Impact of Medicaid and an OEO Health Center on Use of Dental Services in an Urban Area

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THE CONCEPT OF ACCESS to adequate health services as a basic right for all instead of a privilege of only those who can afford it is increasingly reflected in public policy decisions related to health care. This concept has significantly influenced recent allocations of public funds to support health facilities such as neighborhood health centers (NHC) and health care payment mechanisms such as the Medicaid program. As a result of the neighborhood health centers and Medicaid, and because of general increases in the standard of living, social class differentials in the use of medical care services have been steadily decreasing (*1–4*).

Nationally, this trend toward more equal utilization of health services has been less pronounced for dental care (*5,6*). Since both neighborhood health centers and Medicaid provide medical and dental health service benefits for the poor, the question why socioeconomic differentials have persisted for dental care needs closer examination.

In this paper we report observed changes in social class differentials in use of dental health services in an urban community in upstate New York over a 4-year period, 1967–71 and offer an explanation for the persistence of these differentials.

In an earlier paper (*7*) we presented findings from the first Household Survey of the Rochester Child Health Studies. The findings, documented

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in great detail, indicated that socioeconomic differentials account for most of the variations (in addition to age differences) in the use of dental care. In fact, in no other area of health care utilization examined in the Rochester Child Health Studies did we find such strong and clear-cut relationships with socioeconomic status. Compared with national averages, the utilization rates for our community were considerably higher, probably reflecting the highly skilled industry and above national average income.

The initial 1,000 family survey of 1967 was followed by a 500 family survey in 1969 (*8*) and by a final 1,200 family survey in 1971 (*4*). The first and last samples were based on address files. Families with children under 18 years old were selected from these files. The 1969 survey used as a sampling frame the enrollment lists of Medicaid and Blue Cross (family contracts). Medicaid recipients were intentionally overrepresented. Although weight factors were employed in this analysis to correct for the bias, we still cannot consider the 1969 sample completely comparable to the samples used in the 1967 and the 1971 surveys.

The wording used in the dental care section of the 1969 and 1971 questionnaires was identical, but differed somewhat from that used in the 1967 survey. It started with the simple "When did (child's name) *last* see a dentist?," then inquired about the name of the dentist or clinic, the reason for this last visit, whether the child goes for routine checkups and if so, how often. Details about the means of transportation used to reach the dentist or clinic and the time required to do so were obtained in the 1967 survey, but not in the later ones. Also, for children, contacts with the school hygienist were not counted in the later surveys as a dental visit, as was done in 1967. Dental visits were then limited to visits to a dental office or clinic without regard to who delivered the services—the dentist or hygienist. Thus, prophylaxis, examinations, and X-rays given by the dental hygienist in the dentist's office or clinic were regarded as a visit.

Socioeconomic differentials were assessed by comparing utilization patterns of respondents living in different areas of the county. Each address was coded by census tract. The census tracts were then grouped in five categories from lowest to highest, based on a combined ranking by median house value, median family income, median number of years completed in school, and percentage of work force in professional occupations.

Findings

Time interval since last visit. Table 1 presents findings on the percentage of respondents who reported a dentist visit within the 12 months preceding the interview. In 1967 and 1971, 46 percent and 31 percent, respectively, of the children from the lowest socioeconomic area had made a dental visit within the past year in contrast to 88 and 79 percent in the highest socioeconomic area. For mothers, the 1967 and 1971 percentages were 45 and 58 percent in the lowest area and 84 and 87 percent in the highest area.

There was no clear trend toward a more equitable distribution of dental care services by social area over the 4 years. For children, the proportion who saw a dentist declined. Some of this decline is a result of the 1967 definition of dental visits for children, which included seeing dental hygienists at school, frequently the only dental contact

Table 1. Percentage of children (age 3 and over) and mothers who visited a dentist during preceding 12 months, by socioeconomic area, Monroe County, N.Y.

