THE IMPACT OF CAPITATION ON THE NON-INSTITUTIONALIZED AGED

An Evaluation of the Hennepin County
Medicaid Demonstration Project

FINAL REPORT - PART 1

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Acknowledgment

Executive Summary

This study evaluates the impact of using prepaid health plans to provide health and social services to non-institutionalized aged Medicaid beneficiaries. Special strengths of the study include the use of a true experimental design and the collection of data on physiologic outcome measures for four chronic conditions — hypertension, diabetes, asthma/COPD and impaired vision.

The results suggest that significant cost savings were achieved after one year without adverse effects on the health status, functional status, access, satisfaction and social support of the non-institutionalized aged. In the short run, it was cost-effective to serve the non-institutionalized aged in prepaid health plans participating in the Hennepin County Medicaid Demonstration Project.

The findings support current efforts in Minnesota to expand the use of prepaid health plans to meet the needs of non-institutionalized aged Medicaid beneficiaries. For future expansion to be successful, policymakers need to set fair capitation rates that will create economic incentives for prepaid plans to enroll this group, yet still maintain the control of Medicaid expenditures that program administrators require. Policymakers should also take advantage of the current interest in research on the effectiveness of medical treatment to assure that the health outcomes and quality of care provided to Medicaid beneficiaries are monitored on an ongoing, long-term basis.

I. Introduction

This report assesses the impact of using prepaid health plans to provide health and social services to non-institutionalized aged Medicaid recipients. The major questions addressed in the report are:

1. What, if any, differences exist in the use and cost of health and social services by non-institutionalized aged Medicaid recipients in prepaid health plans (PHP's) and the fee-for-service (FFS) system?

2. What, if any, differences exist in health and functional status outcomes for non-institutionalized aged Medicaid recipients in PHP's and the FFS system?

The sample for the study consisted primarily of non-institutionalized aged individuals who were eligible for both Medicaid and Medicare. This group has rarely been studied but is important from a policy perspective. Its high per capita expenditures on health and social services suggest savings to government programs may be possible through managed care. However concern has been expressed that this group may not be aggressive enough in their consumption behavior to secure necessary services in a prepaid plan. As a result, their health and functional status may suffer (Schlesinger) .

There are 2 special strengths of the research. First, it takes advantage of a true experimental setting in Hennepin County, Minnesota, where 35 percent of Medicaid beneficiaries were randomly assigned to prepaid health plans starting in 1986. Second, in addition to general health status measures, data were collected on physiologic outcome measures for 4 chronic conditions — hypertension, diabetes, asthma/COPD and impaired vision. Few studies have measured physiologic endpoints for the aged, low income population, and the inclusion of these measures increases the utility of this study to policymakers and clinicians.

The use of prepaid, capitated systems is one approach that has been fostered as an important policy option to reduce health care costs by making beneficiaries and providers more sensitive to costs and promoting competition in the medical marketplace (Granneman and Pauly). Medicare has used prepaid health plans or health maintenance organizations (HMO's) to provide care to its beneficiaries since the early 1970's, but it is only recently that HMO enrollment has become significant. In 1987, approximately 6 percent of Medicare beneficiaries were enrolled in HMO's. The Medicaid program has also expanded its use of HMO's and prepaid health plans with almost 10 percent of Medicaid beneficiaries enrolled in PHP's in 1987 (Freund et al.).

Several questions arise when considering capitation models for Medicaid clients. First, will there be any cost savings? If so, will savings be achieved at the expense of adverse health outcomes for the poor, especially those at high risk of adverse outcomes such as the aged?

Previous research does not answer these questions. Evidence suggests that prepaid systems are less expensive than FFS systems for a general population and they achieve cost savings largely by reduced institutionalization (Luft). The Rand Health Insurance Experiment (HIE) found 25 percent lower HMO costs than FFS costs for comparable populations, with the savings primarily accomplished through a 40 percent reduction in annual hospital admissions (Manning, et al.). The HIE, however, did not include persons over age 61.

