decayed teeth include not only teeth with caries but also filled teeth with carious lesions or defective fillings. Missing teeth include both missing and nonfunctional teeth. DMF is the total of these three categories. Third molars are included in the count.

Source: U.S. Department of Health, Education, and Welfare, Decayed, Missing, and Filled Teeth in Adults - 1960-1962 (Washington: U.S. Government Printing Office, 1967), pp. 13, 35-36.

## APPENDIX E

### PRICE INDICES



Source: U.S., Department of Health, Education, and Welfare, A Report to the President on Medical Care Prices (Washington: U.S. Government Printing Office, 1967), pp. 14-16.

## APPENDIX F

Table 1  
DMF Rate - Selected Areas

Area*	Mean DMF rate, 6-14 years
Woonsocket, Rhode Island - 1947	6.98
Muskegon, Michigan - 1944-45	5.70
Hawaii - 1958	5.64
Grand Rapids, Michigan - 1944-45	5.51
Richmond, Indiana - 1947	5.44
Sedalia, Missouri - 1952	5.22
Providence, Rhode Island - 1952	4.75
Sixteen cities, California - 1952-56	4.30
Newburgh-Kingston, New York - 1944-46	4.20

\*Some of these areas have fluoridated their water supplies since the dates shown.

Table 2  
DMF Rates Among Public  
School Children - Hawaii 1958

Age last birthday	Per cent erupted teeth decayed, missing, filled-- DMF rate	Number DMF permanent teeth per person
5	7.6	.11
6	13.0	.72
7	18.4	1.79
8	21.5	2.78
9	23.0	3.75
10	25.2	5.12
11	27.2	6.48
12	32.2	8.45
13	37.6	10.30
14	40.9	11.36
15	45.4	12.64
16	47.7	13.36

Source: Manuel C. W. Kau, James R. Robinson, and Charles G. Bennett,  
"Dental Caries Among Hawaii's School Children." Journal of the  
American Dental Association, LXIII (November 1961), p. 657.

Table 3  
Dental Care Programs in Hawaii  
December 1967

Content	Who is served	Program source	Primary source of funds	Adminis-tered by	Approximate cost 1966-67
Education-service	Children in public schools	State Department of Health	State	State - DOH	Total DOH budget for dental health \$348,906 - 12,500 Federal funds \$336,406 State
Treatment	a. Project Head Start children	Economic Opportunity Act (PL 88-452) 1964	Federal	Contracts with State	\$140,000
	b. Educationally disadvantaged	Elementary and Secondary Education Act, 1965 (PL 89-10)	Federal	Contracts with DOE	\$ 7,700
	c. Aid to aged, blind, disabled	Social Security Act	Federal and State	State - DSS	Total DSS dental budget estimated at \$ 90,000
	d. Aid to families with dependent children			"	
	e. Child welfare foster care			"	
	f. General assistance - medical			"	
	g. Vocational rehabilitation	Vocational Rehabilitation Act	Federal and State	"	
	h. Corrections Division	State prisons and youth correction facility		"	?
	i. Crippled children	Social Security Act, 1965, 1967 amendments	Federal and State	State - DOH	\$ 9,250
	j. Mental retardation	Social Security Act, 1965, 1967 amendments	"	"	23,600
	k. Special projects	Maternity and infant care Waimanalo child and youth Nanakuli child and youth	"	"	20,047
	l. State Hospital Patients Hale Mohalu Kalaupapa Settlement Waimano Hawaii State Hospital	State	State	State	?

Table 3 (continued)

Content	Who is served	Method of delivery	Scope of dental care	Location
Education-service	Children in public schools	Dental hygienists employed by DOH	Inspections, education, topical application of fluorides for 2nd, 5th, and 8th grade children	Throughout the State
Treatment				
	a. Project Head Start children	Part-time dentists under contracts with DOH	Preventive, examination, treatment	Various areas in State
	b. Educationally disadvantaged	Private dental office	Treatment	
	c. Aid to aged, blind, disabled	Strong-Carter Clinic, dental clinics in hospitals in urban Honolulu, mobile unit for rural Oahu; private dental office on neighbor islands	Treatment	
	d. Aid to families with dependent children	"		
	e. Child welfare foster care	"		
	f. General assistance - medical	"		
	g. Vocational rehabilitation	"		
	h. Corrections Division	State employed dentist		
	i. Crippled children	Government clinic - Oahu Private dentists' offices - neighbor islands		
	j. Mental retardation			
	k. Special projects Maternity and infant care Waimanalo child and youth Nanakuli child and youth	Government clinic and private dental office	Comprehensive care during pregnancy  Comprehensive care including re-inspection	
	l. State Hospital patients Hale Mohelu Kalaupapa Settlement Waimano Hawaii State Hospital	State employed dentist		

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## APPENDIX G

### HONOLULU COMMUNITY ACTION PROGRAM COMMITTEE

#### POSITION STATEMENT DENTAL CARE PROGRAMS November 1967

Dental health of the poor in our State is a major problem, and present State-sponsored programs do not meet the need. However, Title 19 of the U.S. Social Security Act now bears promise of "mainstream" dental care for the disadvantaged.

Comprehensive care could be better realized through the State government's involving the extensive resources of private dentistry on a fee-for-service basis to supplement existing government-sponsored clinic services.<sup>1</sup>

CAP Committee urges the 1968 Legislature to mandate such an expansion and provide the State's fiscal share.

Following implementation of a fee-for-service system on Oahu, it should be closely studied regarding its continuing costs and the capability of private dentistry to meet public needs.

A conclusive answer on the future of the State's present involvement in dental clinic operations should be postponed until the effects of fee-for-service can be evaluated, as in rural areas it is highly possible that clinics will not only have to be maintained but expanded in the future--if dental manpower shortages continue to exist in outlying communities.

