A GLANCE AT GROUP DENTAL COVERAGE

JAMES H. DURKIN

Is group dental coverage, by insurance or prepayment methods, feasible? Does it have a future? What are the special characteristics and problems that can be adduced at present about this coverage?

This paper is an effort to discuss such questions in a rather general and preliminary way, in the expectation that more precise and specific information and data now accumulating will soon be available for publication.

THE PERSPECTIVE

The subject under discussion, dental coverage as such, of a fairly complete and comprehensive type, is sufficiently different in degree to be different in kind from the limited coverage such as of oral surgery resulting from accident which has long been included in medical expense insurance.

Joseph E. Follman, Jr., director of information and research, Health Insurance Association of America, recently estimated that from 1½ to 2 million people are now receiving dental services under some form of group coverage.

The major forms of coverage are:

Insurance plans offered by at least 25 life and casualty companies.

Plans provided by dental service corporations organized by dental societies in some 30 states.

A number of group health non-profit corporations, several of the Blue Shield type.

Closed-panel or clinic plans maintained by employers, unions or labor-management welfare funds.

In the last two or three years, there has been a growth both in the number of people under group coverage and the number of companies, associations and organizations offering it.

Group dental care coverage, in one form or another, is now available virtually everywhere in the United States.

In estimating the prospects for this coverage, it seems useful to review the growth of group hospital-medical care coverage over the last 25 years. Spectacular expansion of group health insurance and prepayment systems has been attributed to the following elements among others:
1. Existence of a pressing need for more and better medical care, and public recognition of that need.

2. The crisis in financing hospital and medical care which arose from the depression of the 30's, giving rise to the search by hospital boards, doctors, government and the public for more stable and reliable financing methods.

3. The wage-freeze of the World War II period, with its concomitant emphasis on fringe benefits.

4. Adoption by labor and management of the principle of employer contribution to health care for employees.

5. Reaction to proposals for government systems of health care exemplified by the Beveridge Social Security program in Britain and the Wagner-Murray-Dingell bill in the United States.

6. The organization of hospital and medical care prepayment plans, the entry by insurance companies into the field, and the mastery by both types of carriers of the technical and marketing problems involved.

7. The expansion of national income and gross national product, making increasing resources available to provide needed medical services.

The question occurs, to what extent do these economic and social factors exist today; or are there other conditions present promising similar effects?

Authorities agree that the need for more and better dental care is acute, a point which is well demonstrated in the statistics and literature of the subject but is not within the scope of this paper.

Insurance companies, dental service associations and prepayment plans have entered the field and registered some progress. Although the number of people covered thereby is still comparatively small, the evidence is that technical problems of coverage are being satisfactorily solved.

Government's present role appears implicitly to be the encouragement of private forms of group dental care, as evidenced by the application to such systems of the same tax-saving provisions that are applicable to group financing of hospital-medical care, the dissemination of pertinent information by the Federal Public Health Service, and the adoption by numerous states of favorable legislation and regulations.

The dental profession manifests a readiness to encourage and take part in group dental care financing, reflected in decisions of its societies,
organization of dental service associations, and cooperation with commercial insurers under insured plans.

On the other hand, there are several important if not decisive unknown elements.

Neither management nor labor has committed itself to adding dental care to the fringe benefits of employees, and voices are heard of opposition to further extension of fringe benefits. This question is of even greater consequence for the dental than for the medical field, for, as will be suggested below, group dental coverage seems impractical without substantial employer contributions to the cost.

Above all, the future of group dental care cannot but be related to the direction taken by the economy. It seems unlikely to the writer that competition by insurers or prepayment organizations for the present payroll or consumer dollar to cover dental care can be highly fruitful, but that a sufficient growth in national income would satisfy the first prerequisite for group dental care to follow a course of growth similar to that of medical coverage. Extension of good dental care to wider sections of the population, whether paid for individually or by some group method, would appear to be a function of the affluence of our society.

