A STUDY OF HEALTH CARE PATTERNS OF PUBLIC ASSISTANCE RECIPIENTS[1]

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Introduction

The general objectives of the Medicaid program, initiated under Title XIX of the Social Security Act, are well known, i.e., to provide better health care to the poor. This program is also known to vary considerably from state to state under federal guidelines that mandate coverage of certain basic services and also allow for a broad range of optional services to be provided under the umbrella of federal cost-sharing with the states. As has been true under most similarly funded programs, the extent to which states are able to capture federal money to support services is, in part, directly related to the general affluence of the state. Under Medicaid, as with a number of other programs, the southern states have generally lagged considerably behind others in this regard.

A major, legitimate concern of federal policymakers concerns the impact that any restriction in coverage of optional services may have on the health of Medicaid eligibles as well as on the utilization and cost of services. In this regard, the specific objectives of this study sponsored by the Social and Rehabilitation Service of DHEW, were as follows:

Primary objectives. To determine (1) the proportion of Medicaid eligibles who are receiving health care services (both basic and optional services); (2) what specific services are used; (3) where services are received, i.e., from what type of provider; and (4) how and by whom they are paid.

Secondary objectives. To determine (1) the so-called "utilization effects," whether optional services were obtained through the substitution of one of the basic covered services, and to make comparisons between jurisdictions providing different coverages of medical services regarding the proportions of eligibles receiving various health care services; (2) the proportion of eligibles who have perceived a need for health care services but who did not receive them and to ascertain the reason(s) why they did not receive them.

Tertiary objective. To determine the health status of the eligibles.

Design of the Survey

From the outset, the project team felt it would be necessary to gather most of its data from a field survey. Secondary sources of Medicaid experience, including records of state agencies and the office records of providers, were considered to be unsatisfactory and incomplete in several respects in comparison to direct contact with eligibles. This would be particularly true with respect to the determination of unmet needs, since they would never appear in official records; furthermore, even where services had been used, it was found that paid claim tapes were often inaccurate for any one of several reasons, ranging from slow reporting to data processing errors. In addition, they could provide no information on utilization and expenditures by eligibles outside of the Medicaid system.

It was, therefore, determined that the major focus of investigation would be a survey of Medicaid eligibles in locations offering different programmatic benefits under Medicaid. It is important to note that Medicaid eligibles rather than recipients were surveyed, since this made it possible to also gather information on those poor who sought and received health care services outside the system, either because they were unaware of available benefits, their providers refused to participate, or any of several other possible reasons.

For purposes of the survey, Medicaid eligibles were defined as cash welfare recipients in the particular locations; the "medically indigent" or others who may have qualified in the absence of categorical public assistance benefits were not included. These latter groups were excluded for two major reasons: (1) it was impossible to identify them before they actually became users of the system; and (2) not all of the sites selected provided benefits for them.

In addition to the constraints listed above, institutionalized welfare recipients were also eliminated from the survey on the grounds that their health care needs and the health system which serves them are both likely to be different than for noninstitutionalized eligibles. Finally, welfare recipients under the Aid to the Blind program were also eliminated because they were small in number and are typically serviced by other specialized programs.

In summary, the survey population of interest, or target population, consisted of noninstitutionalized cash welfare recipients in the Aid to the Permanently and Totally Disabled (AD), Old Age Assistance (OAA) and Aid to Families with Dependent Children (AFDC) programs in each of the four local areas of Atlanta, Little Rock, Oklahoma City and Trenton.

The sites were chosen purposively, after considerable preliminary investigation, to ensure a spectrum of optional service coverage and local agency cooperation in the survey. The identified population was produced by using the county welfare categorical assistance eligibility file as of March 1973. This resulted in the sampling unit being the welfare case; the Atlanta LA was represented by Fulton County (which was estimated to contain 91 percent of the Atlanta welfare caseload); Pulaski County (including Little Rock, North Little Rock, College Station, and Jacksonville, Arkansas) represented the Little Rock LA; Oklahoma County (which includes Midwest City, and most of Oklahoma City) represented the Oklahoma City LA; and Mercer County

(Trenton, Mercerville, and Princeton) represented the Trenton LA.