In regard to the level of State-paid dental services, the current level described in the Department of Social Services' guidelines should be expanded to include the preventive measure of space-maintainers for children and the rehabilitative measure of dentures and bridges for persons of all ages. If priorities on dentures and bridges must be set for fiscal reasons, first priority should be given to school-age youngsters and to job-seekers whose employability is limited by poor teeth.

In short, the Committee supports comprehensive dental care, except for orthodontia.

In proposing such changes, CAP recognizes there will be growing pains involved. We therefore would ask that the Governor of Hawaii convene the public and private agencies involved with dental health and general welfare to monitor and coordinate progress in dental care over a two-year period following Legislative provision for fee-for-service.

With an increased commitment to dental health from the Executive and Legislative branches of government and the private sector, much can be done to improve the overall welfare of the people of our State. The needs of today call for action now.

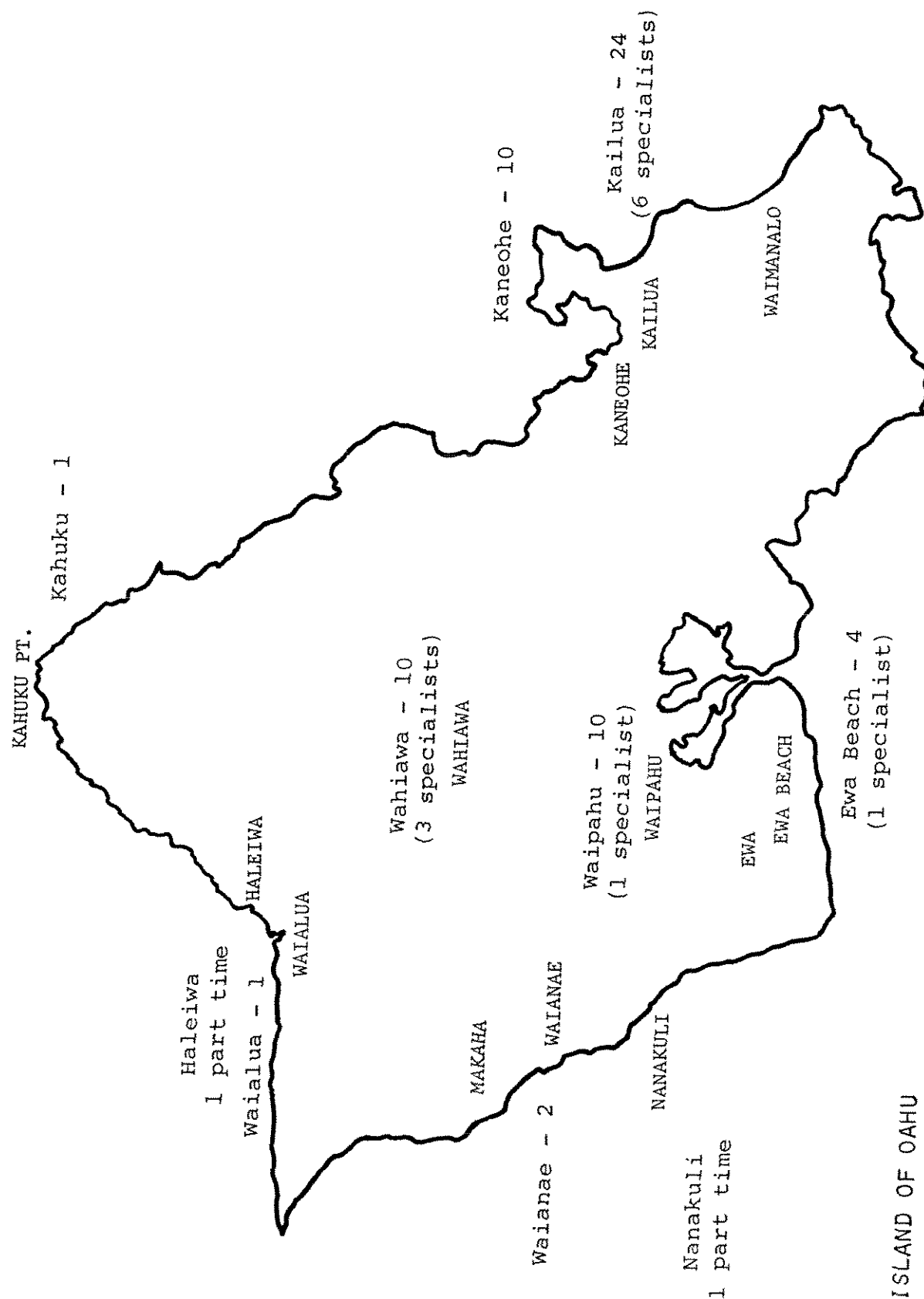
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<sup>1</sup>Presently supported or subsidized by Departments of Health and Social Services, the U.S. Office of Economic Opportunity, and the U.S. Health, Education and Welfare Department.



## APPENDIX H

MAP SHOWING LOCATION OF DENTISTS - RURAL OAHU



APPENDIX H (continued)

DEPARTMENT OF SOCIAL SERVICES  
CLIENT POPULATION ON OAHU  
FIVE LARGEST CONCENTRATIONS  
OCTOBER 1967

Census Tract	Location	Total	Age Group			
			0-6	7-12	13-19	20+
96, 97, 98	Nanakuli-Lualualei, Waianae, Makaha- Makua	2,900	815	725	515	845
61, 62, 63	Kalihi Waena, Kam IV, Lower Kalihi Valley	2,595	795	645	375	780
103, 104, 105, 106, 107	Kualoa-Kahaluu, Kaneohe State Hospital, Heeia- Kaneohe, Puohala- Halekoa, Kaneohe Bay Drive	1,510	380	305	245	580
57, 58, 59, 60	Iwilei-Sand Island, Waiakamilo, Mokauea, Kalihi Kai	1,285	320	255	105	605
54, 55, 56	Mayor Wright Housing, Palama, Kapalama	1,085	300	275	115	395

## APPENDIX I

### THE AMERICAN DENTAL ASSOCIATION DENTAL HEALTH PROGRAM FOR CHILDREN

Objective: The objective of the American Dental Association Dental Health Program for Children should be to make the benefits of an organized program of dental health education, preventive dentistry and dental care available to all children, particularly the needy and underprivileged.