OBJECTIVES

The objectives with respect to dental health of the various parties concerned would seem to be:

1. From the viewpoint of the public, to attain improved dental health on a basis reasonable in cost, convenient and practical in method of payment, and mitigatory of the impact of sudden, unexpected large expenses.

2. From the viewpoint of the dental profession, to improve public dental health and see to it that resources are available to pay for adequate dental care provided by the dental profession as it now exists and functions.

3. From the viewpoint of insurers, group health associations and similar enterprises, to enlarge their usefulness and business effectiveness in providing means to meet the aims above-cited of the public and the dental profession.
Any system of group dental coverage must then be measured by whether it conforms to the criteria:

1. Able to provide sufficient resources to cover the costs of better care for more people.
2. Reasonable in cost.
3. Convenient and practical in method of payment.
4. Consistent with present procedures and functions of the dental profession.
5. Responsive to the problem of unexpected large dental expenses.
6. Technically suitable for marketing by insurers and group prepayment organizations.

If insurance or prepayment plans can be devised that meet these criteria, then group dental coverage is feasible. Group coverage plans which have been devised and are in effect so far, at least in a prototype sense, appear to demonstrate such feasibility.

CHARACTERISTICS AND REQUIREMENTS

While the criteria listed above might be generally applicable to any field of insurance, they have their own specific application to dental coverage. I believe it is helpful to analyze the special features of dental care by comparison with surgical-medical expense care with respect to elements significant for insurance purposes.
CHART I
SIMILARITIES AND DIFFERENCES, SURGICAL-MEDICAL CARE AND DENTAL CARE

1. List of defined, distinguishable procedures
   Surgical-Medical Care: Yes
   Dental Care: Yes

2. Specific identifiable fees for different procedures
   Surgical-Medical Care: Yes
   Dental Care: Yes

3. Generally accepted relative value of different procedures
   Surgical-Medical Care: Yes
   Dental Care: Yes(a)

4. Predictable incidence of morbidity
   Surgical-Medical Care: Yes
   Dental Care: Yes

5. Variation in utilization by age, sex
   Surgical-Medical Care: Yes
   Dental Care: Yes(b)

6. Variation in professional fees by patient income level
   Surgical-Medical Care: Yes
   Dental Care: Yes(c)

7. Availability of population utilization data
   Surgical-Medical Care: High
   Dental Care: High

8. Incidence of utilization close to incidence of morbidity
   Surgical-Medical Care: Yes
   Dental Care: No(d)

9. Significance of pre-existing conditions
   Surgical-Medical Care: Moderate
   Dental Care: High(e)

10. Significance of sudden, high-cost treatment need
    Surgical-Medical Care: Moderate
    Dental Care: Low

11. Significance of regularly-recurring minimum-treatment need
    Surgical-Medical Care: Low
    Dental Care: High

12. Significance of optional element
    Surgical-Medical Care: Low
    Dental Care: High

13. Availability of insured utilization data
    Surgical-Medical Care: High
    Dental Care: Low(f)

(a) Relative values in dental fees are not as firmly and widely established as in the medical field, but are implicitly reflected in extant fee schedules and in practice.

(b) However, as will be indicated, several other factors seem to influence dental utilization which apply with much less weight to medical utilization.

(c) But a feature of dental care is that not only do charges tend to vary by income of patient for a given treatment, as in the medical profession; but there is a larger area, relatively speaking, where either a more costly or less costly treatment can be chosen for the same condition; e.g., a gold or porcelain filling as against a silicate filling.

(d) As will be discussed, the designation "No" is particularly relevant to an uninsured population, and is subject to modification under insured conditions.

(e) With respect to applicants for coverage who are actively at work when they apply.

(f) There is some published data, and much more is being accumulated.
The most meaningful differences in characteristics between surgical-
medical and dental care, which the architect of a group plan must reckon
with, are those indicated in the chart above as items 8 through 12.

Follman summarizes some of these obvious problems as follows:

“One is that a portion of dental work is elective and at times a matter
of cosmetics rather than medical necessity. . . .