The population of interest and the identified population, the population that was attempted to be sampled, have been described. However, a third population, the sampled population, is the population that was actually sampled. Like the initial population of interest, this is a prescribed population and is composed of all those sample units in the identified population who could have been successfully interviewed. In short, only those sample units who were willing and who could have been reached are members of the sampled population. The interest was in maximizing the intersection between the identified population and the sampled population. In this study, those welfare cases who were home during the hours of 8:00 A.M. to 10:00 P.M. in June, July, and August, 1973, who had not moved and had a correct address, who had moved and had established a new address, and who had or would have answered any (or the majority) of the questions were members of the sampled population.

An additional restriction on the sampled population was that only those individuals in these cases who were eligible for welfare at some period within the last three months were fully interviewed. Those individuals who stated that they were not eligible in the last three months or who did not know if they had been eligible, were declared ineligible and no interview data were collected beyond the initial demographic and eligibility data.

Questionnaire design is an art which is gradually becoming more of a science. In constructing the questionnaire for this survey, an attempt was made at obtaining questions that were similar to those successfully utilized by other "health" surveys, such as the National Center for Health Statistics, Health Interview Survey [2].

Considerable attention was given over a three-month period to the construction of the questionnaire. Numerous discussions occurred between the subject-matter members of the project and the project statistician. Topics discussed included the number of optional services to investigate, the selection of the appropriate respondent, the quantity and level of detail of the desired information, the recall period, procedures for maximizing the quality of the data, interviewer bias, the length of the questionnaire, the potential coding problems, etc. The literature on questionnaire construction and response errors were consulted, and rough drafts of the questionnaire were "hot-housed" on university employees and local welfare eligibles. During this period, the survey subcontractor, Marketing Information Service, Inc., Atlanta, Ga., worked on the formulation and flow of the questionnaire and, with the Temple project team, conducted a pretest of it using approximately twenty-five cases in each of the four local areas.

The final questionnaire contained a total of approximately 228 questions spread over eleven sections (A. Demographic, B. Eligibility and Health Insurance, C. Overnight Hospitalization, D. Dental Care, E. Eye Care, F. Hearing, G. Physician Services, H. Prescription and Nonprescription Drugs, I. Home Health Care, J. Family Growth and Planning Services, and K. General Health Status). Because of skip patterns and welfare program differences, however, no one was called upon to respond to all questions.

It was felt that the family growth and planning section of the questionnaire contained a number of sensitive and "threatening" questions. These were handled in the traditional manner by placing them at the end of the interview in the belief that this would give the interviewer an opportunity to establish rapport and would minimize any possible damage to the survey. It was somewhat surprising to find that answers to these questions appeared to be as complete as for other questions in the survey, and many interviewers commented on the willingness of respondents to provide information in this as well as other areas.

Both purposive and probability-based selections were utilized in this study. As mentioned above, the selection of the four sites was purposive.

The second stage of the sample design utilized probability-based selection of the welfare cases. Because previous studies [3] suggested that there tended to be different utilization rates between various subsets of the U.S. welfare population, and because SRS desired to gain knowledge about the health care and practices of various subsets of Medicaid users, stratified random sampling with proportional allocation was selected as the sampling technique [4].

The third stage employed 100 percent sampling of all eligible individuals within the welfare case.

Both a priori and a posteriori stratification were utilized, the former on the identified population, and the latter on the collected sample units.

The selection of the specific a priori stratification variables was largely dictated by the importance of such variables as indicated by past published and unpublished research, the desire to keep the number relatively small, and their availability. The results were that a set of four variables--type of aid program, race, age, and size of family--was selected. Their utilization in all four sites was as follows: (1) AD--classified by the racial categories of white (W), American Indian (AI), black (B), and unclassified (UC); (2) OAA--cross-classified by race (W, AI, B, UC) and age (65 through 74, 75 and above); and (3) AFDC--cross-classified by race (W, AI, B, UC) and family size (three or less, four or more).

For prestratification purposes, the above variables were based on welfare agency classification; the AI category was only used in Oklahoma City, and the UC category only in Little

Rock. The reason for the UC classification was that a federal directive had been issued that called for the elimination of classification by race. Little Rock was the only site that had implemented this new policy to any significant degree.