This objective should be attained by the application of the following principles:

1. All dental services should be provided which are necessary to prevent disease and to restore and maintain oral health.
2. Guidance and consultation at local, state and national levels should be made available by the profession, through dental associations, in the planning, operation and evaluation of the program.
3. There should be full cooperation in planning, operating and financing the program between private and public agencies at local, state and national levels.
4. The scope of the local program should be determined at the community level and should be based on the general standards which have been established through the state and national programs.
5. The use of all preventive measures should be encouraged and an incentive program for the intensive promotion of the fluoridation of public water supplies should be established.
6. Increased support should be provided for research in all procedures and programs for improving the dental health of children.
7. All preschool and school children, through the age of 18 years, should be included in the program and existing resources should be made available on a priority basis to the younger age groups.
8. The initial program in each community should be expanded on a planned and systematic basis to include additional age groups of the school population as rapidly as experience and resources permit.
9. The dental health education components of all local, state and national programs should be expanded.
10. Every individual should be encouraged to develop increasing responsibility for his own dental health and parents should be motivated to full responsibility for the dental health of their children.
11. The services of private practitioners and of all existing resources and facilities should be utilized fully in the operation of the program.
12. The right of freedom of choice by both the patient and the practitioner should be preserved.
13. The highest quality of dental services should be available to all.
14. The opportunities for the basic and continued education of dentists and dental auxiliaries should be expanded as needed in order to insure an adequate supply of qualified personnel for the program.
15. The use of voluntary prepayment and postpayment programs for the purchase of dental care for children should be expanded.
16. Priority consideration should be given to reimbursement for professional services on the "usual and customary fee" basis.
17. Fiscal responsibility for the dental care of nonindigent children and families must continue to lie with the individual, the family and private and voluntary agencies.

18. The terms indigent and dentally indigent, for the purposes of this program, should be defined by appropriate state agencies in accordance with existing state laws and regulations in full consultation with representatives of the dental profession.

#### Dimensions of Problem

The present and potential size of the American Dental Association Dental Health Program for Children can be measured by the number of children and their dental needs. The present utilization of dentists' services is also an index of major unmet dental needs in the child population.

**Population:** The child population is expected to increase steadily despite recent decreases in the birth rate. Projections by the U.S. Bureau of the Census in 1966, indicate that the preschool population, now about 24.5 million, will increase by 1985 almost 50 per cent or by 12 million children. The school-age population of 49.5 million (25 per cent of the total population) will increase by the same date by almost 30 per cent, or 13 million. The total number of children under age 19 will increase from 74 million to about 98 million by 1985.

In the total child population there are approximately 7 million children on public assistance. This subgroup will probably increase faster than the total child population because the birth rate is relatively higher in the indigent segment of the population. Implementation of existing legislation for indigent children by all of the states could increase the number of children receiving some form of public assistance health care to 15 million by 1970.

**Disease:** The prevalence of dental disease in children is nearly universal. By age two, 50 per cent of children have decayed teeth. The average child on entering school has three decayed teeth. By age 15, the average child has 11 teeth decayed, missing or filled. The average Selective Service recruit has three missing and seven decayed teeth.

Selected surveys show the incidence of one new cavity per year in children aged 6 to 11 years, and one and one-half cavities per year in children aged 12 to 15 years. In fluoride areas, the incidence of caries declines by about 60 per cent, a sizable reduction in the dental needs of a community.

Large-scale studies indicate that up to 50 per cent of children would benefit from orthodontic treatment.

Gingivitis occurs in a major portion of the child population. This condition can lead to progressive periodontal disease, a major cause of the loss of teeth in adults.

Cleft palate, with or without cleft lip, occurs about once in every 700 births.

**Utilization:** About one-half of all children in the United States under 15 have never been to a dentist. This percentage is higher for children in rural areas.

The utilization of dentists' services is related to family income, the educational level of the parents, the availability of dental service, the effectiveness of dental health education and the degree to which a dental program has been organized. Although family income may not be the principal reason that more children are not receiving dental care, 66 per cent of the children in families with incomes under \$4,000 have never been to a dentist, compared to 40 per cent in families with incomes of \$4,000 or more.

The utilization of dentists' services can be increased in organized programs by removing or reducing financial barriers as demonstrated by the experience of dental prepayment programs. In one program which used the recall system, utilization was increased to 70 per cent. In other programs, an effective system of dental health education also increased utilization significantly.

#### Manpower Resources

The American Dental Association Dental Health Program for Children should be geared realistically to existing dental manpower resources and planning should be initiated immediately to expand those resources in a measure commensurate with the anticipated growth of the program. In general, the manpower problem is accentuated by the distribution of dental personnel in certain areas and by the known shortage in rural areas.

The dentist population is not expected to increase in proportion to the projected increase in the child population and to the anticipated increase in demand under an organized program of dental health for children. Since 1930 the population per dentist has increased by 25 per cent and this increase is expected to continue. This disparity between dental manpower and population will be a major factor in the development of the American Dental Association Dental Health Program for Children.