“The second is that most dental care is not, or need not be, either
sudden or sizable in its occurrence. It occurs, or can occur periodi-
cally, the cost is regular and not usually sizable, and, hence, more
subject to family budgeting in most instances than to an insurance
mechanism.

“The third is that often where costly work is needed, it is the result
of needs which have accumulated for a period of years prior to the
inception of the insurance protection and hence a pre-existing con-
dition which is generally recognized as not being a fit subject for
sound insurance practice.”

These problems immediately suggest certain general conclusions.

1. The fact that much dental care is repetitive with fairly stable costs
from year to year, and that the sudden, unexpected large loss is
not a significant factor, tends to minimize the insurance element
in group dental care and emphasize the budgeting and service ele-
ments. To illustrate, an average patient, with no “back-log” (or
“clean-up”) problem, through most early and middle years of age
will visit the dentist once or twice a year; undergo an examination,
including some X-rays; have a cavity or two filled and receive a
teeth cleaning. This might mean repetitive annual costs of, say,
$30 – $40. To this extent, then, dental care coverage by insurance
or prepayment contains a large element of dollar-for-dollar ex-
change. This feature gives rise to the requirements: that if group
dental coverage is not to be uneconomical in the insurance sense
of that word, its advantages must be demonstrated in the conveni-
ence of budgeting costs, in the encouragement of regular dental
care that such cost-budgeting begets, in the efficiency and flexibility
of service provided by the carrier to the patient and the dentist, and
in low administrative expense charges. This characteristic also
suggests the necessity of a large employer contribution, for other-
wise a consumer of dental services will prefer to pay his own dental
bills rather than pay an essentially stable charge for dental services
plus a carrier expense charge as well.
Another conclusion that can be drawn from this characteristic of dental care is that the agreement by dentists to provide service benefits (to accept the specified fee provided by the coverage as full payment) could well be a powerful factor in encouraging growth of the coverage. To the prospective purchaser, the quid pro quo of service benefits could well justify the cost of carrier administrative expense included in premiums. A feasible modification of the service benefits approach, and one consistent with the dental practice cited in Note (c) to Chart I, is to provide service benefits for routine and repetitive procedures and for certain standard treatments, while paying indemnity benefits for more complicated dentistry and the more costly options.

2. The optional nature of much dental care dictates other conditions of coverage, for it bears on the important question of the possibility of anti-selection. Optional can be considered in three contexts: (a) freedom of choice by the patient as to whether to go to the dentist at all; (b) freedom of choice by the patient as to when he will go to the dentist; (c) freedom of choice as to the extent and cost of the treatment provided.

Points (a) and (b) are relevant to the question of “back-log” or pre-existing conditions, discussed below.

Point (a) is particularly pertinent to the problem of measuring utilization of dental services as against incidence of dental morbidity. Utilization of dental services, at least by an uninsured population, can be inferred to be a function of a complex of interacting factors: incidence of dental morbidity, income level, cultural-educational level, age, sex, geographical area, and a subjective element that might be called the “Apprehension-of-Pain Deterrent.” Tables I and II illustrate the effect of some of these factors.

To take account of the optional element, various devices are at hand. Deductibles, coinsurance, inside limits on a procedure or annual basis, waiting periods, and exclusions of specified procedures, are feasible and in fact one or another such provision is embodied in most current plans.

Special consideration must be given to the use of the deductible provision. A first-dollar deductible can be an obstacle to good dental care and to positive policyholder and public response. This is because one purpose of group dental coverage, that of encouraging visits to the dentist, is defeated if the semi-annual or annual
visit to the dentist is not covered. It is precisely the budgeting of normal care that, to many people, will be the most appealing aspect of group dental coverage; an attitude justified by the lesser significance, in this field, of the unexpected, expensive occurrence. Furthermore, in the first year or two of operation of any group plan, it may seem inequitable to policyholders or members who have little or no back-log (who have kept their teeth in shape), that they should enjoy little or no plan benefits while others with heavy cleanup requirements qualify for substantial benefits after the deductible is applied.

