Anticipated Health Behavior of Families in Relation to Medicaid

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TITLE XIX (Medicaid) is potentially the most far reaching of the 1965 Social Security Amendments to Public Law 89–97 (*1–4*). The general purpose of title XIX is to provide grants to States for medical assistance programs and to extend health care coverage to families and individual persons who presently cannot afford necessary medical and dental services. Since the passage of title XIX, its impact has been felt in most of the 50 States, the District of Columbia, Guam, Puerto Rico, and the Virgin Islands, and at present it is one of the most controversial pieces of health legislation ever enacted in this country (*5*).

Like most types of social legislation, Medicaid is destined to undergo changes to adapt to the society in which it must function. A number of reports concerning the present status and future role of Medicaid in American society have been published, and a number of controversial issues have arisen. Some of the controversies about Medicaid are related to the organization of health services, others to costs of the program, and others to objections on principle alone (*6–12*).

For example, the cost of Medicaid programs to State and Federal agencies has exceeded most early expectations (*13*, *14*). This underestimation of cost has led to numerous reassessments and adjustments of the extent and limits of coverage for families and individual persons. In addition, some health professionals have been accused of abuses in service rendered beneficiaries and fees obtained from Medicaid programs which have led to the initiation of constraints to halt these abuses. Occasionally one hears about health professionals who have refused to participate in Medicaid programs because they believe that health legislation of this type is only a prelude to a national system of compulsory health insurance that eventually will undermine the traditional American system of delivering health care (*15*, *16*).

More Complete Data Needed

In the midst of the controversy about the costs and implications of Medicaid, virtually nothing has been heard from the people who are supposed to benefit from this legislation. How do patients view Medicaid? Would they apply if eligible for its benefits? Would they seek professional help more often than before?

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The paper was based on data from the Rochester Child Health Studies, which was supported by Children's Bureau grants Nos. H–104 and H–148. The studies were directed by Dr. Robert Haggerty, professor of pediatrics, University of Rochester School of Medicine.

Logically, the public's views should be taken into consideration when planning health legislation. Like many programs of this type, however, the ideas, the decisions made regarding passage of the legislation, and the events that followed were initiated, promoted, and maintained without adequate involvement of and research on the recipients. Needless to say, such a course of action was not sound social policy, and every attempt should have been made to find out how the potential beneficiaries would respond if they were eligible for benefits.

Ideally, patients' opinions should be obtained well ahead of time. In this way, their ideas and anticipated behavior can be taken into consideration during the planning and implementation of health care programs on both national and local levels. In addition to providing pragmatic guideline information, these data can also be used to compare anticipated behavior with actual behavior. Analyses of such data would thereby contribute to theories which have been formulated to predict and explain variations in health behavior and the effectiveness of various forms of organization to achieve stated goals.

Unfortunately, no such data were collected before the enactment of Medicaid. Therefore, most national, State, and local estimates have been based on demographic data rather than on information obtained from potentially eligible persons as to their anticipated behavior.

Because most predictions of behavior of individual families upon eligibility for Medicaid were not based on systematic public inquiries, we felt that some attempt should be made to collect data on knowledge and anticipated behavior upon eligibility. We selected one local area where a study had been made close to the date when the Medicaid program was implemented. Data of this type can guide local health services in their planning efforts and, if properly collected, can act as a baseline for comparing anticipated behavior with subsequent behavior. These data could be collected either by forming panels by subsampling and reinterviewing or by comparing responses of a probability sample with behavior later reported for the universe from which the sample was drawn.

Because of the lack of direct inquiries of the populations regarding knowledge and anticipated behavior upon eligiblity for Medicaid benefits, we decided to collect data to provide baseline information for planning and comparisons. Although the information from the sample population had more local than national significance, the general approach and reported results have widespread significance. They provide an empirical test of some popular assumptions concerning health behavior following eligibility for government health programs.

Study Information

Data from the Rochester Child Health Study, a countywide family study conducted in 1967–68 based on a 1 percent probability sample of all families with children under 18 years of age, were used in this report. Monroe County, N.Y., had a population of about 650,000, including the city of Rochester's population of about 320,000, at the time of the survey. The 1 percent sample yielded a study group of about 1,000 families with three or more members in each family.

New York was one of the first States to adopt title XIX. The State legislature enacted the program early in 1966, and a maximum reimbursable dental fee schedule became effective August 15, 1966. The original bill was modified on April 1, 1968, as a result of cost and demand factors. Data from the present study were based on a period before the April 1968 cutback. Therefore, the results of this study are to some extent unusual in that the proportion of persons potentially eligible for Medicaid benefits was at its greatest point. This factor may introduce certain artifacts into the results. Since the major focus of the study was to probe into potential behavior rather than to predict actual application rates, we felt that the time period of the study would not have serious implications.

Some information on potential eligibility at the time of the survey indicated that as many as 100,000 persons in Monroe County were eligible for Medicaid benefits. This estimate was based largely on information on family income, taken from 1960 census publications, and adjusted for the increases in family income reported in current population surveys. After the April 1968 cutback, the number of eligible persons was estimated to be 75,000—a reduction of

25 percent. Of the eligible persons, roughly 70 percent lived in the city of Rochester and the remainder in the suburban areas.

Reliable responses to questions on Medicaid depended on how well informed respondents were about the program. Most people had heard about Medicaid, and many had some idea of their eligibility. For example, during the summer of 1966, detailed eligibility requirements for Medicaid benefits and some estimates of the cost of the program to the county, State, and Federal Government had been published in a local newspaper. In addition, all persons in basic assistance programs had been given literature on the program (*17*, *18*).