Socioeconomic area	Children			Mothers		
	1967 (N=1,955)	1969 (N=2,155)	1971 (N=2,515)	1679 (N=1,355)	1969 (N=923)	1971 (N=1,134)
Highest	87.8	77.9	78.8	83.7	77.5	86.9
High	69.4	74.8	69.0	69.7	66.7	79.2
Medium	68.9	64.5	63.8	62.2	61.2	69.1
Low	44.0	42.9	44.1	38.0	41.7	48.9
Lowest	46.2	27.7	31.0	45.0	41.1	58.4
All areas	66.8	65.7	62.7	61.8	62.8	71.8

NOTE: Numbers of mothers and children for 1967 and 1969 are slightly inflated because of weight factors. For 1971, the numbers are self-weighting samples.

Table 2. Percentage [1] of children (age 3 and over) and mothers visiting a dentist at a clinic [2] on the last visit, by socioeconomic area, Monroe County, N.Y.

Socioeconomic area	Children			Mothers		
	1967	1969	1971	1967	1969	1971
Highest	0.4	0.9	1.1	.....	.....	.....
High	2.7	4.7	2.5	1.9	.....	1.5
Medium	2.0	4.8	6.3	3.2	.6	3.4
Low	13.0	36.7	24.5	1.5	17.1	18.1
Lowest	46.2	80.4	53.0	.....	55.0	36.0
All areas	4.2	8.4	7.5	1.9	3.5	5.1

[1] Missing values (all years) and school hygienist (1967 only) excluded for percentage computation.

[2] Hospitals, Eastman Dental Center, and neighborhood health center.

for many children from low income families in any given year. For maternal care, where the definition of a dental visit was comparable in all surveys, there was an overall increase in the percentage seeing a dentist, from 62 percent in 1967 to 72 percent in 1971. Although this increase was observed across all socioeconomic areas, its highest magnitude occurred in the lowest and low socioeconomic areas.

Type of facility. Traditionally, increases in use of medical care by the poor have not come through the private sector. Thus, the proportion of medical care, especially child and maternal care given at public clinics, in hospital outpatient departments and emergency rooms, or in health centers, has steadily increased over recent years. The data obtained in this study suggest that dental care utilization is lagging behind in this respect (table 2). While only 80 percent of the ambulatory medical care contacts for children in Monroe County are now in the private sector (*9*), about 92 percent of the last dental care contacts are still in the private sector, although the trend is also toward a greater involvement of the public sector.

Since children have always had more access than adults to dental health services at clinics in Rochester (Eastman Dental Center), it is not surprising that the proportion of mothers using clinic services in the lower income areas showed a greater increase than that for children after the NHC and expanded hospital service programs began. About 5 percent of the dental visits of mothers were to clinics in 1971 in contrast to only 2 percent in 1967.

Reason for last visit. Socioeconomic characteristics determine not only the frequency of dental visits and their place of delivery, but also the type of care received (table 3). About 60 percent of all child and 50 percent of all maternal visits were for preventive services, with little change between 1967 and 1971; large differences continued to be observed among socioeconomic areas. In 1971, only 34 percent of the dental visits of children from the lowest socioeconomic area were for preventive services in contrast to about 70 percent of those from the highest socioeconomic area. For similar maternal socioeconomic groups, these proportions were 23 percent in the lowest and 58 percent in the

Table 3. Percentage of children (age 3 and over) and mothers visiting a dentist for preventive reason on the last visit, by socioeconomic area, Monroe County, N.Y.

Socioeconomic area	Children			Mothers		
	1967	1969	1971	1967	1969	1971
Highest	73.9	66.0	70.2	61.3	57.9	58.3
High	63.7	63.1	65.3	53.3	47.9	56.5
Medium	65.3	55.7	59.6	46.1	40.7	53.4
Low	59.2	48.9	43.9	28.6	27.5	24.1
Lowest	56.3	39.8	33.8	15.9	8.7	23.2
All areas	65.3	58.8	60.5	48.1	43.2	50.1

Table 4. Percentage of children (age 3 and over) and mothers visiting a dentist for emergency reason on the last visit, by socioeconomic area, Monroe County, N.Y.

Socioeconomic area	Children			Mothers		
	1967	1969	1971	1967	1969	1971
Highest	6.1	4.1	0.7	4.2	5.9	3.5
High	5.8	1.8	.8	7.7	9.2	7.4
Medium	5.8	5.0	3.8	11.9	11.8	11.4
Low	15.0	11.2	12.2	30.0	33.7	18.0
Lowest	21.2	31.5	10.3	25.0	48.1	23.2
All areas	7.4	5.2	3.4	11.4	13.3	10.3

highest group. Data on the proportion of emergency visits are presented in table 4. Although the proportion of child emergency visits may have declined (from 7 to 3 percent), the difference between areas as to the proportions of emergency visits remained about the same.