One answer is to provide certain annual first-dollar benefits, either in a dollar amount of, say, $25, or for designated procedures such as examination, X-rays, prophylaxis, and to apply a deductible to expenses thereafter.

Optional element (b) above, freedom of choice in timing dental visits, creates a particular hazard in the possibility that a covered person paying monthly premiums based on annual rates can concentrate needed dental care into a month or two and then cancel participation and premiums, or rapid turnover of employees in an employer-pay group may lead to the same result. This may necessitate the requirement of annual premium payments for all participants, whether or not participation continues for the year, as well as special attention to waiting periods for eligibility. Table III is one illustration of this problem.

As to optional choice of types of treatment: fee schedules, inside limits, coinsurance and annual or lifetime maximum provisions and package programs can be used in many variations and combinations in order clearly to define benefits and costs.

The special circumstances affecting orthodontia (see below), may require not only limits on benefits, but a long waiting period in terms of years before this treatment is covered.

3. The high significance in the area of dental health of pre-existing conditions or back-log must be taken into account. As indicated in Tables IV and V, first-year or initial cost of dental care as against maintenance care is from 1 1/2 to 2 1/2 times more expensive. Several methods present themselves to deal with this characteristic:

A. Exclusion of pre-existing conditions. This seems unsatisfactory, as likely to evoke public dissatisfaction; and for two other rea-
sons. One is that pre-existing conditions may be difficult to define as time passes; the other, correction of currently-incurred conditions may frequently require the treatment of a contiguous or related pre-existing condition. A policyholder unable or unwilling to pay the cost of treatment of a pre-existing condition would in that case be deprived of treatment of the current condition.

B. First-year rates higher than renewal-year rates (with respect to the individual policyholder or member policy year).

C. Higher first-year deductible.

D. Amortization of higher first-year costs over a subsequent period.

All of these methods are presently in use in one form or another.

CLASSES AND SYSTEMS OF COVERAGE

A priori considerations and practice, even at this comparatively early stage, have already given general form to systems of coverage.

For purposes of group coverages, dental care can be broken into three main classifications (admittedly the lines blur in some areas):

I. Basic or simple dentistry. (Simple is not to be construed as implying simple in the skill or technique involved, but rather in contrast to complex as used below.)

This class of treatment or procedures includes:

Dental Examinations
X-rays
Prophylaxis
Extractions
Fillings
Repair of Dentures
Emergency Relief of Pain
Minimal treatment of periodontal disease.

II. Complex, or Restorative Dentistry (essentially Prosthodontia)

Bridges
Crowns
Dentures
Root Canal Work
Other treatments and procedures.
III. Orthodontia

Broadly speaking, Class II services are in the more optional and costly category, and arise less frequently, and with respect to such services there would appear to be a greater insurance element than with respect to Class I services. Class I services are those, generally less costly, which for most people can be expected to be repetitive through youth and early middle age.

Orthodontia is in a class by itself because the optional element is especially significant; the difference between orthodontic treatment required for reasons of oral health and that performed for cosmetic purposes is not easy of determination. Furthermore, orthodontia is almost exclusively applicable to children in early teens.

Use of this rough classification system offers the following possibilities:

1. Class II and III services can be identified as those for which inside limits or annual maxima are especially applicable.
2. Package programs, building up from minimum basic coverage to Comprehensive can be devised by appropriate combinations.
3. Rate calculation and the development of meaningful data may be facilitated.

Two alternative systems of coverage are possible — and extant.

One is similar to surgical-medical expense insurance, in that covered procedures are defined and listed, with corresponding fees. This is typified by the plans offered by the New York Dental Service Association.

The other can be viewed as the Major Medical type, under which covered procedures are defined, but dental charges are paid, without set fees, under provisions for deductible and coinsurance elements. An example is the Continental Casualty Company plan covering employees of the Dentists’ Supply Company of New York. (The phrase major medical is somewhat misapplied here, for while the parallel holds with respect to the payment of charges subject to deductible and coinsurance, the catastrophe coverage feature of major medical is relatively absent in dental coverage.)

The writer has not found sufficient information to weigh the relative merits of the two approaches.