**Dental Practitioners:** In 1965, 88,500 dentists were actively engaged in private practice. Of these, 95 per cent accept children in their practices. There are approximately 1,200 dentists who limit their practice to pedodontics and approximately 3,500 who limit their practice to orthodontics.

In a recent survey, 40.3 per cent of dentists replying indicated they are so busy that they must either turn new patients away or work longer hours than desirable; 36.8 per cent reported that they had enough patients. Only 22.9 per cent stated that they could take more patients; this group consisted largely of recent graduates, older dentists and dentists in certain large cities with a low population per dentist.

This statement of dentists' patient load is based on the present utilization of dentists' services by less than half the population during the course of a year.

The existing workforce, then, should be amplified in both numbers and productivity if there is to be sufficient manpower to cope with the demands of the American Dental Association Dental Health Program for Children. This can be done by: (1) increasing the number of practicing dentists; (2) providing increased instruction for professional personnel in the dental care for children at the undergraduate, graduate and postgraduate level; (3) increasing the number of continuing education courses devoted to the care of children; (4) increasing the number of training programs for auxiliary personnel, and (5) expanding efforts to achieve more effective utilization of auxiliary personnel.

**Dental Administrators:** The American Dental Association Dental Health Program for Children will create a significant demand for trained dental administrators. There will be a need for personnel to organize and administer state, community and area-wide programs of education, prevention and care. While dentists and hygienists trained in public health are qualified to fill these positions, public health personnel already is in short supply and there is not enough staff to administer existing public health programs adequately.

It will be necessary, therefore, to recruit and train more personnel in dental public health to meet the expanded responsibilities placed on official health agencies by the American Dental Association Dental Health Program for Children. In addition, university-based training programs should be developed to prepare dental and related personnel for the organizational, supervisory and administrative responsibilities to be assumed by community and area program directors.

**Dental Auxiliaries:** In addition to the expansion of educational programs for both dental and auxiliary personnel, it is essential for dental societies to join with dental schools in assuming aggressive leadership in determining the nature and extent of additional functions which can be delegated to auxiliary personnel.

**Distribution of Personnel:** A realistic assessment of manpower resources demands consideration of the distribution of dental and auxiliary personnel. Immediate consideration should also be given to the distribution of dental personnel within the individual states.

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## THE PROGRAM

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**Initial Stages:** While the establishment of the American Dental Association Dental Health Program for Children appears to be a shared objective of the public and of the dental profession, realism and prudence dictate that it be initiated on a carefully considered basis which would be useful in predicting its future operation and results. The mere provision of the massive funding necessary to establish the program is not sufficient to insure its success nor would a vast initial expenditure be justified in terms of the nation's economy or the productive expenditure of tax funds without preliminary planning.

The complex problems of administration at local, state and national levels, the available supply of dental personnel and its distribution throughout the country, the provisions for adequate financing and the solution of many other problems involved in providing dental services on an unprecedented basis—all dictate a provisional approach to the total program.

It is recommended, therefore, that the program be initiated with a series of pilot or exploratory programs designed to provide the actuarial and operational experience necessary to expand the program successfully on a nation-wide scale. Such programs, adapted to the needs of individual communities and designed to provide essential information, can be supported through Project Grants which are authorized under existing law. New legislation and support will undoubtedly be needed to assure the achievement of the total objective of the program.

The programs in this initial phase should be carefully designed to provide data which would fill the gaps in existing knowledge in such areas as: the cost and effectiveness of expanding treatment programs by the addition of age groups on a planned and progressive basis; the determination of the initial and maintenance costs of dental care for children under a variety of conditions; the variations in programs which might be required in fluoridated and non-fluoridated areas; the patterns of administration at local and state levels; the production of more dental personnel and the retraining of existing personnel to meet the needs of a children's program; the role of dental hygienists and dental assistants in staffing a dental health program for children; the reaction of individual dentists, dental societies and state boards of

dental examiners to expanding the role of selected auxiliaries to enlarge the manpower resources; the practicality of applying the principles of dental prepayment to purchase dental care for children of indigent and nonindigent families; the coordination of the public and private segments of a community in a comprehensive dental care program for children.

While there should be no artificial limitation on the number of pilot or exploratory programs, it is recommended that at least forty be developed in order to encompass the investigation of the problems which have been identified.

Some of the programs already in existence and those which could be developed in the near future should constitute the core of the needed exploratory programs. Thus existing resources could be enlisted in designing the total program which might be envisioned at the end of a five-year period. After such initial programs are identified, there should be a critical analysis to determine whether all visible research needs are being satisfied. The programs should be evaluated periodically and the results made available to all interested in the development of the American Dental Association Dental Health Program for Children.

A program of dental health for children should be comprehensive so as to meet the total dental health needs of every child. The program should include, but not be limited to, the following elements.

**Preventive Program:** There are available preventive technics of demonstrated effectiveness for the prevention of dental diseases. These should be employed in their full range, and all dentists should be made aware of the benefits to be realized from their application in communities and to the individual patient.

**Fluoridation of Communal Water Supplies:** Every program should have the benefit of fluoridation of the communal water supply to reduce dental caries by approximately 60 per cent. When there is no communal water supply, the alternative uses of fluorides should be programmed. State action, when necessary, should be sought to require the fluoridation of all community water supplies.

Federal and state support should be provided for all communities in the form of incentives to foster the fluoridation of the water supply. These incentives may take the form of a subsidy for the purchase of equipment and supplies and the employment of personnel for the fluoridation program.

**Topical Agents:** Where the fluoridation of communal water supplies is not feasible, provision should be made for the topical application of fluorides, or other anti-cariogenic agents by dentists in private practice or on a public health basis.

**Dietary Fluoride Supplements:** Provision should be made, when necessary, for the use of dietary fluoride supplements either through public health programs or on the prescription of a physician or dentist.