The racial and sex composition of the interviewers varied, with Trenton having black, white and Spanish-speaking interviewers, mostly college-aged males, while Oklahoma City had mainly white females of middle forties and fifties and college age. The supervisors were all experienced survey field personnel, and contrary to expectation, both supervisors and interviewers reported no unusual problems in interviewing members of this selected welfare population. This was supported by the fact that response rates by site ranged from about 75 percent to 86 percent [1].

The main survey was in the field for the months of June, July and August, with the majority of the interviewing conducted between 8:30 A.M. and 4:30 P.M. on weekdays. Interviewers were requested to seek an interview environment that permitted the respondent, or respondents, to give undivided attention to the questions of the interview. Up to three callbacks (subsequent visits to the interviewee's address) were utilized before a case was terminated, with evening (7:00 P.M. to 10:00 P.M.) callbacks being frequently used.

Initial demographic data (names, ages, relationships, sex, welfare eligibility, etc.) were collected for each member of the household (Sections A and B of the questionnaire); only data on "eligibles" was collected for all other sections of the questionnaire. "Eligibles" were defined as those listed on the Medicaid card, which was asked for by the interviewer, or those designated as eligible by the respondent.

The usual field problems of "no one at home," "vacant dwelling," "refusals," "incomplete interview," "invalid address," "deceased," etc., were encountered. Two of these problems, "invalid address" and "ineligible for welfare," had considerably higher frequencies in most of the locations than anticipated. Invalid addresses were either returned to the county welfare office for resolution or neighbors were solicited for the "new" or "correct" address. It was felt that the vigorous pursuit of invalid addresses was partially responsible for the relatively favorable response rates.

It should be noted that, contrary to normal personal interview procedures, no introductory letter was utilized. Indications from the pretest were that this letter created more problems than it solved by generating apprehensions among respondents.

After the interview was designated as completed by the interviewer, a number of checks and studies were made on the quality of the collected data, including a field edit, home-office edits, an acknowledgement of the interview, a 10 percent reinterview study, and a validity study.

The acknowledgement of an interview was a brief letter, with a postage guaranteed envelope, that also contained two questions from the main survey--one demographic, and one on doctor visits in 1973. The hope was that with these two questions one would get a more substantial indication of the presence of an interview than with the traditional yes-no question. Unfortunately, this approach was not particularly successful, for the return rates did not exceed 25 percent.

A reliability study was conducted by reinterviewing 10 percent of the respondents in each location using eleven important questions from the questionnaire. These reinterviews were typically conducted by the most "senior" interviewers within a week or two of the original interview. Results of this study indicated reliability of in excess of 90 percent with the exception of responses about prescriptions and certain aspects of dental care [1].

A validity study was conducted in the main survey relying largely on the "paid-claims tapes" secured from three of the sites (they were unavailable to the project team in Atlanta). Again, results indicated that information on prescriptions and dental care were weakest.

Some Preliminary Results

Survey data were collected for over 3,000 cases which included over 8,000 Medicaid eligible individuals. Needless to say, the resulting database is substantial and analysis will proceed for some time.

In this paper some preliminary findings will be reported with respect to the utilization of key health services, the proportion of eligibles who incurred out-of-pocket expenses for those services, the proportion of eligibles who perceived themselves to have unmet needs for the services, and the interviewee ratings of health status.

At the outset, it should be noted that the research group ranked the Medicaid benefits in the four survey locations on the basis of comprehensiveness. In general, there was agreement that Trenton had by far the best overall benefits, followed by Atlanta, Little Rock and Oklahoma City, in descending order. Trenton covered virtually every allowable optional service. Atlanta, though providing full coverage for prescriptions, did not cover dentures at all and gave only partial coverage--via a screening program for AFDC children to age six--for routine dental care, orthodontics, eyeglasses, optometric services and hearing aids. Little Rock did not cover prescriptions or hearing aids, but full coverage was afforded for routine dental care, orthodontics (prior approval required), and dentures. Eyeglasses and optometric services were provided only in the screening program for children to age twenty. In Oklahoma City, there was no coverage for prescriptions or dentures, and all of the other above-mentioned benefits

were generally provided only for AFDC children through age twenty via a screening program. Oklahoma City also had a limit of only four covered physician visits per month. These coverage patterns should be kept in mind when reviewing the findings reported below, and displayed in Tables 1-4.