RATING

No attempt will be made here to provide either data or precise methods for rate calculation, but some inferences can be drawn from the tables and discussion.
Theoretically, the annual pure premium per individual can be expressed as \[ \sum_{x=1}^{n} p_x f_x, \] where \( p_x \) is the frequency of utilizing procedure \( x \), when there are \( n \) such procedures, and \( f_x \) is the fee-schedule fee—or average area fee—for procedure \( x \). Trivial as this formula may be, it does have some utility. It reflects similarities between dental care and surgical expense insurance, and suggests that methods of evaluating fee schedules, combining specific procedures, etc., practiced in the latter field are applicable in the former. It lends itself, too, to precise measurement of variations in cost due to variations in frequency of procedures by age, sex, income and educational level for statistical if not actual ratemaking purposes.

It is of interest to note some of the variations in utilization of different procedures by age and other characteristics. The Group Health Association project identified in the section, "Tables", showed the peak in frequency for fillings to be around age 20, for dentures to be about age 60. In the U. S. population, the National Health Survey (July 1957—June 1959) exhibited one facet of the difference in utilization due to educational level: those in the highest educational category visited the dentist over three times as frequently per year as those in the lowest educational classification, but among both classes the frequency of visits for extractions was the same.

A more practical rating approach and one especially consistent with the major medical type of program is to express an individual pure premium for a comprehensive coverage in simple form as \((E)(U)\) where \( E \) is the expected annual cost per person utilizing dental care, and \( U \) is the probability of utilizing dental care at all. \( E \) as defined here would seem to be a more meaningful statistic than cost per claim or cost per service because of the difficulty of defining these two terms in the dental field (unless the latter term is construed as cost per procedure). Implicit in this formula is the assumption that some members of any group will not go to the dentist at all in a year, if \( U \) is to be less than 1.00. This assumption is borne out by some of the appended tables; and is explained by the factors affecting utilization discussed above. Approximate values for \( E \) and \( U \), for different benefits, for male, female, child, and related to age, income and educational levels, can be derived from material presently publicly available.

It might properly be expected that, over a period of time, with the expansion of group dental coverage, \( U \) should approach 1.00 for a group with average characteristics, ultimately differing from it only by the value of the "Apprehension of Pain" factor as the deterrent factors related to cost and cultural-educational level wear off.
How much does group dental care cost? Obviously, an accurate estimate would require a full definition of coverage and benefit levels, and take into account group characteristics.

But plans presently operative do indicate at least the order or range of costs. For group coverage of an adult group, at average working age, per person rates run from about $2.00 per month for limited coverage and benefit levels to about $6.00 per month for plans of a relatively comprehensive type.

Variations in rating systems are evident. In some cases age of participants, and female content, are taken into account; in others, only an adult and a child (or children) rate are offered.

In the long run, in view of general trends in group medical insurance, and the particular characteristics of dental care coverage, it seems likely that experience rating and cost-plus rating systems will be the practice.

**THE TABLES**

The tables are by no means recommended for actual calculation of group dental costs or rates. Their purpose is to reflect some relationships and elements of variation in a broad and approximate fashion. Furthermore, no effort has been made to adjust for differences between cited groups in benefit levels and group characteristics.

Table I, U. S. population data, is from the U. S. National Health Survey covering the two years July 1957 – June 1959.1 While the figures cover an uninsured population, it seems reasonable to assume their significance would carry over to an insured population, granted greater total utilization in the latter category.

Table II exhibits the proportion of eligible persons who visit a dentist per year. The fact that 60 out of 100 members of the public do not go to the dentist at all in a given year is one of the strong arguments for the view that large numbers of people are receiving insufficient dental care.

The St. Louis Labor Health Institute at the time the study covers (circa 1956) was a dental clinic operated by the Teamsters’ Union in which union members received almost all services (except orthodontia and laboratory cost of dentures) without charge.2

The I.L.W.U. – P.M.A. plan is a labor-management dental care pro-

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1 Health Statistics; Public Health Service Publication No. 584-B15.
2 Dental Care in a Group Purchase Plan; Public Health Service Publication No. 684.
gram covering children up to 15 under which payment for all services is provided by the plan. One significant feature is that a systematic and thorough effort is made to see that the eligible children make regular dental visits.  