**Anti-Cariogenic Dentifrices:** The use of anti-cariogenic dentifrices on a public health or individual basis should be encouraged.

**Control of the Consumption of Sweets:** Educational campaigns should be conducted to reduce the frequency of consumption of sweets in the diets of all children. Special attention should be given to the elimination of the sale of sweets in schools.

**Toothbrushing Instruction:** Toothbrushing instruction and oral prophylaxis at regular intervals starting at three years of age, should be encouraged.

**Malocclusion:** Carious teeth should be restored to maintain normal occlusion; spaces resulting from the early loss of primary teeth should be maintained, and deleterious oral habits should be discouraged.

**Patient Education:** Provision should be made for a comprehensive and continuing program of patient education in all treatment programs.

**Treatment Services:** The program should provide all indicated treatment services which are necessary to restore and maintain the dental and total health of the child patient. All programs should be designed to include:

- Complete examination and diagnosis including radiographs

- Elimination of pain and infection

- Treatment of injuries

- Elimination of diseases of bone and soft tissues

- Treatment of anomalies

- Restoration of carious or fractured teeth

- Maintenance or recovery of space when this service will have an effect on occlusion

- Replacement of missing permanent teeth

- Treatment of malocclusions with priority provided for interceptive service and disfiguring or handicapping malocclusions

**Dental Health Education:** This program should be designed to encourage the appreciation of dental health and the practice of proper oral hygiene. Dental health education for parents, children and personnel working with children should be an essential component of all programs.

**Research:** Research of all types, especially in the social sciences and in administration, should be supported in larger measure in order to improve the dental health of children.

**Evaluation of Program:** An integral part of all dental programs for children should be the establishment of procedures for the continuing evaluation of the results of the program in terms of the individual patient, the community, the state and the nation.

#### **Administration**

The administration of the American Dental Association Dental Health Program for Children should be based on full cooperation among the dental profession, the public and private agencies.

Governmental health agencies have traditionally relied on advisory committees composed of nongovernmental experts and the lay public to assist in establishing policies and guidelines relating to the planning and operation of a publicly funded program. The use of advisory committees at national, state and local levels to assist governmental agencies in managing program responsibilities for the American Dental Association Dental Health Program for Children is essential.

The use of private agencies to share in the administration and operation of govern-



mental health care programs has also had a history of success. In the administration of grants for dental treatment programs, provision should be made for the use of an intermediary, such as the dental service corporation or the commercial insurance company. Voluntary prepayment organizations are now acting as fiscal intermediaries for such long-standing programs as the Dependents' Medical Care and the Federal Employees' Health Benefits Programs. Congress has also recognized the desirability of continuing this system of sharing administration in the new Title XVIII of the Social Security Act. Guidelines for Title XIX of the same Act give assurance that this principle will be applied to the newly expanded program for public assistance recipients. The use of private, voluntary prepayment organizations in the administration and operation of the American Dental Association Dental Health Program for Children should be specified in the enabling legislation and in guidelines for the program.

**National Level:** At the national level, where ultimate responsibility and authority for the approval of publicly funded plans lie, the program should be administered by the Secretary of the Department of Health, Education, and Welfare, through the Division of Dental Health of the Public Health Service. The Secretary and the Division of Dental Health should have advice and assistance from an inter-agency committee, including representation from the Office of Education, all Department of Health, Education, and Welfare agencies with dental programs, and from other agencies, such as the Department of Defense and the Office of Economic Opportunity, which have significant dental interests.

A national advisory committee should be established to assist the Secretary in the administration of the publicly funded elements of the program. The committee should be composed of dentists and members of the lay public.

**State Level:** At the state level, responsibility for approving publicly funded programs developed at the local level and for their statewide administration should be vested in the state health department, through its division of dental health. Collaboration with the department of welfare, the department of education and other state agencies with dental interest should be sought as needed. Fiscal administration of the program should be assigned, by contract, to a private, voluntary prepayment organization.

There should be a state dental advisory committee, composed of representatives of the dental profession and the lay public, to assist state health department officials.

**Local Level:** At the local level, the publicly funded elements of the program should be administered by an agency recognized by the state health department.

There should be a local advisory dental committee, composed of representatives of the dental profession and the lay public, to assist the agency recognized by the state health department.

#### **Financing the Program**

**Present Funding:** In the development of the American Dental Association Dental Health Program for Children, cost will be one of the significant factors. It has been increasingly apparent that the contribution of the private sector must be augmented by governmental assistance. The traditional method for sharing costs between federal and state governments is the grant-in-aid mechanism which has been in successful operation for many years. Limited funds are available at the present time to initiate the dental program, although it must be recognized that new legislation will be essential both to provide the additional funds needed for a total program and to provide

one channel for funds which are now disbursed by many agencies of the federal government.

The Department of Health, Education, and Welfare now channels funds for dental programs of some type through the following seven agencies: Children's Bureau, Welfare Administration; Bureau of Family Services, Welfare Administration; Division of Community Health Services, Bureau of State Services, Public Health Service; Division of Indian Health, Bureau of Medical Services, Public Health Service; Division of Dental Health, Bureau of State Services, Public Health Service; Division of Hospital and Medical Facilities, Bureau of Medical Services, Public Health Service, and Division of Plans and Supplementary Centers, Office of Education. In addition, the independent Office of Economic Opportunity provides funds for dental programs through its Community Action Program which includes Project Head Start.

It should be clear that no federal funds are available for dental programs for the children of nonindigent or non-medically indigent families, except for certain dependents of federal employees. Funding of a dental health program for nonindigent children must be derived from the private sector of the economy—on a voluntary basis.