Table 1 presents data on the percent of Medicaid eligibles, classified by categorical assistance group, who made use of five selected health services during given time periods prior to the interview date. Note that the first two services listed are mandatory services, i.e., they must be covered by state Medicaid programs or no federal funds would be made available to help finance the state program. The last three services listed, however, are "optional" services, i.e., it is not required that they be included in a state plan, but if they are, the federal government will share in their cost.

Note that the data in Table 1 speak directly to two of the primary objectives of the study: the proportion of Medicaid eligibles who are receiving health care services and the utilization rates for these specific services.

As can be seen, Trenton had the highest or tied for the highest proportion of eligibles reporting utilization in thirteen of fifteen subpopulations (three aid categories; five services). Atlanta had the highest percentage of utilization for physician services among the OAA and for visits to the dentist among the AFDC. It also tied for the highest percentage of physician use in both the AD and AFDC subpopulations.

The comprehensive coverage of the New Jersey Medicaid program must certainly be a major factor in the persistently high utilization in Trenton. Not only were its benefits extensive, but the survey indicated a very high level of awareness of available benefits on the part of Medicaid eligibles. Yet there was no evidence to suggest that this greater awareness of benefits resulted directly from efforts by the Medicaid program staff to "market" their product more aggressively in New Jersey. In fact, based on the standard procedures for disseminating Medicaid information which were outlined to the researchers by program staff in each of the four locations during a pre-survey site visit, Trenton may have been less zealous in this regard than some of the other cities. Naturally, there may have been some discrepancy between the standard procedures that were reported and what was actually done.

In any case, it seems plausible to suspect that at least some factors unrelated to Medicaid may also have been operative. This is especially true when Trenton's utilization level remains consistently higher even when compared with cities having similar benefits, e.g., Atlanta for prescriptions. Trenton was the only non-southern location in the survey, and some national health statistics have indicated higher levels of the use of health services in the Northeast than in the South. Further investigation may show that regional differences are as much a function of educational level (generally higher in the Northeast) and/or variations in regional medical practices as of program differences.

The relatively strong showing of Atlanta with reference to physician visits and dental care can be traced to the central role played by Grady Hospital and some other special public and private programs in that city. Grady is a large, centrally located municipal hospital which is readily reached by public transportation. Long before the enactment of Medicaid, it had served as the primary provider of health services to the poor, a role which it continues to play--even for extra-programmatic services--especially for black Medicaid eligibles. In addition, the OEO-sponsored Atlanta Southside Comprehensive Health Center and the Ben Massell Dental Clinic, among others, provided additional accessibility to these services.

In five of six subpopulations dealing with mandatory services, Little Rock showed the lowest reported utilization. This was consistent with a presurvey finding that Little Rock had the most serious problem of the four cities studied with a maldistribution of providers and facilities. Major poverty pockets were concentrated in the eastern section of the city, while all the hospitals and most physicians were located in the western part of town. The situation was further exacerbated by a poor public transportation system which did little to enhance the accessibility of services to the poor.

Consistent with the ranking assigned to it, Oklahoma City showed the lowest level of utilization in six of the nine optional service subpopulations.

Generally speaking, utilization levels for the three optional services shown followed a predictable pattern in light of Medicaid coverage and other known available services. Thus, while Atlanta, without Medicaid dental benefits (except for AFDC children to age six), showed higher utilization in two of three aid categories than did Little Rock, with full dental coverage, this was not surprising in light of the several public and private dental programs in Atlanta and the maldistribution of providers in Little Rock.

For vision care, only Trenton provided Medicaid benefits, but Atlanta did relatively better than the other noncovered cities in two of three aid categories, and once again, it had several extra-Medicaid vision care services available.

With respect to prescriptions, only Atlanta and Trenton provided coverage. The relatively good showing by Oklahoma City, despite no Medicaid coverage, probably results from an awareness on the part of physicians of the existence of the special drug allowance provided by the county welfare agency in connection with the cash welfare benefit and the availability of a free county dispensary after the drug allowance has been exhausted.