The Naismith data is from experience of a prepaid dental care plan organized by a group of dentists, The Naismith Dental Group. It covered 1925 persons who participated during all or part of the period 1957-1960. Regular monthly "dues" were charged to members, covering a limited program of services. One element that may be reflected in the utilization is that the dues charged were substantially below the value of the services provided.

The data from Group Health Association, Inc., Washington, D. C. is based on 1925 persons over a five-year period in the early 1950's representing 4002 man-years of observation. Services were provided by a professional staff at the Association's building, on a fee-for-service basis. All participants in this group volunteered but were required as a condition of participation to accept all treatment recommended by the examining dentists; so that those receiving services were, to all intents and purposes, all those eligible.

Table III requires no comment.

Table IV illustrates differences between covered group and population utilization, by services; frequencies of different services; and initial as against maintenance costs.

Table V demonstrates again the relation between initial and subsequent year costs. The figures on the Continental Casualty Company plan covering employees of The Dentists' Supply Company of New York are from a press release of Mr. Henry Thornton, president of the latter company. They reflect three years of experience beginning August 1959, involving 2300 persons, employees of the company and their dependents.

Table VI is simply indicative of the types of services identified in fee schedules and of some fee levels. While the fees, as labeled in the table, in no way are intended to represent actual or recommended dental charges, they do convey an idea of approximate relative values of procedures.

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4 An Experiment in Dental Prepayment: Public Health Publication No. 970.
5 Comprehensive Dental Care in a Group Practice; Public Health Service Pub. No. 395.
GROUP DENTAL COVERAGE

CONCLUSIONS

Following are some conclusions suggested by current information:

1. More and better dental care is needed by the population.

2. Attitude of the dental profession is favorable to the development of group insurance and prepayment plans.

3. There are no insuperable technical obstacles in the way of group dental care; and information, experience and statistics are rapidly being accumulated.

4. The special characteristics of dental morbidity and dental practice, combined with popular attitudes, impose corresponding requirements on the structure of group dental coverage and its financing, some of which this paper has attempted to set forth.

5. Large groups, and substantial employer contributions to cost, are two primary requirements.

6. Public response cannot yet be accurately estimated.

7. The future of group dental coverage depends on: (a) the future course of the economy; (b) the policy decisions of management and labor; (c) the policies and practices adopted by insurers and prepayment plans.
TABLE I

NUMBER OF DENTAL VISITS PER YEAR PER 100 PERSONS,
BY VARIOUS CHARACTERISTICS

U. S. Population – From U. S. National Health Survey, July 1957-June 1959

<table>
<thead>
<tr>
<th></th>
<th>No. of Visits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Population</strong></td>
<td>150</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
</tr>
<tr>
<td>0 - 4</td>
<td>30</td>
</tr>
<tr>
<td>5 - 14</td>
<td>180</td>
</tr>
<tr>
<td>15 - 24</td>
<td>220</td>
</tr>
<tr>
<td>25 - 44</td>
<td>180</td>
</tr>
<tr>
<td>45 - 64</td>
<td>150</td>
</tr>
<tr>
<td>65 and over</td>
<td>80</td>
</tr>
<tr>
<td><strong>By Sex</strong></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>130</td>
</tr>
<tr>
<td>Female</td>
<td>170</td>
</tr>
<tr>
<td><strong>Family Income</strong></td>
<td></td>
</tr>
<tr>
<td>Under $2,000</td>
<td>70</td>
</tr>
<tr>
<td>$2,000 - 3,999</td>
<td>100</td>
</tr>
<tr>
<td>4,000 - 6,999</td>
<td>160</td>
</tr>
<tr>
<td>7,000 and over</td>
<td>250</td>
</tr>
<tr>
<td>Unknown</td>
<td>140</td>
</tr>
<tr>
<td><strong>Education of Family Head</strong></td>
<td></td>
</tr>
<tr>
<td>Education under 5 years</td>
<td>60</td>
</tr>
<tr>
<td>5 - 8 years</td>
<td>110</td>
</tr>
<tr>
<td>9 - 12 years</td>
<td>160</td>
</tr>
<tr>
<td>College</td>
<td>240</td>
</tr>
<tr>
<td>Unknown</td>
<td>90</td>
</tr>
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</table>
TABLE II