The HIE focused on a general population, a small subset of which was poor or chronically ill. Whether similar savings can also be achieved for an aged, poor, chronically ill population without compromising health outcomes is questionable. As part of the HIE, Ware et.al., studied individuals enrolled

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in Group Health Cooperative in Seattle and compared them to patients in FFS settings. Their work suggests that while the general population may do well in prepaid settings, poor, chronically ill individuals may actually experience worse health outcomes. For those beginning the HIE both financially poor and in poor health, there was a higher incidence of serious symptoms, and the risk of dying from all causes was substantially higher for individuals in the HMO as compared to those receiving FFS care.

There are several reasons for concern that individuals who are chronically ill may not fare well in prepaid plans. Prepaid plans, because of their financial incentives to reduce use, actually risk undertreating certain segments of the population. The less that is done for a patient, the less it costs the plan. Plans must walk a fine line between withholding unnecessary or nonessential services and doing enough to prevent costly problems at a later point. In addition, since there is little agreement among physicians about basic process of care indicators, such as the number of return visits a patient should have, physicians may be more inclined to respond to the economic incentives under prepayment by seeing chronically ill patients less often.

II. Background

In 1982, the federal government, through the Health Care Financing Administration, provided financial support to six states to test the efficacy of providing prepaid health care services to the Medicaid population. Minnesota was one of those states, with Hennepin County (containing Minneapolis) serving as an urban site for the demonstration. Hennepin County was unique among participants, in that it was the only site with a true experimental design in which enrollees were randomly assigned to prepaid

versus fee-for-service care. It was also the only site enrolling a wide range of populations, including the non-institutionalized elderly and those classified as disabled due to mental illness. At the beginning of the demonstration, seven health plans enrolled the elderly population. They range in structure from individual practice associations to network model plans (see Table 1). Although the prepaid health plans participating in the Demonstration Project varied in their structure, all were required to provide the complete range of services covered by the Minnesota Medicaid program which included all allowable optional services (see Table 2).

In Hennepin County, 35 percent of all Medicaid beneficiaries, including the elderly, were randomly assigned to receive services from prepaid health plans, and were given the opportunity to choose a specific health plan. The remaining 65 percent continued to use fee-for-service providers.

An independent broker managed the enrollment process, educating beneficiaries about plan characteristics and enrolling them in the plan of their choice. A variety of activities were undertaken to contact beneficiaries and encourage them to make a choice. Meetings were held at community sites, 'high-rise housing facilities, group homes and, in rare cases, in the homes of beneficiaries. Those not attending an informational meeting could request a packet of information about the plans. Beneficiaries who did not attend a meeting or respond to mailings were contacted by phone, if possible. Individuals who did not choose a plan within 60 to 90 days were randomly assigned to one by the broker. Unless beneficiaries requested a change of health plan within 60 days of initial enrollment, they remained in their health plan of choice or assignment for one year. Enrollment of the elderly clients by health plans occurred between November 1986 and April 1987.

Table 1

HEALTH PLANS PARTICIPATING IN HENNEPIN COUNTY
MEDICAID DEMONSTRATION PROJECT FOR THE
NON-INSTITUTIONALIZED AGED

Plan Name	Plan Type	Percent of Sample
Blue Cross/Blue Shield	IPA	30.2%
Physicians Health Plan	IPA	30.7%
Group Health	Staff HMO	1.0%
MedCenter Health Plan	Network HMO	7.8%
Metropolitan Health Plan	Group HMO (County-Sponsored)	23.9%
Preferred One	IPA	3.4%
U-Care Minnesota	Primary Care IPA	3.0%

Table 2

SERVICES AVAILABLE THROUGH THE MEDICAID PROGRAM IN MINNESOTA

Mandated Services: Services mandated by Congress for the "categorically needy"; in Minnesota, available to all recipients:

- inpatient hospital services
- outpatient hospital services
- laboratory and x-ray services
- skilled nursing facility services for those over 21
- early and periodic screening of individuals under 21
- physician's services
- family planning services

Optional Services: Services made optional by the federal government; in Minnesota, all are available to MA recipients:

- mental health services
- private duty nursing
- rehabilitation services
- Intermediate Care Facility (ICF) Services
- nursing home rehabilitation
- public health nursing
- prescription drugs
- medical supplies
- medical transportation
- dental services
- optometric services