The Rochester survey contained questions on the person's perceived eligibility for Medicaid and anticipated changes in his pattern of care if eligible. More specifically, persons were interviewed as to (*a*) whether they thought they and their families were eligible for Medicaid and, if eligible, (*b*) whether they would apply and, if they were accepted, (*c*) whether they or their families would change the place where they were receiving medical and dental care, (*d*) whether they would seek care more frequently and, if so, (*e*) for which family members, and (*f*) for what kinds of problems. Data were obtained on family units. A family was defined as a mother, father (in some cases separated or not living), and at least one child under 18. The respondent for a family unit was usually the mother unless circumstances prevented the interviewer from contacting her. Information was obtained from the mothers on husbands and children.

Results

The survey is based on a sample of 987 families of which 959 supplied information. The completed urban survey consisted of 449 families, and the suburban survey consisted of 510 families.

Table 1 shows that only about 18 percent of the respondents had never heard of Medicaid, with slightly more uninformed people in the urban than in the suburban sample. This percentage supports our previously mentioned assumption that because of the publicity, most people knew about the program. The remaining 82 percent of the sample had heard of Medicaid and approximately 52.5 percent had some definite idea of their eligibility status, while the remaining 29.6 percent thought they might be eligible (table 1). Noteworthy is the fact that the level of certainty about their eligibility was

Table 1. Knowledge about Medicaid and perception of eligibility status

Knowledge about Medicaid	Urban sample		Suburban sample		Total	
	Number	Percent	Number	Percent	Number	Percent
Never heard of it	98	21.8	74	14.5	172	17.9
Not eligible	123	27.4	333	65.3	456	47.6
Probably eligible	204	45.5	80	15.7	284	29.6
Eligible	24	5.3	23	4.5	47	4.9
Total	449	100.0	510	100.0	959	100.0

Table 2. Potentially eligible respondents who would apply for Medicaid if eligibility was confirmed

Anticipated action	Urban sample		Suburban sample		Total	
	Number	Percent	Number	Percent	Number	Percent
No	27	15.3	13	19.1	40	16.4
Yes	138	78.4	53	77.9	191	78.3
Undecided	11	6.3	2	3.0	13	5.3
Total	176	100.0	68	100.0	244	100.0

higher among suburban residents than among urban residents. Furthermore, as would be expected, more suburban than urban residents were certain of not being eligible. Unfortunately, there is no way to verify whether the respondents were correct in their knowledge about eligibility since their status could only be ascertained by family income data. Information on income was purposely omitted from the survey questionnaire for ethical reasons.

If we compare perceived eligibility with estimates of the number of families that might be eligible because of family size and income, which are available from sources such as the census reports, the survey data in table 1 agree with these estimates. For example, estimates from the census reports indicated that approximately 47 percent of the families in the city of Rochester with children under 18 had gross incomes of less than $6,800. Before the April 1968 cutback, the net family income for eligibility for a family of four was $6,000.

The average family in Rochester had about 2.5 children, and this $6,800 figure for family income represents gross rather than net income as stated in the eligibility criteria. It appeared that responses given by the persons from the urban sample were related to the eligibility potential.

Table 2 presents information on how many persons were potentially eligible and how many of these would apply if their eligibility was confirmed. A total of 244 respondents provided usable information which included 176 urban families and 68 suburban families. Approximately 78 percent of all persons potentially eligible felt that they would apply if their eligibility for Medicaid was confirmed.

Although these data may not be reliable enough to derive estimates of the proportion of families that would actually apply, they do give a rough indication of the number of persons that may be applying. This type of data could be of value to the professional community and public health officials when planning for the effects of Medicaid on patterns of use of various health services. These data could also serve as baseline information for comparing actual rate of applications from the pool of eligibles. In fact, two followup studies have been designed that will permit more accurate determination of eligibility and a comparison in patterns of use of health facilities and personnel. One survey is now in the final stage of fieldwork and another is planned to be conducted in 1971. Both surveys will be sponsored by Children's Bureau grants Nos. H–104, H–148, and Public Health Service grant No. CH 00433–01.

When the responses in table 2 are compared with information obtained from the Monroe County Department of Social Services, we find substantial agreement between the survey results and actual applications for Medicaid benefits. For example, during the study period there were approximately 100,000 persons eligible for Medicaid residing in the county, and during the peak month (December 1967) approximately 60,000 applied for Medicaid. A similar trend occurred during the following year when 58,000 persons received Medicaid benefits in Monroe County.

In the sample, 78 percent of the persons who were potentially eligible among the 82 percent who knew about the program said they would apply for benefits. Sixty percent of the eligible population actually applied.

Multiplication of the potential eligibles with the percentage of eligibles who anticipate applying for benefits would be our prediction of the rate of actual applications. The population from which the sample was chosen represented only families with children and omitted those who might be eligible but did not have children. Furthermore, the figures in table 2 reflect those whose eligibility might be challenged and tend to underrepresent or overrepresent positive or negative responses to the eligibility questions. Although we do not know which way the proportions would change if the eligibility of all the respondents was certain, the similarities between these two sets of data suggest a fairly close relationship between anticipated and actual behavior.

Next, we were concerned with gaining some insight into potential shifts from one dental or medical care facility to another upon eligibility for Medicaid benefits. One assumption often made is that eligibility for Medicaid benefits would enable people to select from a wider range of dentists instead of having to seek care at welfare clinics, outpatient facilities where services were offered, or at over-crowded health

centers located in poor neighborhoods. Some persons speculate that there will be significant shifts in all types of health services to private practitioners. This shift is often seen as placing excessive demands on already overstrained health manpower.