Rather substantial differences in utilization rates were found when age breakouts were examined. The contrasts were especially marked when the AFDC group was separated by adult/child category. In most instances, predictably higher levels of utilization were manifested by adults.

Racial differences tended to be even more pronounced, with proportionally more whites than blacks reporting utilization in most subpopulations.

Finally, the figures in Table 1 tend not to support the hypothesis that a "utilization effect" would reflect substitution of more costly basic services for uncovered optional services in those locations with very narrow program benefits (e.g., more doctors' visits in Little Rock, prescriptions not covered, than in Trenton --prescriptions covered--in order to permit injection of medication and/or dispensation of free medicine samples to persons who otherwise might never obtain needed medicines). There are, however, so many variables that influence the demand for health services, that some of the substitution may very well be present (indeed, in some subpopulations that have been reviewed this seems certain), though masked by other offsetting factors.

The percent of eligibles who incurred some out-of-pocket costs for various services are shown in Table 2. Trenton, again, showed the lowest figures in thirteen of fifteen subpopulations, missing its customary first ranking only with respect to OAA hospitalization and OAA physician visits. This would seem to further substantiate the earlier contention that Medicaid eligibles in Trenton were more aware of the benefits to which they were entitled than were the eligibles in the other locations. Obviously, one reason for incurring expenses with respect to any covered service would be that the eligible received the service outside the system--either involuntarily because of ignorance, or voluntarily because, e.g., of a desire to utilize a provider who had chosen not to participate in the program. An attempt was made, through the survey document, to ascertain why out-of-pocket expenses were incurred, but time has not yet permitted analysis of those responses.

Preliminary analysis has revealed very sharp racial differences with respect to out-of-pocket expenses, with proportionally more whites than blacks reporting these expenses in a large majority of cases. Again, it is not clear whether this reflects less awareness of available Medicaid benefits or a greater propensity to seek services outside the system, for any of a variety of reasons. Some evidence exists on both counts, but more analysis is needed before any final inferences may be drawn. It can be reported, though, that a fairly consistent pattern exists showing larger proportions of whites than blacks using private physicians and dentists. This may be suggestive of more treatment outside the Medicaid system, since a number of private practitioners have refused to participate in it.

Among the AFDC group, out-of-pocket expenses were reported far more frequently among adults than among children, a result that was hardly surprising in light of coverage patterns.

Note that the data in Table 2 speak directly to the primary objective of determining who pays for the health care of the poor.

A secondary objective of the study was to determine the proportion of eligibles who perceived a need for health care services that were not received. Information on this point is displayed in Table 3. Note that Trenton shows the lowest reported unmet needs in eleven of twelve subpopulations. The only other low was recorded by Atlanta with respect to prescriptions for the AFDC (Atlanta and Trenton both provided prescription benefits). Oklahoma City, on the other hand, had the highest or tied for the highest proportion of unmet needs in eight of the twelve categories listed.

Again, age and racial differences were significant. Predictably, a much smaller proportion of children than adults among the AFDC were reported to have unmet needs, probably reflecting the previously mentioned mandatory screening programs for children, increasing morbidity with age and, possibly a natural parental instinct to obtain care for the young at any cost.

It was, however, mildly surprising to find that when all subpopulations were compared, half showed greater unmet needs among blacks and half showed greater unmet needs among whites, despite the fact that in most subpopulations whites reported higher levels of utilization. This finding suggests that whites may have a greater propensity to seek and use medical services than blacks. While there are many possible reasons for this situation, and further analysis will be conducted, one plausible explanation is that poor whites seem less prone than poor blacks to be concentrated in narrowly defined "ghetto" areas. Because of the greater dispersion of their living areas, poor whites may be more exposed to the middle class health values of the community.

A tertiary objective of the study was to determine the health status of Medicaid eligibles. Evaluation of this point by the eligibles themselves is displayed in Table 4. In all three aid categories, Trenton had the lowest percentage of eligibles who reported their health as "poor." Not unexpectedly, the smallest proportion appeared among the AFDC; relatively few persons under age twenty (the preponderant group in the AFDC classification) would be expected to classify their health as poor. Also note that the intercity differences are smallest among the AFDC. This is consistent with the fact that benefits are more uniform across sites in this category for children. The high proportion of Atlanta ADs reporting poor health is probably accounted for by a substantially higher proportion of eligibles who reported chronic conditions.