**Cost of the Program:** It is not possible to determine with precision the cost of the American Dental Association Dental Health Program for Children since so many variables and unknown factors are involved. If the 15 million children who will be eligible for dental care under existing legislation were to receive it, the national cost would be at least a half billion dollars for the first year. It is not likely, nor perhaps desirable, that funding of this order should be authorized for it would place an overwhelming burden upon existing dental manpower and facilities before pilot and exploratory programs had revealed more effective and economical methods for the expenditure of funds. At the outset, therefore, the estimated total cost of the program should be reduced to one that is more manageable within the nation's economy and to provide for the period of experimentation and development that will be necessary to insure a productive expenditure of funds as the program matures.

**Pilot or Exploratory Programs:** Federal funds should be made available for the pilot or exploratory programs without matching by the states when this is indicated in order to secure essential information for the development of the program.

**Future Program:** For programs beyond the pilot or exploratory stage, provision should be made for federal grants on a matching basis. The matching should be designed to take into consideration the size of the problem in a given state, the economic status of the state and other variables which traditionally apply to matching programs. It is desirable that a uniform method of allocating grants be devised for the dental program to replace the heterogeneous methods which are now used by various agencies.

**Financing Dental Care for Indigent Children:** Project and formula grants are presently available to the states—and not fully utilized—for the provision of dental care for indigent and dentally indigent children. The extension of these grants to all of the states will provide interim funding until new legislation as previously recommended places the program on a permanent basis.

**Financing Dental Care for Nonindigent Children:** Federal financing for nonindigent children is not available under existing legislation. No legislation should be sought to provide federal funds for the dental care of nonindigent children.

Dental care should be extended to nonindigent children as a responsibility of the private and voluntary sectors of society. Coverage of dental prepayment plans should be extended to children and individual insurance coverage for children and families should be made available. Incentives, such as income tax credits, should be made available to parents to encourage the purchase of dental care for their children. Other incentive measures should be established to stimulate prepayment agencies to experiment in the development of new methods of providing coverage to children in segments of the population not presently eligible for existing plans.

#### **New Legislative Authority**

New federal legislation will eventually be needed if there is to be an orderly development of the American Dental Association Dental Health Program for Children. Even though existing law provides a large measure of authority to finance dental care costs of several million indigent and dentally indigent children, the system for allocating these federal funds does not adequately assure that resulting programs will have professional guidance or standards to achieve the quality of care available from private dental practitioners today. Equally objectionable is the system's inflexibility. Title XIX of the Social Security Act, for example, is designed to provide comprehensive care to all needy and near needy persons. But there is no way under Title XIX for a state to concentrate its dental resources upon children; nor is there provision for designing an orderly plan that will permit the states to enlarge programs by age groups, an approach that is essential under existing limitations of both manpower and funds.

Legislation should be sought first to provide federal project grants for pilot programs in at least forty communities throughout the country. After a sufficient time has elapsed to evaluate the pilot programs, a permanent legislative design should be fashioned to provide the states the opportunity to bring all children within the American Dental Association Dental Health Program for Children, with provision for appropriate cost sharing by federal, state and local governments and private and voluntary agencies.

#### **Conclusion**

The American Dental Association, on the basis of its unique competence in the field of dentistry and under its obligation to foster the improvement of personal and national health, recommends a national dental health program for the children of the United States. Such a program has been the objective of the Association and of the dental profession for many years.

Strong national attitudes predict that such a program can now be initiated with new potential for adequate funding. Legislation is already in existence to provide much of the administration and support which will be needed to initiate the program. The program should be started by the selection of a number of communities which will establish pilot or exploratory programs to provide the professional, administrative, statistical and other data which are needed to guide the national program in its future development. Funding will be largely on the traditional grant-in-aid basis and responsibility for the planning and operation of the program will rest heavily at state and local levels. The advice of the dental profession will be made continuously available through the establishment of advisory councils at all levels. The community should have the responsibility for the essential design of its program in order to meet local needs and conditions.

All dental services should be provided under the program which are necessary to prevent disease and to restore and maintain oral health. The program must insure the provision of the highest quality of dental care and special emphasis must be placed on preventive services. All preschool and school children through the age of 18 should eventually be included in a national program. There should be a continuing, organized program of dental health and patient education.

Existing facilities and resources, especially those of private practice, should be fully utilized and plans should be developed to provide an adequate supply of well qualified dental personnel for the program.

State and local health departments should have a major role in the administration of the program. Administration at the national level should be coordinated through an inter-agency committee with representation from all federal agencies having a role in the dental program.

The translation of this program into reality in the predictable future will require a new awareness on the part of many agencies and individuals of the value of dental health services to the individual child, the community, state and nation. Dentists and dental societies must apply their professional knowledge and leadership effectively by cooperation with the administering agencies at all levels. Only a full partnership of the profession and those administering the program can convert the American Dental Association Dental Health Program for Children to a national asset that will bring returns for many years to come in terms of a healthier and stronger nation.

Source: American Dental Association, Dental Health Program for Children (Chicago: American Dental Association, 1966), pp. 7-17.

## APPENDIX J

### REPORT ON DENTAL PREPAYMENT PLANS IN THE UNITED STATES

This report is submitted in three parts. Part I is a compilation of two independent reports made respectively by the National Association of Dental Service Plans and by the Subcommittee on Dental Care of the Allied Health Services Committee on the Health Insurance Council. Part II consists of excerpts from the HIC report and Part III is the NADSP report in its entirety.

#### PART I. FACT SHEET ON DENTAL PREPAYMENT

##### *Growth of prepaid dental plans*

As of December 1966, approximately 4 million Americans have prepaid dental care coverage. Dental service corporations showed the greatest growth in coverage, though it is probable that in the case of both dental service corporations and commercial insurance companies, an improvement in reporting methods is partly accountable for the sharp rise between 1965 and 1966.