Such shifts are possible in communities where many low-income families receive dental care in clinics rather than from private practitioners. Families in other communities may go from clinics to dentists in private practice, but we do not believe that this will happen in Rochester. More than 90 percent of the respondents said they would merely change to another practitioner. Therefore, dentists in private practice would not have a sudden influx of patients from clinics because of Medicaid.

Information on the proportion of respondents who anticipated changing to another place for medical care if eligible for Medicaid is presented in table 3. Of the persons who possibly were eligible, about 75 percent felt that they would not change their present place for health care, although 22 percent anticipated some change and about 3 percent were undecided. Most of those who said they would seek care elsewhere were seeing private practitioners rather than seeking care at clinics. On the basis of these facts, we would not anticipate significant shifts of patient loads.

Thus far, we have presented data which suggest that a majority of those who are eligible for Medicaid will apply and, if they apply, chances are that most of them would continue visiting the health facility where they normally receive care. Though these are important discoveries, information on the potential influence of eligibility for Medicaid on the frequency of seeking health care is perhaps even more important. Many health planners anticipate that eligibility and subsequent application for Medicaid benefits will be followed by an increase in the number of patients seeking treatment and an increase in the number of office visits per patient.

Changes in health behavior are anticipated on the assumption that factors such as the removal of financial barriers will enable persons with low incomes to purchase the care they need. Some persons disagree with this position, and they assert that removing financial barriers may or may not result in changes in behavior. Health behavior is a complex phenomenon related to a cluster of attitudes which endure after the removal of financial restraints (*19–24*).

Some insight into whether families eligible and accepted for Medicaid benefits would seek dental and medical care more frequently can be obtained by examining the responses to a series of questions on anticipated behavior by various family members.

Table 4 gives the response distributions for anticipated dental health behavior for various family members following eligibility for Medicaid. The data for the urban and suburban sample are combined in this table. Approximately 61 percent of all family members would not seek dental care more frequently as opposed to 38 percent that would seek care more frequently. Also, according to the responses of the family member questioned (usually the mother), there would be no difference among family members regarding the frequency with which they would seek dental care.

How do we interpret these data? We had expected persons in the sample to respond nor-

Table 3. Anticipated action by eligible respondents after application for Medicaid benefits

Anticipated action	Urban sample		Suburban sample		Total	
	Number	Percent	Number	Percent	Number	Percent
No change	107	69. 0	58	87. 9	165	69. 0
Change medical care only	13	8. 4	1	1. 5	14	5. 9
Change dental care only	4	2. 6	1	1. 5	5	9. 6
Change both medical and dental care	25	16. 1	6	9. 1	31	13. 0
Undecided	6	3. 9			6	2. 5
Total	155	100. 0	66	100. 0	[1] 239	100. 0

[1] Slightly smaller than original number of eligibles due to missing information.

matively, that is, answering in the direction of what is socially desirable, and we anticipated that a larger proportion of respondents would say they would seek dental care more frequently than the proportion in table 4. Nevertheless, the fact that 38 percent anticipate seeking dental care more frequently cannot be taken lightly and could represent a substantial increase in use of services, depending upon the nature of this increase.

In interpreting the results in table 4, we evaluated some data that were obtained on the postdental behavior of the mothers among the potentially eligible group and for whom usable data were obtained. The following table shows in percentages anticipated future behavior by mothers in relation to the time since their last dental visit.

Anticipated future behavior	*Under 1 year (N=73)*	*More than 1 year (N=67)*
No change	62	38
Increase care	41	59

These data indicate that those who made a dental visit during the past year are less likely to anticipate making more frequent dental visits upon eligibility than those who did not make a dental visit during the past year. Also, a fairly large proportion of the potentially eligible group had seen a dentist during the year preceding this survey.

Comparable figures for anticipated increases in use of medical services are given in table 5. When these results are compared with anticipated increases in the use of dental services, they bring out an important point; namely, that lack of financial resources seems to pose a greater barrier to seeking dental care than to seeking medical care. Thirty-eight percent of all family members would seek dental care more frequently as compared with the 23 percent who would seek medical care more frequently.

The results previously described support the general observation that people tend to place less emphasis on the purchase of dental services than certain classes of medical services, especially when financial resources are limited. When persons of limited means seek dental care, they usually seek those services for which they have the most urgent need (*23*, *24*). To obtain more information on the perceived needs of the families in the study sample, the respondents were asked the following question: If you seek dental care more frequently, for what kinds of problems would you seek care? The responses indicated that approximately 50 percent of the

Table 4. Anticipated action regarding dental care by family members upon being accepted for Medicaid benefits

Anticipated action	Mother		Father		Children	
	Number	Percent	Number	Percent	Number	Percent
No change	135	60.0	126	61.5	137	61.7
Increase care	89	39.6	76	37.1	84	37.9
Undecided	1	.4	3	1.4	1	.4
Total	225	100.0	205	100.0	222	100.0

Table 5. Anticipated action regarding medical care by families upon being accepted for Medicaid benefits

Anticipated action	Mother		Father		Children	
	Number	Percent	Number	Percent	Number	Percent
No change	168	73.7	167	81.5	166	73.5
Will increase medical care	59	25.9	37	18.1	59	26.1
Undecided	1	.4	1	.5	1	.5
Total	228	100.0	205	100.1	226	100.1

mothers, 60 percent of the children, and 20 percent of the fathers would seek preventive care.