Discussion

Study data. The greatest changes observed during this study relate to the two lower socioeconomic areas. From 1967 to 1971 the decline in the percentage of children with a visit in the preceding 12 months is largely attributable, as noted previously, to a change in the definition of a dental visit. The decline in the proportion of preventive visits is also related to the exclusion of the school hygienist visit. Several factors may be associated with the more equal distribution of maternal visits: (*a*) the availability of dental health service benefits under the Medicaid program, (*b*) the availability and accessibility of dental service at the NHC, and (*c*) the expansion of hospital dental service programs in the area.

An interesting finding in this study was the increase in the proportion of clinic visits made by low income groups. Despite declines in these visits between 1969 and 1971, following rather dramatic increases between 1967 and 1969, the increases were still substantial. Again, some of these results may be artifacts of the methodology, such as the special sampling frame chosen in 1969, but they probably also reflect some real changes.

The 1969 increases may be ascribed to the large number of persons eligible for Medicaid benefits up to April 1968 before the first change in Medicaid legislation in New York State, the high percentage of persons who applied for Medicaid and received dental care under this program (*10*), and the accessibility of dental services at the new NHC as well as in expanded hospital-based dental programs. The declines noted in 1971 may largely stem from the change in Medicaid legislation in 1969, which reduced the number of eligible persons and the scope of services and changed the reimbursement schedule to private practitioners (*11*).

Our basic finding is that socioeconomic differences in utilization rates persisted throughout the study period, although the NHC and expanded hospital and Medicaid programs seem to have had some effect on the pattern of use of dental health service by low income persons in Rochester. Better access to care and less emergency care seem to have been major improvements. The responsiveness of the care system to changes in Medicaid regulation, such as in fee schedules and eligibility criteria, is remarkable.

Future direction. Social inequality is still primarily responsible for the lack of parity in use of dental health services across population groups. To obtain this parity through the abolition of social inequality is probably utopian, but to reduce its impact through special programs in selected fields such as health care is probably realistic. However, the efforts made in this direction up to now have been insufficient.

Plans to move further in this direction are underway in Rochester; the NHC program will be expanded from one to four centers. Medicaid will have a capitation plan covering dental care services for low income persons while a new prepayment plan marketed by Blue Shield will cover similar benefits for the employed population. Since these programs only reduce financial barriers, health facilities delivering care must continue to work toward the realization of the opportunities by extending their programs. These programs

should include (*a*) outreach, (*b*) readily available and accessible clinic services, (*c*) comprehensive care, (*d*) continuous monitoring of patient and provider satisfaction, (*e*) career ladder programs for auxiliary personnel, and (*f*) an appropriate health education program.

In 1975, a new survey will examine the effect of the expanded health center program and new prepayment plans. In addition, the survey will monitor the level of patient and provider satisfaction and the effect of a health education program on patient motivation toward dental care. This research will provide valuable information on the remaining nonfinancial barriers between dental health services and the poor (*12,13*).

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The impact of two new health programs—Medicaid and neighborhood health centers—on the use of dental health services in Rochester, N.Y., was investigated over a period of 4 years, 1967–71. Data collected in 1966 on a 1 percent probability sample of young families with children were used as baseline information for determining the level of this impact over the study period.

Generally, findings in this study demonstrate that even when financial barriers are removed, social class stratification persists as an important determinant of the pattern of utilization of dental health service.

The specific results of the study showed that (*a*) the greatest changes in the use of dental health services occurred among residents from the lower socioeconomic areas, (*b*) the proportion of mothers' visits increased overall while the proportion of children's visits was less affected, (*c*) mothers' visits to clinics increased significantly, from less than 1 percent in 1967 to 36 percent in 1971 (lowest socioeconomic area), but less significantly for children of the same socioeconomic standing, from about 46 percent to 53 percent for the same time period, and (*d*) emergency visits for both children and mothers declined; again, the greatest declines were observed for residents of lower socioeconomic areas.