- psychological services
- physical therapy
- speech therapy services
- occupational therapy
- home health care services
- podiatry services
- chiropractic services
- audiological services
- crippled children's services
- home and community-based services for the mentally retarded

Health plans received a monthly capitated payment for each beneficiary who enrolled or was assigned to them. These rates, which did not vary by plan, were derived using a rate cell approach and were based on 95 percent of historical Medicaid costs. For non-institutionalized aged Medicaid recipients, 8 rate cells were developed based on the age (65-74, 75+), sex, and Medicare eligibility status of the recipient. Federal laws permitted only Medicaid costs to be included in the capitated rates; for "dual eligible" Medicare/Medicaid beneficiaries, benefit coordination was the responsibility of the plans. Health plans were responsible for payment for emergency services, even if care was received from a non-participating provider.

Health plans had an opportunity to join or withdraw from the Demonstration during their annual contract negotiation period. In January 1988, Blue Cross/Blue Shield terminated its contract. Elderly Medicaid recipients in the Blue Cross/Blue Shield health plan were reassigned (in a similar fashion to the original enrollment process) to other health plans that continued to serve this population.

III. Design of the Evaluation

1. Experimental Design

Our evaluation of the Hennepin County Medicaid Demonstration project takes advantage of a true experimental design. Graphically this design appears as follows:

$$R \ O_1 \ X \ O_2$$
$$R \ O_3 \quad O_4$$

where an X represents the exposure of a group to an experimental variable or event (in this case, assignment to prepaid care), the effects of which are to

be measured; 0 refers to some process or observation or measurement, and the Xs and Os in a given row are applied to the same specific persons. The left-to-right dimension indicates the temporal order, and Xs and Os vertical to one another are simultaneous. A symbol R indicates random assignment to separate treatment groups, in this case, prepaid care and fee-for-service.

The advantages of this design include the elimination of threats to internal validity, including the effects of unique historical events, maturation of the sample, testing or instrumentation effects, effects due to regression toward the mean, selection, mortality, and any interaction of these effects (Campbell and Stanley). In addition, estimates can be made with more precision and a much smaller sample size than is possible with other experimental or quasi-experimental designs.

2. Sample

Aged recipients are those non-institutionalized Medicaid recipients aged 65 or older. Ninety-six percent are also enrolled in Medicare Part A and/or Part B. The state of Minnesota has provided us with eligibility information on the population of non-institutionalized aged Medicaid recipients in Hennepin County. Seven-hundred forty-one were randomized to the prepaid plan experimental group; the fee-for-service control group contained 1371 individuals.

Our study sample was randomly selected and consisted of 400 individuals in the experimental group and 400 in the control group. Using the central limit theorem, these sample sizes are sufficient to distinguish mean differences of not less than +/-5 percent with 95 percent confidence at both baseline (n=400) and year one follow-up (n=360 assuming no more than a 10 percent non-response rate).

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Minimum sample sizes necessary to detect clinically meaningful differences in the physiologic measures were also calculated. Our results indicate the following minimum sample sizes by condition.

a. Hypertension: To detect a 6mm difference in diastolic blood pressure with mean = 84mm, sigma = 10, N = 56.

b. Diabetes: To detect a 9 percent difference in Hemoglobin A1 with mean = 10.4 percent, sigma = 1.8, N = 80.

c. Asthma/COPD (peak flow): To detect a 10 percent change in peak flow with mean = 450/min, sigma = 50, N = 24.

We exceeded these requirements with the subset of our sample who had hypertension, diabetes or Asthma/COPD.

3. Data Collection

A. Data Sources

Data sources for the study include the following:

1. Baseline and one year follow-up in-person interviews which collected detailed information on health status, functional status, access to care and use of health services, satisfaction with care, social support, use of formal social services, and demographic and socio-economic characteristics. Visual acuity was also assessed at this time. A copy of the follow-up survey instrument appears in Appendix 1.

A survey research firm was hired to conduct the interviews. Interviewers received at least 3 half-days of instruction in interview techniques, participated in role playing interviews and conducted 3 supervised practice interviews.