Conversely, 50 percent of the mothers, 40 percent of the children, and 80 percent of the fathers would seek restorative and rehabilitative services. (We included routine examination, prophylaxis, oral hygiene instruction, and diet counseling under preventive services. The restoration of lost masticatory and occlusal functions and harmony were included in a broad sense under restorative and rehabilitative services.)

If these results truly indicate perceived needs, then the mothers and children have less need for restorative care than fathers. This discovery is consistent with the popular assumption that mothers and children get better dental care than fathers, especially when the family's resources are limited.

Summary and Conclusions

Some results from the Rochester Child Health Survey regarding health care and Medicaid are reported in this paper. These data are limited in one sense in that the eligibility requirements for Medicaid have changed dramatically since the time of the survey.

On April 1, 1968, New York State, burdened with a continuing increase in the cost of its Medicaid program, discontinued Medicaid benefits to all persons who were receiving financial help through programs such as public assistance, aid to the blind, and aid to the disabled. This action was taken because Medicaid was relatively unplanned, and the benefits were broader than warranted by available resources. This drastic switch might have been prevented had surveys been conducted in selected locations or from a random sample of New York residents before implementing Medicaid.

Although it would be difficult to generalize from this study of one metropolitan area to populations outside upstate New York, there are several discoveries that merit summarizing and that may act as guidelines for future research. They are as follows:

1. More than 80 percent of the respondents had heard about the Medicaid program, but many were in doubt about their eligibility. Knowledge, however, was lacking where it was needed most, in the city.

2. About 5 percent of the families interviewed regarded themselves as eligible for Medicaid. About 29.6 percent felt they might be eligible, but the respondents were not absolutely sure about the status of their eligibility.

3. About 78 percent of the mothers who thought their families might qualify for Medicaid felt that they would apply, if eligible.

4. Of those who thought they would apply for Medicaid, about 75 percent said they did not anticipate changing their physician or dentist.

5. When the family is taken as a whole, about 40 percent of the mothers, 37 percent of the fathers, and 38 percent of the children would seek dental care more frequently, if the family were eligible for Medicaid.

6. Only 26 percent of the mothers, 18 percent of the fathers, and 26 percent of the children would increase their use of medical care facilities.

7. There seems to be little difference between family members as to anticipated increase in seeking dental health services. From the list of problems mentioned for additional care in the event of eligibility for Medicaid, there was evidence that the father's dental health was neglected the most, and his increased use of dental services would be largely for major problems. In contrast, more than 50 percent of the combined increased use by children and mothers would be primarily for preventive dental services.

In summary, the study brings out some important points concerning perceived eligibility, anticipated behavior change, and perceived health needs in a population potentially eligible for Medicaid benefits. Data of this type should be sought from all populations for whom public assistance programs are being planned. Such data can provide guidelines for fiscal programing and health care planning.

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Tearsheet Requests

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Safeguards for Plasma Donors in Plasmapheresis Programs

Guidelines for safeguarding donors of blood plasma who participate in plasmapheresis programs have been announced by an ad hoc committee of the National Research Council.

In a booklet, "Safeguards for Plasma Donors in Plasmapheresis Programs," issued by the NRC, the Ad Hoc Committee on Plasmapheresis of the division of medical sciences stated that plasmapheresis is a safe procedure when practiced under close medical supervision and when reasonable limits of size and frequency of donation are set. But, current regulations and standards are insufficient to guard the plasma donor, and the resulting inadequacy is a problem of national scope and significance.

Plasmapheresis is a process in which whole blood is drawn from the donor and separated into its liquid and formed elements (red and white blood cells and platelets). Plasma, making up about 55 percent of whole blood, is retained by the laboratory while the formed elements are returned to the donor. Plasmapheresis makes possible frequent donations by the same person with no waste of red blood cells.

The increased use of plasmapheresis has been accompanied by some careless laboratory operations that caused problems, including epidemics of viral hepatitis and donors who damaged their health by selling plasma too frequently. Some deaths have been reported, mostly among prison donors. Many of these problems are associated with short suppliers—operators not federally regulated—who sell their plasma products to licensed drug firms.

Usually, a plasmapheresis donor is paid for his services. Approximately 100,000 donors, including a number of prison inmates, now earn money this way. Some donors are also immunized or hyperimmunized by injections of antigens so that their plasma can be used to combat pertussis, tetanus, smallpox, and mumps. Female donors are often immunized with Rh factors, creating a blue baby risk for any future children they might bear.

Plasmapheresis, particularly when performed frequently, can create a number of health hazards for the donor. Foremost is the always present danger of returning the wrong red blood cells to the donor. There are risks of depleting protein reserves by too many blood removals, of air bubbles blocking blood vessels, and of infections. The long-term effects of plasmapheresis are still not known.

Administration of antigens for immunization brings with it added dangers—donors with rare factors in their blood may not be able to obtain a transfusion or may be mismatched, viral hepatitis can be contracted, and the inflammation of a blood vessel (vasculitis) or the accumulation of an abnormal material called an amyloid in various body tissues (amyloidosis) may take place.

The committee recommended that potential donors be properly advised of these hazards and that the use of donors from populations with limited capabilities to dissent, such as prisoners, be discouraged. Participation beyond 5 years in a program involving frequent plasmapheresis should be approached with caution, with the donor's health being monitored carefully. All programs involving administration of antigens for immunization should be under the surveillance of a peer review group, the committee stated, with the number of artificially immunized donors kept to a minimum.