ANNUAL UTILIZATION OF DENTAL SERVICES: PERSONS VISITING THE DENTIST AT LEAST ONCE EACH YEAR PER 100 ELIGIBLE

<table>
<thead>
<tr>
<th>Source of Experience</th>
<th>Utilization</th>
</tr>
</thead>
<tbody>
<tr>
<td>St. Louis Labor Health Institute</td>
<td>27 (1)</td>
</tr>
<tr>
<td>U. S. Population</td>
<td>40</td>
</tr>
<tr>
<td>Children's Coverage Plan, ILWU-PMA</td>
<td>70</td>
</tr>
<tr>
<td>Naismith Plan</td>
<td>85</td>
</tr>
<tr>
<td>Group Health Association “Pilot Project”</td>
<td>100</td>
</tr>
</tbody>
</table>

(1) Visits to Institute clinic only.

TABLE III

UTILIZATION BY “SHORT TERM” MEMBERS, NAISMITH DENTAL PLAN

<table>
<thead>
<tr>
<th>Class of Members</th>
<th>No. Annual Visits Per Member</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Plan Member</td>
<td>4.24</td>
</tr>
<tr>
<td>Members Terminating Membership In Less Than a Year</td>
<td>6.46</td>
</tr>
</tbody>
</table>
TABLE IV
DENTAL SERVICES PER YEAR PER 100 ELIGIBLE RECIPIENTS
A. Group Health Association, Washington, D. C., “Pilot Project”
B. Naismith Dental Plan, San Francisco, California
C. U. S. National Health Survey

<table>
<thead>
<tr>
<th>Services</th>
<th>Initial Care(1)</th>
<th>Maintenance Care</th>
<th>Visits Initial and Maintenance Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Examinations</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- A</td>
<td>107</td>
<td>129</td>
<td></td>
</tr>
<tr>
<td>- B</td>
<td>53(2)</td>
<td>51(2)</td>
<td></td>
</tr>
<tr>
<td>- C</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X-rays</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- A</td>
<td>108</td>
<td>132</td>
<td></td>
</tr>
<tr>
<td>- B</td>
<td>44(2)</td>
<td>39(2)</td>
<td></td>
</tr>
<tr>
<td>- C</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prophylaxis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- A</td>
<td>102</td>
<td>123</td>
<td></td>
</tr>
<tr>
<td>- B</td>
<td>77(2)</td>
<td>63(2)</td>
<td></td>
</tr>
<tr>
<td>- C</td>
<td></td>
<td>30(3)</td>
<td></td>
</tr>
<tr>
<td>Fillings</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>- A</td>
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<td>250</td>
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</tr>
<tr>
<td>- B</td>
<td>428</td>
<td>274</td>
<td></td>
</tr>
<tr>
<td>- C</td>
<td></td>
<td>70</td>
<td></td>
</tr>
<tr>
<td>Extractions</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>- A</td>
<td>44</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>- B</td>
<td>36</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>- C</td>
<td></td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>Dentures</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- A</td>
<td>10</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>- B</td>
<td>4(4)</td>
<td>2(4)</td>
<td></td>
</tr>
<tr>
<td>- C</td>
<td></td>
<td>10(5)</td>
<td></td>
</tr>
<tr>
<td>Crowns, Bridges</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- A</td>
<td>31</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>- B</td>
<td>7(4)</td>
<td>4(4)</td>
<td></td>
</tr>
<tr>
<td>- C</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- A</td>
<td>67</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td>- B</td>
<td>80</td>
<td>42</td>
<td></td>
</tr>
<tr>
<td>- C</td>
<td></td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- A</td>
<td>911</td>
<td>690</td>
<td>160(6)</td>
</tr>
<tr>
<td>- B</td>
<td>729</td>
<td>491</td>
<td></td>
</tr>
<tr>
<td>- C</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(1) Initial care services for A are not on annual basis but for whatever period in which they were performed.
(2) Reported only when no other service performed.
(3) Includes examinations.
(4) Not covered by plan, paid by patient.
(5) Includes bridgework.
(6) Less than the sum of column because one visit may involve more than one type of service.
GROUP DENTAL COVERAGE