The response rates to the surveys were very high. The survey research firm was initially provided randomly selected names on an ongoing basis until it was able to complete 400 interviews with the experimental group in prepaid health plans and 400 with the control group in fee-for-service. The baseline

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survey response rate was 92.2% for the aged experimental sample and 90.5% for the aged control sample (Tables 3 and 4). Follow-up interviews were completed with 384 members of the non-institutionalized aged experimental sample (96% response rate) and 387 members of the non-institutionalized aged control sample (96.8% response rate, Table 5). These included 30 interviews with proxy respondents for control sample members who had died or were unable to respond to the interview because of illness and 22 proxy interviews for the experimental sample.

      2. Medicaid and Medicare claims tapes provided information on the use of and reimbursement for health services for study subjects.

      3. Dummy claims data provided information on the use and cost of health and social services by the experimental group in the prepaid health plans.

      4. Supplemental interviews and brief examinations by a medical student or physician collected physiologic measures for each aged sample member who was identified as hypertensive, diabetic or with chronic lung disease. At baseline, physiologic data was collected for 291 clients with hypertension, 96 clients with diabetes, and 73 with COPD/asthma. Follow-up data was collected on 260 clients with hypertension (89.3% response rate), 83 clients with diabetes (86.5% response rate), and 64 clients with COPD/asthma (87.7% response rate).

    B. Outcome Measures

In general, the study employed widely-used measures with high levels of reliability and face validity (see Appendix 2 for a definition of indices and scales used in the study). In a few instances, available instruments did not fit our needs exactly, and additional items were developed and pre-tested.

Table 3

BASELINE SURVEY RESPONSES FOR AGED EXPERIMENTALS

Total Names in Sample		741
Completed		400
Out of Sample		273
Language Problems	117	
In Nursing Home	23	
No Longer on Medical Assistance	52	
Spend Down	1	
Died	19	
Unable to Communicate	21	
Out of Sample·Area	6	
Refusals	34	
Out of Town During Study		4
Too Ill To Interview		10
Unable to Locate During Study		12
In Process When Goal for # Completes Achieved		29
Cards Never Given Out		13
Response Rate		92.2%

Table 4

BASELINE SURVEY RESPONSES FOR AGED CONTROLS

Total Names in Sample		753
Completed		400
Out of Sample		287
Language Problems	121	
In Nursing Home	33	
No Longer on Medical Assistance	22	
Interviewer Safety	1	
Died	24	
Unable to Communicate	30	
Out of Sample Area	4	
Completed in Pretest	10	
Refusals	42	
Out of Town During Study		7
Too Ill To Interview		12
Unable to Locate During Study		13
Unable to Reach During Study		30
In Process When Goal for # Completes Achieved		4
Response Rate		90.5%

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Table 5

1 YEAR FOLLOW-UP SURVEY RESPONSES

Aged Controls

Total Sample	400
Completed*	387
Refusals	10
Moved Out-of-State	3
Response Rate	96.8%

Aged Experimentals

Total Sample	400
Completed*	384
Refusals	13
Moved Out-of-State	2
Died (No Proxy Available)	1
Response Rate	96.0%

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*For deceased sample members, 24 aged control and 20 aged experimental interviews were completed by proxies. Proxy respondents also completed interviews for 6 aged control group members and 2 aged experimental group members who were too ill to complete the interview.

1. <u>Measures of Use and Cost</u>

The measurement of cost and use of health and social services was guided by the following considerations:

    a. Any enumeration of cost and use differences should be based on comprehensive measurement at the individual level. All components of costs and use should be included in the analysis, including the costs of hospitalization, nursing home utilization, physician services and community based services, regardless of payment source.

    b. The measurement of cost and use should be as accurate as feasible given the nature of the sample, and the data collection and definitional problems that are likely to arise.

    c. Cost and use should be measured in a standardized way, to the greatest extent possible given the limitations of budgets and data sources, across providers and between experimental and control group members. The data sources used for the cost and use analyses include Medicare and Medicaid claims data, dummy claims data supplied by the prepaid plans for the experimental group, and individual survey interviews. Standard utilization and cost measures (e.g. days, admissions, visits, hours, total dollars) were used and these measures varied by type of medical or social service.