Among the specific guidelines recommended by the NRC committee are:

- Donors should be identified by a system that relates them, their blood, and its components; that provides photographic identification of a donor that must be matched with a social security card or driver's license; and that includes a regional registry of plasmapheresis donors to prevent their participation in more than one program.
- The consent of a prospective donor should be obtained in writing after a licensed physician explains the hazards of the process to him.
- A licensed physician should be on the premises during the conduct of all phases of plasmapheresis including the administration of antigen.
- Before each plasmapheresis, the donor's serum protein and hemoglobin concentration (hematocrit) should be measured. At the same time, the physician in charge should review each donor's physical status and the accumulated laboratory data to determine whether he should continue in the program.

The study on plasmapheresis was sponsored by the U.S. Army Medical Research and Development Command and the National Institutes of Health.

Program Notes

Physicians Overrun Virginia Island

In late April, visiting physicians overran Tangier Island, Va., to conduct a program which they hoped would completely rid the island of tuberculosis. Working under Dr. Belle D. Fears, Accomack County health officer, they sought to identify the carriers of this disease and bring them to treatment.

Tuberculosis is peculiarly endemic to the people's way of living on this isolated island in the middle of Chesapeake Bay. The county of which Tangier Island is a part and neighboring Northampton County account for more than half the cases of tuberculosis in Virginia. And the island's 900 inhabitants had been without a physician for more than a year.

As the program began, Mayor William Crockett and Helen Jane Landon, who is a nurse and the island's health officer, passed along encouraging words to the people. Landon had long been urging some kind of massive tuberculosis analysis for the island.

On the first day, residents were given injections at the town community center or in their homes to determine whether they might be carriers. If subsequent X-rays confirmed that a person was a carrier, he was given drug treatment by the physicians.

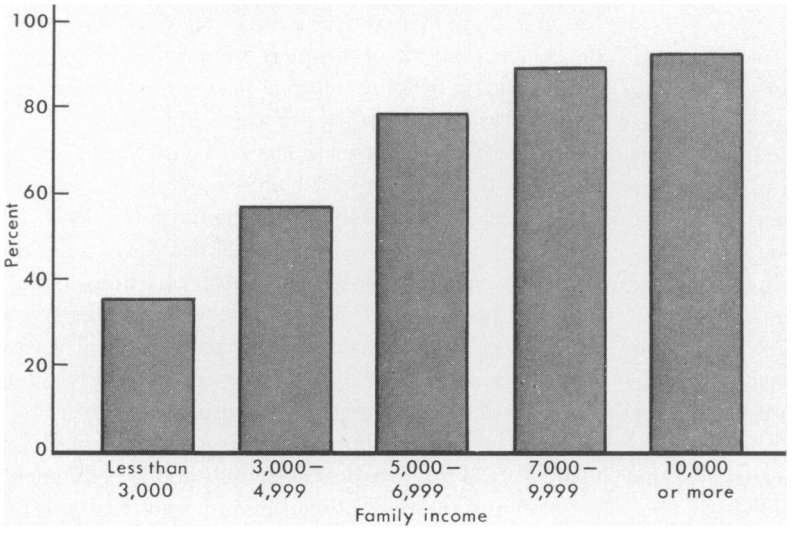
Two cases of tuberculosis that will require hospital treatment were found in adults, and one case of primary tuberculosis was discovered in a child. All persons with positive reactions are being given isoniazid for 1 year. "Tuberculosis will not be a problem in this community in the future, primarily because there has been a total response," said Landon.—Based on article in *Washington Post* (D.C.), April 23, 1970.

Health Insurance and Income

In the United States, the percentage of persons under 65 who are covered by hospital insurance is directly related to family income. The level of coverage in 1968 ranged from 36.3 percent among persons in the United States with a family income of less than $3,000 to 92.3 percent among persons with a family income of $10,000 or more (see chart). Among persons with a family income of less than $3,000, young people 17–24 years had the highest level of hospital insurance coverage (52.2 percent).

Almost all persons 65 years of age and older are now covered by Medicare, and the proportion of persons under 65 years with hospital insurance coverage has been steadily increasing. Estimates derived from sample data obtained in household interviews indicate that 78.2 percent of the civilian, noninstitutional population under 65 years of age had hospital insurance coverage in 1968.—Provisional data from Health Interview Survey, National Center for Health Statistics, February 2, 1970.

Percentage of persons under 65 years with hospital insurance coverage in 1968, by family income (in dollars)



Meeting TB Challenge

U.S. Negro males over 26 years are known to have a rate of tuberculosis 10 times the national rate and "a depressingly low rate of response" to offers of free X-rays. In Baltimore, Md., however, a 6-week chest X-ray drive dubbed "To Beat the Bug" was able to reach this group. The recently ended antituberculosis campaign uncovered more tuberculosis than any other neighborhood survey on record, according to Dr. Robert E. Farber, city health commissioner.

As chairman of the steering committee, Dr. Emerson Julian, a councilman, keyed the campaign to reach the reluctant men on the tendency of people to respond to rewards. Drawings were held at mobile chest X-ray units to give away such prizes as transistor radios and tickets to Oriole games. This approach was novel enough to produce results.—*News American* (Baltimore), June 3, 1970.

Items for this page: Health departments, health agencies, and others are invited to share their program successes with others by contributing items for brief mention on this page. Flag them for "Program Notes" and address as indicated in masthead.