TABLE V
COST OF SERVICES PER PERSON RECEIVING SERVICES, INITIAL YEAR AND SUBSEQUENT YEAR

<table>
<thead>
<tr>
<th>Group</th>
<th>First Year Cost</th>
<th>Subsequent Year Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Continental Casualty Company Plan, Covering The Dentists' Supply Company</td>
<td>$55.99</td>
<td>$36.26</td>
</tr>
<tr>
<td>Childrens Coverage Plan, ILWU-PMA</td>
<td>71.73</td>
<td>46.53</td>
</tr>
<tr>
<td>Naismith Plan</td>
<td>63.11</td>
<td>33.43</td>
</tr>
</tbody>
</table>

TABLE VI
SAMPLE LIST OF PROCEDURES AND FEES
THESE ARE FEES PAID BY PLANS AND IN NO WAY INTENDED TO REPRESENT DENTISTS' CHARGES

1. Group Health Dental Insurance Inc. New York
2. California Dental Association (Service Schedule)
3. Illinois Hospital and Health Service, Inc. (Plan C)

<table>
<thead>
<tr>
<th>Procedure</th>
<th>1 (a)</th>
<th>2 (a)</th>
<th>3 (b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Examination</td>
<td>$10.00 (c)</td>
<td>$6.00</td>
<td>$5.00</td>
</tr>
<tr>
<td>Bite-Wing X-Ray</td>
<td>–</td>
<td>2.00</td>
<td>3.00</td>
</tr>
<tr>
<td>Prophylaxis</td>
<td>–</td>
<td>7.00</td>
<td>7.00</td>
</tr>
<tr>
<td>Palliative Emergency Treatment</td>
<td>3.00</td>
<td>5.00</td>
<td>5.00</td>
</tr>
<tr>
<td>Single extraction, local anesthesia</td>
<td>4.00</td>
<td>6.00</td>
<td>5.00</td>
</tr>
<tr>
<td>Apicoectomy</td>
<td>–</td>
<td>35.00</td>
<td>25.00</td>
</tr>
<tr>
<td>Filling, one surface, amalgam</td>
<td>4.00</td>
<td>7.00</td>
<td>6.00</td>
</tr>
<tr>
<td>Filling, one surface, gold</td>
<td>5.00</td>
<td>25.00</td>
<td>6.00</td>
</tr>
<tr>
<td>Porcelain jacket crown</td>
<td>50.00</td>
<td>75.00</td>
<td>75.00</td>
</tr>
<tr>
<td>Bridge Pontic, cast gold</td>
<td>25.00</td>
<td>40.00</td>
<td>45.00</td>
</tr>
<tr>
<td>Full upper or lower denture, acrylic</td>
<td>90.00</td>
<td>145.00</td>
<td>150.00</td>
</tr>
<tr>
<td>Recementing Inlay</td>
<td>–</td>
<td>5.00</td>
<td>5.00</td>
</tr>
<tr>
<td>Periodontia Treatment</td>
<td>4.00</td>
<td>10.00</td>
<td>6.00</td>
</tr>
</tbody>
</table>

(a) As of February 1, 1961
(b) As of July 1, 1963
(c) Includes X-rays and Prophylaxis

(Feef for Group Health Dental Insurance Inc. and for California Dental Association from U. S. Public Health Service Publication No. 839; fees for Illinois Hospital and Health Service, Inc. by permission of that company.)