Administrative mechanism	Number of eligible persons			
	1960	1964	1965	1966
Total.....	732,300	1,469,800	1,938,000	4,092,960
Dental Service Corp.....	9,000	325,300	458,100	1,289,154
Commercial Insurance Co.....	17,500	274,800	550,600	1,601,878
Group practice/clinic.....	535,600	608,100	616,400	765,900
5 other mechanisms.....	170,200	261,600	362,900	437,000

Since 1960, the number of persons eligible for prepaid dental care has increased fivefold. The number of plans has shown comparable growth.

##### *Status of prepaid dental care in 1966*

Administrative mechanism	Number of organizations	Number of group plans	Number of eligible persons
Total.....	169	632	4,092,960
Dental Service Corp.....	16	276	1,289,154
Commercial Insurance Co.....	34	424	1,601,878
Group practice/clinic.....	78	95	766,000
Self-insured trust.....	25	25	176,000
Nonprofit Insurance Corp.....	1	191	170,000
Mutual Benefit Association.....	20	20	35,000
Health Service Corp.....	5	8	16,000
Other.....	3	3	40,000

PART II. THE EXTENT OF DENTAL INSURANCE COVERAGE WRITTEN IN THE UNITED STATES BY INSURANCE COMPANIES AS OF JULY 1, 1966 <sup>1</sup>

TABLE Ia.—Group dental insurance coverage in the United States by 34 insurance companies, July 1, 1966

	Total	Schedule plans <sup>1</sup>	Comprehensive plans <sup>2</sup>	Combination plans <sup>3</sup>
1. Number of master policies.....	424	150	227	47
2. Number of covered persons.....	1,601,878	1,155,304	317,512	129,062
(a) Employees.....	585,337	414,897	121,359	49,081
(b) Dependents.....	1,016,541	740,407	196,153	79,981
3. Dental insurance annualized premium volume (as of July 1, 1966) <sup>4</sup> .....	\$44,879,623	\$35,538,727	\$5,894,341	\$3,446,555
4. Dental insurance benefits paid (for the 12-month period ending June 30, 1966) <sup>4</sup> .....	\$31,405,694	\$25,006,479	\$2,850,190	\$3,549,025

<sup>1</sup> Plans providing for dollar limits on dental expenses for each procedure performed and with eligible expenses so determined reimbursed at 100 percent or on some percentage basis without a deductible.

<sup>2</sup> Plans providing for percentage reimbursement (coinsurance) on covered expenses after an initial deductible on some or all types of dental expenses and with no (or but few) dollar limits on covered expenses for individual dental procedures.

<sup>3</sup> Plans containing schedule dollar limits on amount of dental expense to be covered as well as a deductible on some or all types of dental expenses and with eligible expenses reimbursed at 100 percent or some other rate of reimbursement.

<sup>4</sup> Total annual premium for number of insured employees and dependents as of July 1, 1966.

<sup>4</sup> Since many plans were in force for a period of less than 1 year, the amount of benefit payments should not be related to the premium volume.

It is important to recognize that this total should not be related to the total premium. One reason for this is that the latter was reported on an annualized basis and in a number of instances a plan had been in force for less than 1 year.

TABLE Ib.—Percentage distribution of group dental insurance coverage in the United States by 34 insurance companies by type of plan, July 1, 1966

[In percent]

	Total	Percent of total		
		Schedule plans <sup>1</sup>	Comprehensive plans <sup>2</sup>	Combination plans <sup>3</sup>
1. Master policies.....	100	35.4	53.5	11.1
2. Covered persons.....	100	72.1	19.8	8.1
(a) Employees.....	100	70.9	20.7	8.4
(b) Dependents.....	100	72.8	19.3	7.9
3. Dental insurance annualized premium volume (as of July 1, 1966) <sup>4</sup> .....	100	79.2	13.1	7.7
4. Dental insurance benefits paid (for the 12-month period ending June 30, 1966).....	100	70.6	9.1	11.3

<sup>1</sup> Plans providing for dollar limits on dental expenses for each procedure performed and with eligible expenses so determined reimbursed at 100 percent or on some percentage basis without a deductible.

<sup>2</sup> Plans providing for percentage reimbursement (coinsurance) on covered expenses after an initial deductible on some or all types of dental expenses and with no (or but few) dollar limits on covered expenses for individual dental procedures.

<sup>3</sup> Plans containing schedule dollar limits on amount of dental expense to be covered as well as a deductible on some or all types of dental expenses and with eligible expenses reimbursed at 100 percent or some other rate of reimbursement.

<sup>4</sup> Total annual premium for number of insured employees and dependents as of July 1, 1966.

<sup>1</sup> It should be noted that it is not possible for the American Dental Association to say that all of the plans listed by the commercial insurance industry are as comprehensive with regard to the services offered as the dental profession considers professionally desirable. With regard to plans offered by dental service corporations, however, it is possible to say that all the plans are comprehensive to the desirable degree.

TABLE 2.—Number of persons covered under group dental insurance plans by 34 insurance companies, by State, July 1, 1966

State	Total number covered	State	Total number covered
1. Alabama	8,546	27. Montana	2,874
2. Alaska	9,197	28. Nebraska	6,799
3. Arizona	4,399	29. Nevada	960
4. Arkansas	7,910	30. New Hampshire	9
5. California	310,249	31. New Jersey	15,938
6. Colorado	9,587	32. New Mexico	3,223
7. Connecticut	45,336	33. New York	277,454
8. Delaware	24	34. North Carolina	25,822
9. District of Columbia	12,734	35. North Dakota	2,156
10. Florida	18,862	36. Ohio	91,944
11. Georgia	18,369	37. Oklahoma	14,425
12. Hawaii	3,405	38. Oregon	61,456
13. Idaho	3,995	39. Pennsylvania	84,279
14. Illinois	50,159	40. Rhode Island	206
15. Indiana	51,982	41. South Carolina	6,169
16. Iowa	24,554	42. South Dakota	1,250
17. Kansas	11,923	43. Tennessee	28,173
18. Kentucky	19,581	44. Texas	76,907
19. Louisiana	13,400	45. Utah	3,522
20. Maine	336	46. Vermont	
21. Maryland	23,888	47. Virginia	5,424
22. Massachusetts	11,973	48. Washington	49,563
23. Michigan	73,086	49. West Virginia	756
24. Minnesota	16,780	50. Wisconsin	26,394
25. Mississippi	4,556	51. Wyoming	1,111
26. Missouri	59,376		