Dangers of Adolescent Pregnancies

Girls who become pregnant before they are 17 years old run great risks for both themselves and their babies, according to the Committee on Maternal Nutrition of the National Research Council.

In a recent report, "Maternal Nutrition and the Course of Pregnancy," the committee pointed out that many biological risks for young mothers are connected with nutrition depletion. Because they are growing, most girls under 17 have greater nutritional requirements in relation to body size than adult women. The additional nutrient demands of pregnancy may compromise their growth potential and increase their risk in pregnancy.

Adolescents often suffer serious complications during pregnancy—most frequently premature labor, iron-deficiency anemia, feto-pelvic disproportion, and prolonged labor. Toxemia is a special hazard. Contributing to its occurrence are lack of development and balance of the endocrine system, the emotional stress of early pregnancy, poor diets, and inadequate prenatal care.

A disproportionately large number of infants weighing less than 5.5 pounds are born to adolescents. In 1965, 18.7 percent of the low birth weight babies born alive in the United States were to mothers under 15 years of age.

Death rates are much higher for both white and nonwhite babies born to mothers under 15. During 1960, the neonatal mortality rate for infants born to white mothers under 15 was 32.1 per 1,000 live births, compared to 15.9 for mothers 20–24 years old. Among babies of very young nonwhite mothers, the rate was 46.5 per 1,000 compared to 25.3 for mothers 20–24 years old.

The psychological impact of pregnancy may be more detrimental to the mother's lifetime well-being and that of her child than any effect of biological immaturity. The committee said that during adolescence there is an intensified preparation for assuming an adult role involving several major psychological tasks. These include the search for identity, the resolution of dependence-independence conflict, and sexual identification. The girl's development will be influenced by the extent to which she has succeeded in resolving developmental problems of infancy and childhood as well as by her experience during adolescence. Pregnancy, with its psychological tasks, adds to the emotional burden of the adolescent.

Society's punitive attitude toward early pregnancy, particularly out of wedlock, makes the psychological adjustment harder. It is difficult for the pregnant girl to obtain medical care, she is often forced to stop school, and many States prevent her marriage. According to the committee, the young pregnant girl is forced to cope with her own psychological immaturity, the often frightening physical changes of pregnancy, and a society that rejects her.

Among the committee's recommendations to alleviate the risks in adolescent pregnancy were the following:

- Since many adolescents are ignorant about health matters, including nutritional needs and how to choose an adequate diet, increased emphasis must be given to sound health, nutrition, and family-life education in elementary and secondary schools.
- Communities should determine if the attitudes, practices, and regulations of local agencies discourage teenagers from using existing medical services and obtaining information and advice about pregnancy. There must be no barrier to prevent young pregnant girls from obtaining information about prenatal care and family planning.
- Teachers and counselors in schools should give early guidance to pregnant girls and help them make contacts with school health personnel and with prenatal facilities in the community.
- At least one professional in maternity care programs should be familiar with special needs and problems of adolescent girls. This person should possess the special skills required to gain the confidence of girls and to communicate with them.
- Dietary regimens commonly used in prenatal clinics are not suitable for adolescents. Diets of young pregnant girls should be individualized—eating habits, economic status, and emotional and social needs should be considered in relation to food and nutritional needs.
- After the girl has her baby, maternity care personnel have an obligation to help her prevent repeated short-interval pregnancies. An effort should be made to alter the behavior pattern leading to pregnancy. Helping girls avoid pregnancy will allow time to institute remedial, preventive, and educational programs that should lead to improvement, for mother and child, in the outcome of subsequent pregnancies.

Federal Publications

Mental Health Benefits of Medicare and Medicaid. *PHS Publication No. 1505; 1970; 24 pages; 45 cents.* Presents information about mental health benefits included in Medicare and Medicaid. Summarizes the substance of the two programs as they relate specifically to benefits for psychiatric care. Should aid those persons in a position to advise people about mental health benefits available to them.

School Fluoridation. New protection for a child's smile. *Division of Dental Health fluoridation leaflet; 1970; 5 cents, $2.25 per 100.* Stresses the advantages of school fluoridation programs for children living in places not served by community water supplies.

Health Facilities Survey Improvement Program. *1970; 2-fold flyer, illustrated.* Published by the Community Health Service, Health Services and Mental Health Administration. Explains purpose of this national program carried on in cooperation with State and territorial agencies responsible for the licensure and certification of America's thousands of health facilities, which serve millions of patients. Describes training courses to be conducted by universities located in all regions of the country. Notes APHA health facility surveyors examination available to State Merit Systems.

Bibliography on Speech, Hearing, and Language in Relation to Mental Retardation, 1900–1968. *PHS Publication No. 2022; by Maryann Peins; 1969; 156 pages; $1.25.* Prepared to serve as a specialized, yet comprehensive reference guide for scientists, teachers, researchers, students, and professional persons who are concerned with the communicative processes of the mentally retarded. Entries cover such subjects as speech, hearing, or language behavior; remediation of atypical communicative behavior through training; habilitation procedures or educational programs; assessment of speech, hearing, and language.

Continuity of Care Through Discharge Planning. *1970; 2-fold.* Community Health Service's Division of Health Resources presents a brochure designed to explain and promote wider use of discharge planning in hospitals. This technique, which calls for participation by all persons involved in the care of the patient, including relatives and close friends, helps to assure the continuity of care so necessary in chronic and long-term illness. Discusses practical methods for carrying out the responsibility for discharge planning.