2. <u>Measures of Health Status and Functional Status</u>

    a. <u>General Health Status</u>

General health status was measured using a 4-item version of the General Health Status Index used in the Rand Health Insurance Study (Ware, et al.). This index has been extensively used and validated and has been shown to be sensitive to change over time. As an additional measure of health status, respondents were asked to rate their health as excellent, good, fair, and poor.

b. Mental Health Status

To measure mental health status, several well known scales designed to assess depression, anxiety, and positive well-being were employed. Measures of depression were taken from the Zung Depression Scale (Zung); measures of anxiety came from the Hopkins Symptom Checklist (Derogatis, et al.); those of positive affect/well-being were taken from the Positive Well Being Measures of Veit and Ware. Our final selection of items for this section was based on the validity of the items and documented experience using these items with the elderly.

c. Physiologic Measures of Outcome

The assessment of physiologic measures of outcome focused on four chronic conditions: impaired vision, hypertension, diabetes and asthma/COPD. These conditions were chosen for several reasons. First, measures of visual acuity, hypertension, and diabetes have been documented to be sensitive to changes in use of services and in access to care. (Brook, et al., Lurie, et al., Lurie, Kamberg and Brook). Second, they were prevalent in the aged population and third they are conditions for which measures were easily available.

1. Hypertension

Respondents who indicated that they were hypertensive during the initial in-person interview had their blood pressure assessed during a supplemental interview at the baseline and follow-up periods. Blood pressures were obtained in a standardized fashion by a physician or medical student who was trained in blood pressure measurement.

2. Diabetes

Similarly, glycosylated hemoglobin (HbA1) measures were obtained at

baseline and follow-up for all individuals who indicated that they were diabetic. Type I and Type II diabetics were included in this portion of the study. Glycosylated hemoglobin, rather than serum or urine glucose measurements, was used because it is less likely to reflect day-to-day fluctuations in blood sugar control.

3. Asthma/COPD

Each individual indicating one of these diagnoses was asked at a supplemental interview to exhale into a Wright Mini-Peak Flow meter. Peak flow was chosen as an outcome measure after consultation with 3 board-certified pulmonary physicians, because it was easy to obtain, it did not require bulky equipment that would be difficult to transport and standardize when moved, and it did not require a painful or invasive procedure. Readings were obtained three times in the presence of a physician or medical student with the best of the readings used in the analyses.

4. Visual Acuity

This measure was chosen because a system of care may affect the provision of corrective lenses or the frequency of cataract removal. Near and far visual acuity of each respondent was tested by our trained survey interviewers with a Rosenbaum Near Vision Care and a Snellen Eye Chart. Each eye was tested separately. Respondents were tested with their corrective lenses, if they wore them. Interviewers received special training in assessing visual acuity.

d. Physical Function and Functional Status

The Rand Physical Functioning Index was chosen to assess physical function in the predominantly ambulatory study sample. This index assesses the full range of function from vigorous physical activity to capability for self-care

(Stewart, et al.). The Personal Self-Maintenance Activity Battery and the Instrumental Activities of Daily Living (IADL) scales, which have been extensively used in studies of functional status of the aged (Lawton, et al.), were also included in survey data collection.

3. Access Measures

These measures were derived from the work of Aday and Andersen and have been tested and used in several national studies including the National Medical Care Expenditure Study sponsored by the National Center for Health Services Research (Aday and Andersen, NCHSR). The measures cover various dimensions of access to care, including presence of a usual source of care, travel time, waiting time for an appointment and in the office, denial of care, access to emergency care, and insurance status.

4. Social Support Network Measures

Measures of social support networks included information on living arrangement, frequency and amount of social contact and amount of direct aid with daily living tasks. The measures of social contact were adapted from those used by Kane and Kane in their studies of the aged. Direct aid with daily living tasks was measured by the amount (hours per month) of informal support received from relatives and friends for daily tasks such as eating cooking, shopping, dressing, grooming, bathing, going to the bathroom, taking medications, doing laundry, housework, and managing money. These measures were adapted from those used in a previous study of the non-institutionalized aged by Moscovice, Davidson and McCaffrey.