TABLE 3.—Dental insurance coverage in the United States by insurance companies, Dec. 31, 1963, and July 1, 1966

	July 1, 1966	Dec 31, 1963	Increase, 1963-66	
			Number	Percent
Group business:				
1. Number of companies offering dental coverage	36	26	10	38
2. Number of companies with policies in force	34	16	18	113
3. Number of master policies in force	424	66	358	542
4. Number of persons covered	1,601,878	334,860	1,267,018	378
(a) Schedule plans	1,155,304	237,858	917,446	386
(b) Comprehensive plans	317,512	86,495	231,017	267
(c) Combination plans	129,062	10,507	118,555	1,128
5. Dental premium volume <sup>1</sup>	\$44,879,623	\$4,332,197		
6. Dental benefits paid	\$31,405,694	( <sup>2</sup> )		
Individual business:				
1. Number of companies offering dental coverage	3	1	2	
2. Number of companies with policies in force	1	1		

<sup>1</sup> Data on premiums are not comparable between the 2 periods. The figure for 1966 is the annualized volume while for 1963 it represents the amount written during that year only.

<sup>2</sup> Not available.

PART III. DENTAL SERVICE CORPORATION COVERAGE, AS OF JANUARY 31, 1967

*Summary*

At the close of business January 31, 1967, the 16 active corporations had 205 private group contracts in force, covering 1,053,755 subscribers. Of these, 192 contracts, covering 1,038,819 persons, were underwritten, and 13 contracts, covering 14,936, were administered on a cost-plus basis. In addition, 71 administrative contracts involving publicly funded programs were in effect covering 235,399 eligible beneficiaries. The combination of contracts in the private and public sector, therefore, totaled 276, with 1,289,154 persons affected, exclusive of dependents.

*Public programs, by category*

Type of program	Number of programs	Number of beneficiaries
Headstart.....	58	38,861
Community action.....	6	4,842
Job Corps.....	1	128
MAA (Kerr-Mills).....	1	70,000
Public assistance (State).....	1	118,718
Public assistance (county).....	1	750
Maternal and infant care.....	2	1,100
Office of Education, title I.....	1	1,000
Total.....	71	235,399

MONTHLY COVERAGE REPORT SUMMARY—DETAIL BY INDIVIDUAL PLAN

Alabama Dental Care Inc. :  
Public: 1 Head Start contract, covering 1,000 children.

California Dental Service:  
Private: 135 underwritten contracts, covering 889,688 subscribers.  
Public: 13 Head Start contracts, covering 25,000 children; 1 Maternal and Infant Care Program contract, covering 500 mothers.

Colorado Dental Service:  
Public: 23 Head Start contracts covering 9,000 children; 1 County Public Assistance contract covering 750 aged adults and children.

Connecticut Dental Service:  
Private: 3 underwritten contracts, covering 69 subscribers.  
Public: 2 Head Start contracts covering 286 children.

Hawaii Dental Service:  
Private: 17 underwritten contracts covering 62,154 subscribers; 3 administrative contracts covering 2,096 persons.

Kentucky Dental Service:  
Public: 1 Maternal and Infant Care Program contract covering 600 mothers.

Maine Dental Service Corp. :  
Private: 1 administrative contract covering 1,200 persons.

Michigan Dental Service Corp. :  
Private: 3 administrative contracts covering 1,650 persons.  
Public: 1 MAA contract covering 70,000 aged; 2 Community Action Program contracts covering 842 beneficiaries.

New Hampshire Dental Service Corp. :  
Private: 1 administrative contract covering 1,200 persons.

New York Dental Service Corp. :  
Private: 4 underwritten contracts covering 438 subscribers.

Ohio State Dental Care Corp. :  
Private: 5 underwritten contracts covering 275 subscribers; 1 administrative contract covering 440 persons.  
Public: 10 Head Start contracts covering 3,175 children; 4 community Action Program contracts covering 4,000 beneficiaries; 1 Office of Education (Title I) contract covering 1,000 children.

Oregon Dental Service:  
Private: 1 underwritten contract covering 750 subscribers; 1 administrative contract covering 2,299 persons.  
Public: 1 Head Start contract covering 400 children.

Rhode Island Dental Service Corp. :  
Private: 1 administrative contract covering 5,000 persons.

Vermont Dental Service Administrative Corp. :  
Private: 1 administrative contract covering 1,000 persons.  
Public: 1 Job Corps contract covering 128 persons.

Washington Dental Service:  
Private: 26 underwritten contracts covering 85,322 subscribers.  
Public: 8 Head Start contracts covering an unknown number of eligibles; 1 State Public Assistance contract covering 118,718 beneficiaries.

Wisconsin Dental Service Corp. :  
Private: 1 underwritten contract covering 123 subscribers.  
Public: 1 administrative contract covering 51 persons.



Source: Information submitted by American Dental Association on H.R. 5710, U.S. Congress, House Committee on Ways and Means, Hearings on H.R. 5710, Part 2, 90th Congress, 1st Session, 1967, pp. 1068-1072.

## APPENDIX K

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