Fluoridation—No Doubt About It. *Division of Dental Health fluoridation leaflet; 1970; 5 cents, $2.25 per 100.* Encourages the institution of fluoridation in community water supplies. The safety, efficacy, and practicality of this vital public health measure has been confirmed by actual experience over a quarter of a century.

Working With Older People. A guide to practice. Vol. II. Biological, psychological and sociological aspects of aging. *PHS Publication No. 1459; April 1970; 51 pages; 65 cents.* Prepared by the Community Health Service and based on material developed by the Gerontological Society. Intended as resource material for the training and orientation of health professionals who serve the aged. Contains overviews for general background information and extended reviews and bibliographies for readers desiring a more in-depth approach. Discusses physical characteristics affected by time and determined largely by genetic and environmental influences brought to bear on the individual. Psychological aspects of aging are viewed in terms of those functions used by the individual in adapting to his environment—his senses and perception, his ability to learn and remember, his responses, and his personality. Sociological aspects are considered in terms of the adjustment of the aged individual to society, with consideration given to the degree to which he is, or can be, influenced by family, friends, and community.

A Conceptual Model of Organized Primary Care and Comprehensive Community Health Services. *PHS Publication No. 2024; 1970; 16 pages.* An illustrated brochure, published by the Community Health Service, outlines some of the general characteristics common to all organized primary care settings. Booklet should be useful to health professionals and to community groups as they begin to develop specific plans for carrying out such health care programs. A four-color poster, 30 by 40 inches, "Primary Health Care, Comprehensive Health Services and the Community," has been issued to complement the new publication and serve as a visual teaching aid. A 10-by-13-inch replica of the poster is included in the booklet.

This section carries announcements of new publications prepared by the Public Health Service and of selected publications prepared with Federal support.

Unless otherwise indicated, publications for which prices are quoted are for sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Orders should be accompanied by cash, check, or money order and should fully identify the publication. Public Health Service publications which do not carry price quotations, as well as single sample copies of those for which prices are shown, can be obtained without charge from the Public Inquiries Branch, Public Health Service, Parklawn Building, Rockville, Md. 20852.

The Public Health Service does not supply publications other than its own.

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phr synopses

MOODIE, ALLAN S. (Baltimore City Health Department), and ROGERS, GEORGE W.: ***Baltimore uses inner city aides in a tuberculosis control program. Public Health Reports, Vol. 85, November 1970, pp. 955–963.***

A special tuberculosis project in Baltimore, Md., has demonstrated that a paramedical staff largely comprised of carefully selected health aides who come from the areas targeted for disease control can, with suitable training, extend, and to some degree, replace professionals. Health aides are easier to recruit than professionals and, in the special project in Baltimore, losses of such workers by resignation have been minimal over a 3½-year period. Only one of 23 health aides taken on to fill the present 11 posts was lost to service through resignation. The aides' field activities, being centered in the chest clinics, are easier to direct than those of nurses centered elsewhere and primarily answerable to a district nursing supervisor. Because the aides work part time in the clinics and part time in the field, they have also been able to provide better continuity of care and an atmosphere more acceptable to patients.

The very success of the aides, however, has generated considerable extra work at the chest clinics so that visits by patients have increased 50 percent over a 5-year period. By the end of 1969, the aides were spending half their total available time in a variety of clinic routines which otherwise would have fallen to the nurses. In fieldwork alone, substitution of aides for nurses saved almost $90,000 in 1969; at the chest clinics, use of the aides also saved an estimated $25,000 that year. There is evidence, too, that counseling sessions conducted by the aides over a 3-year period helped restore to self-support 23 tuberculous alcoholics who had previously depended fully on public funds.

DENSEN, PAUL M. (Harvard Center for Community Health and Medical Care), ULLMAN, DORIS B., JONES, ELLEN W., AND VANDOW, JULES E.: ***Childhood characteristics as indicators of adult health status. Relationship of school records to selective service classification. Public Health Reports, Vol. 85, November 1970, pp. 981–996.***

Characteristics of a cohort of 3,511 boys in New York City public schools were studied in relation to their subsequent selective service classification. Acceptance rates (66.3 percent) and rejection rates (33.7 percent) for the group as a whole were similar to national rates, although rejection rates by cause for New York City differed slightly from the U.S. rates. With selective service rejection, by cause, as an index, groups of boys with certain physical, behavioral, or academic problems noted on their school records were shown to be at relatively high risk of having defects in these areas of function in young adult life also. The highest risk (48.0 percent rejected) appeared to be for those having academic deficiency, with a large part of the adult problem also definable as academic deficiency.

Boys having physical defects had a rejection rate of 40.7 percent from all causes; this group was the one most likely to have adult health conditions resulting in medical disqualification for military service. Boys identified as having behavioral problems during school years had a rejection rate of 41.2 percent and were at relatively high risk of deficiency in both health and learning in early adult life.

Increased risk of rejection was associated with increasing numbers of types of problems, and, in some instances, with measures of severity. For example, in the case of absenteeism the risk of rejection was clearly related to the amount of time lost from school. Since indicators of future functional impairment can be identified in populations of school children, these findings have implications for school health programs, suggesting an epidemiologic approach to planning school health services and types of measurements useful in evaluating program accomplishments.

PEDERSEN, A. H. B. (Seattle-King County Department of Public Health), and HARRAH, W. DANIELL: ***Followup of male and female contacts of patients with gonorrhea. Comparison of epidemiologic yield. Public Health Reports, Vol. 85, November 1970, pp. 997–1000.***

A current screening program in Seattle-King County, Wash., was used to gather epidemiologic data on men and women infected with gonorrhea. The number of new cases found from interviewing the sexual contacts of 770 such women was compared with the results of interviewing the contacts of 897 infected men.