5. Demographic and Other Client Characteristics

These characteristics include age, race, marital status, years lived in current location, education, work status, and income. All have been shown to

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be important correlates of the use and cost of health and social services (National Health Care Expenditures Study). In addition, information on a list of chronic comorbidities was collected as a proxy measure of health at baseline.

IV. Analytic Framework

The analysis was carried out using the traditional hypothesis testing paradigm in randomized experiments. A number of fundamental hypotheses were tested which focused on potential differences between users of the fee-for-service system and prepaid health plans by comparing mean values of outcome measures for these groups.

Tests of the hypotheses were based upon the differences between means of the control group and the experimental group at the post-test. This was accomplished by using multivariate regressions which held constant variables measured during the pretest. Though the randomization employed in this study provides estimates of sampling error, the use of covariates can substantially reduce the sampling error and provide more power for the same sample size and therefore more efficient estimators.

Variables whose properties are ordinal or nominal or whose characteristics otherwise violate the assumptions of ordinary least squares (OLS) regression were analyzed using logit models. Examples of such variables include whether or not an individual was hospitalized and the presence of a usual source of health care. Standardized values of the impact of experimental versus control group membership were estimated for a range of dependent variables.

Dependent variables that are truncated at zero, but are not binary (such as the number of hospital admissions in the past year and the number of

physician visits in the past year) may also violate the normality assumptions of ordinary least squares regression. For this type of bounded variable, an appropriate econometric procedure, tobit analysis, was used to estimate the multivariate model. The parameters of the tobit model were estimated by maximum likelihood techniques and can be interpreted in a comparable manner to the parameters of an OLS model.

V. Evaluation Results

1. Introduction

Tables 7-22 summarize the major findings of the study. For each variable of interest, these tables present differences in unadjusted means between the experimental group (prepaid plans) and control group (fee-for-service) and the significance (p-value) of the difference. In addition, differences in regression-adjusted means (and significance) are also presented for ordinary least squares results, logit results, or tobit results as appropriate. The logit results are presented as the impact, or algebraic change, in the probability of an event occurring (e.g. hospital admission during the past year) from being in the experimental group as compared to the control group with all other independent variables set to their mean value.

All of the regression models (i.e. OLS, logit, tobit) included a dummy variable equal to one for experimental group members and 0 otherwise, a set of baseline control variables, two interaction terms which are the cross product of experimental/control group status with baseline utilization measures (the number of physician visits in the 3 month period prior to the demonstration, the number of hospital admissions in the one year period prior to the demonstration), and a variable reflecting the number of days a client remained in the health plan during the year of the study (see Table 6).

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Table 6

BASELINE CONTROL VARIABLES USED IN MULTIVARIATE ANALYSIS

Age

Sex

Race

Monthly Income

Education Level

Medicare (Yes/No)

Private Insurance (Yes/No)

Hospital Admissions Past Year

Physician Visits Past 3 Months

ER Visits Past 3 Months

Visits to Other Health Professionals Past 3 Months

Use of Community-Based Services Past Month (Yes/No)

  Home Nursing Care

  Homemaker

  Home Health Aide

  Adult Day Care

  Meals on Wheels/Congregate Dining

  Transportation Services

Chronic Comorbidities

Live Alone (Yes/No)

Married (Yes/No)

Children Living Within 1 Hour of Your House

General Health Status Index

IADL Dependency Index

Personal Self-Maintenance Index

Physical Functioning Index

Satisfaction With Health Care Index

Total Hours of Informal Care Past Month

Social Contact Index

The interaction terms were included to assess whether the results were related to the differential treatment of high and low utilizers by prepaid plans and the fee-for-service sector. The "plan days" variable controls for any variations in the length of the follow-up study period due to a change in client status (e.g. death, no longer eligible for Medicaid).