It was interesting to note, however, that the eligibles appeared to have a remarkable degree of sophistication when asked to rate the quality of health services available to them; their ranking of services often differed sharply from their rating of health status. Thus, they apparently recognized that many factors other than the quality of available services influence an individual's health status.

Some Tentative Conclusions

It seems clear from the survey that the presence of Medicaid benefits does positively influence the use of health services, and it also reduces financial barriers to care and levels of perceived unmet needs. The influence of these benefits on health status are much less clear. Here, the presence of many other variables, including different patterns of medical practice, variations in the available mix of providers, the geographical spread of hospital facilities and a multitude of others, makes it difficult to reach definitive conclusions.

The data clearly show rather marked differences in racial patterns for the variables investigated. Additional analysis should lead to better explanations for these variations.

The project team intends to continue working with the survey data and hopes to report further on its findings in the near future.

ACKNOWLEDGEMENTS AND REFERENCES

[1] This paper is based on research conducted by the authors under contract with the Social and Rehabilitation Service of DHEW, contract #18P 56701/3-01. Readers wishing more detail should refer to the final report for that contract, dated October 1974.

[2] DHEW, Health Survey Procedure: Concepts, Questionnaire Development and Definitions in the Health Interview Survey, NCHS, Series 1, No. 2, May 1964.

[3] Effect of Medicaid on Health Care of Low-Income Persons, School of Public Health and Administrative Medicine, Columbia University, New York, contracts WA-406, SRS-ORDT-68-01 and SRS-69-50.

[4] Cochran, William G., Sampling Techniques, 2d ed., Wiley & Sons, 1963.

TABLE 1. UTILIZATION, PERCENT OF ELIGIBLES

	Trenton			Atlanta			Little Rock			Oklahoma City		
Service	OAA	AD	AFDC	OAA	AD	AFDC	OAA	AD	AFDC	OAA	AD	AFDC
1. Hospital 1972-73	34	45	25	26	42	20	29	29	16	34	43	24
2. Physician 1973	68	81	56	73	81	56	59	65	44	64	68	55
3. Dentist 1972-73	18	36	43	10	34	50	15	28	37	14	23	31
4. Eye doctor 1972-73	48	45	32	41	36	21	33	28	27	29	24	17
5. Prescription 1973	51	61	41	47	54	32	44	37	27	42	50	39

TABLE 2. OUT-OF-POCKET EXPENSE, PERCENT OF ELIGIBLES

	Trenton			Atlanta			Little Rock			Oklahoma City		
Service	OAA	AD	AFDC	OAA	AD	AFDC	OAA	AD	AFDC	OAA	AD	AFDC
1. Hospital 1972-73	14	3	7	22	11	10	20	10	17	12	11	16
2. Physician 1973	19	5	5	13	6	8	34	24	16	11	14	13
3. Dentist 1972-73	13	4	3	77	24	26	54	36	17	68	55	34
4. Eye doctor 1972-73	12	6	8	39	17	2	66	55	22	38	39	33
5. Prescription 1973	4	3	5	48	33	33	96	84	84	91	91	94

TABLE 3. UNMET NEEDS, PERCENT OF ELIGIBLES

	Trenton			Atlanta			Little Rock			Oklahoma City		
Service	OAA	AD	AFDC	OAA	AD	AFDC	OAA	AD	AFDC	OAA	AD	AFDC
1. Physician 1973	9	12	3	29	34	6	21	20	5	22	31	6
2. Dentist 1972-73	13	24	8	24	31	22	22	33	16	25	41	23
3. Eye doctor 1972-73	19	14	3	41	41	12	38	32	10	41	41	13
4. Prescription 1973	5	10	11	10	12	9	10	26	24	11	23	16

TABLE 4. HEALTH STATUS, PERCENT OF ELIGIBLES LISTING POOR

	Trenton			Atlanta			Little Rock			Oklahoma City		
Rating	OAA	AD	AFDC	OAA	AD	AFDC	OAA	AD	AFDC	OAA	AD	AFDC
Poor	15	41	5	36	62	6	37	46	6	30	45	7