Of the 748 male contacts examined, 88.5 percent were found to have contracted gonorrhea following exposure. All but 19 of these men (2.5 percent), however, had previously sought medical attention and had been adequately treated. This outcome contrasts significantly with the results obtained from examining female contacts. Of 583 female contacts examined, 222 (38 percent) had undiagnosed cases and had not been treated for gonorrhea. Single-site cervical cultures on Thayer-Martin media were used to establish the diagnosis.

The data demonstrate that interviewing infected women for their contacts has little value. On the other hand, continuation of epidemiologic efforts to locate the female contacts named by male patients is justified. Because infection cannot be definitely ruled out by present culture methods, all named female contacts of patients with gonorrhea should be given adequate treatment if they have not already received it.

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McMILLAN, ALMA W. (Baltimore City Health Department), GORNICK, MARIAN E., ROGERS, RONALD R., and GORTEN, MARTIN K.: ***Assessing the balance of physician manpower in a metropolitan area. Public Health Reports, Vol. 85, November 1970, pp. 1001–1011.***

A study, begun in 1967 in the Baltimore Standard Metropolitan Statistical Area (SMSA) to assess physician manpower at the census tract level, sought to identify each physician in the area and then to determine whether he was in training or beyond the training stage. Physicians beyond the training stage were sent a self-administered questionnaire. For counts of interns, residents, and fellows, inquiries were made to all hospitals in the SMSA. Each physician was subsequently mapped into his census tract and into a study district according to his professional address.

There were 4,297 active physicians in the SMSA, 40 percent of whom were in hospital training. Of the 60 percent beyond the training stage, the ratio of practicing to nonpracticing physicians was about 4 to 1. Of the practicing physicians in the SMSA, 13 percent were general practitioners and 87 percent were specialists. Almost two-thirds of the physicians were engaged in primary care—general practice, general surgery, internal medicine, pediatrics, or obstetrics-gynecology. Of those in a specialty-type practice, 42 percent were certified by an American board. Eighty-eight percent had private office locations.

The ratio of physicians in specialty practice to those in general practice was 87 to 13 in the SMSA, compared with 80 to 20 for the nation. In Baltimore City, only 9 percent of the practicing physicians were in general practice. Moreover, the proportion of physicians in general practice was smaller in the younger age groups than in the older.

The rate of practicing physicians in the SMSA per 100,000 was 106.3; in Baltimore City, 160.0. The rate of primary care physicians in the SMSA was 67.3; in Baltimore City, 96.7. The rate for the combined group of interns, residents, and primary care physicians in the SMSA was 134.6; in Baltimore City, 226.2.

Among the 15 study districts within Baltimore City, the rates of practicing physicians ranged from 25.8 to 504.1; the rates of primary care physicians, from 25.8 to 265.0. Fifteen census tracts, in the inner city as well as in some outlying areas, totally lacked primary care physicians. The results of the survey demonstrate how unplanned the distribution of physicians was by specialty and location.

TRYON, AMES F. (University of Connecticut Health Center, Hartford), POWELL, ELBERT, and ROGHMANN, KLAUS: ***Anticipated health behavior of families in relation to Medicaid. Public Health Reports, Vol. 85, November 1970, pp. 1021–1028.***

A series of questions on title XIX (Medicaid) were asked of a probability sample of 1,000 families in a metropolitan community in upstate New York. Their general purpose was to obtain potential population response to this type of health legislation. The survey results suggested (*a*) knowledge of the program was widespread because of adequate coverage in the mass media, (*b*) the proportion of families perceiving themselves as eligible for Medicaid corresponded with estimates based on population composition and eligibility criteria, (*c*) most of the potential eligibles would apply for benefits, (*d*) among those that would apply, the majority anticipated remaining with their present physician, (*e*) a greater proportion of the respondents anticipated making more frequent dental than medical visits, and (*f*) there appeared to be little difference among family members regarding the frequency with which they will seek health care; however, fathers will probably seek major dental care more frequently than mothers and children. The study pointed up the need for systematic inquiries of populations before enacting health care programs.

LABARTHE, DARWIN R. (School of Public Health, University of Texas), KIM, PETER M., and EHRLICH, S. PAUL, Jr.; ***Coronary risk factors of male workers on a Kauai, Hawaii, plantation. Comparison of data for Japanese and Filipinos. Public Health Reports, Vol. 85, November 1970, pp. 975–980.***

An industrial health screening examination conducted among employees of a sugarcane plantation in Kauai, Hawaii, in 1964 afforded an opportunity to study risk factors for coronary heart disease (CHD) among 463 male Japanese and 171 male Filipino workers, aged 35–64. Although systolic blood pressure levels and the ponderal index were similar for the two ethnic groups, the Japanese showed strikingly higher levels of serum cholesterol concentration, lower levels of occupational physical activity, and for older persons a higher frequency of electrocardiographic abnormalities consistent with the diagnosis of CHD.

Only the uric acid levels, among the risk factors studied in this paper, showed the Filipinos to be at relatively greater risk of CHD than the Japanese if these factors are assumed to operate in Kauai as observed elsewhere. Comparison with data from other studies of Japanese showed unexpected results among the Japanese workers of Kauai, especially for serum cholesterol values, which were closer to the high levels previously reported for Japanese from California than for those from Hawaii.