2. Results

a. Baseline Characteristics

There were no significant differences between the prepaid and fee-for-service samples with respect to their demographic characteristics at baseline (Table 7).* With respect to demographic characteristics, the average age of both samples was 76 years, more than 3/4 were female, approximately 20% were minorities, and slightly more than 10% were married. On average, the aged clients had completed less than 10 years of formal education, but approximately 1/3 completed high school. Less than 20% of sample members were employed and their average monthly income was less than $400.

Both groups were also similar with respect to their health status, functional status, use of hospitals, nursing homes, and physicians and other ambulatory care providers, informal care received from family and friends, and satisfaction with the health care they received. In summary, the random assignment process resulted in prepaid plan (experimental) and fee-for-service (control) groups that were extremely similar at baseline.

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*For the purpose of this report, differences are considered statistically significant if the p-value for the relevant statistical test is less than .05.

Table 7

BASELINE CHARACTERISTICS OF AGED SAMPLE

	Pre-Paid	FFS	P-Value
Age (mean)	76.1 (7.1)*	76.5 (7.3)	.47
% Female	79.9	76.8	.34
% Married	10.2	11.6	.70
Years in Hennepin (mean)	39.5 (25.6)	40.0 (24.4)	.75
Years Education (mean)	9.6 (3.3)	9.5 (3.6)	.88
% White	79.7	81.0	.45
% Employed (Full or Part-Time)	1.3	1.6	1.00
Monthly Income (mean)	$381.2 (128.7)	$394.1 (204.9)	.30
# Chronic Health Conditions (mean) (Range 0-18)	3.0 (2.0)	3.2 (2.1)	.15
General Health Status Index (mean) (Range 4-16)	9.9 (1.9)	9.8 (2.1)	.45
IADL Dependency Index (mean) (Range 0-8)	1.8 (2.1)	2.0 (2.1)	.33
Personal Self-Maintenance Index (mean) (Range 0-8)	0.6 (1.1)	0.7 (1.2)	.28
% With Any Hospital Admissins Past 12 months	23.6	26.1	.48
% With Any Nursing Home Admissions Past 12 months	3.6	6.2	.14
# Outpatient Visits Past 3 months (mean)	2.1 (2.7)	2.2 (2.9)	.66
% With Ususal Source of Health Care	89.8	85.3	.07
Health Care Satisfaction Index (mean) (Range 5-20)	8.9 (2.0)	8.7 (2.0)	.28
Total Hours Informal Care Past Month (mean)	10.8 (32.0)	10.9 (35.1)	.98

*Values within parentheses are standard deviations.

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b. Health Status

Tables 8-11 present data on the health status of the aged clients. One of the important issues for the Hennepin County Medicaid Demonstration Project was whether a poor, chronically ill population, such as the non-institutionalized aged, would experience adverse health outcomes after enrollment in a prepaid health plan. The study found no evidence that they did. There were no statistically significant differences in health status measures between the prepaid and fee-for-service samples at the one year follow-up.

It is noteworthy that almost 60% of clients rated their health as fair or poor, indicating the limited health status of the group. It is also noteworthy that control of diabetes and hypertension was very good. The mean glycosylated hemoglobin was slightly greater than normal (approximately 9) and the mean systolic and diastolic blood pressure levels were below the upper limits of normal of 150/90. The general health status index had a small difference that favored the prepaid plans and approached, but did not achieve, statistical significance. The estimates of the impact of prepaid health plan/fee-for-service status on health status measures were similar in size and significance when comparing the differences in unadjusted means and OLS adjusted means.

c. Functional Status

The functional status of clients was summarized by three measures — dependency in instrumental activities of daily living (IADL), dependency in personal self-maintenance activities, and an index of physical functioning (Tables 12-13). At the one year follow-up period, aged individuals in the two samples were similar, but not identical, with respect to their functional

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Table 8

PERCEIVED GENERAL HEALTH OF AGED SAMPLE AT 1 YEAR FOLLOW-UP

	Pre-Paid	FFS	Difference in Means	P-Value	Difference in OLS Adjusted Means	P-Value
Self-Rated Health:				.65		
% Excellent	7.7	5.9				
% Good	35.8	34.5				
% Fair	40.2	40.9				
% Poor	16.3	18.8				
General Health Status Index (mean) (Range 4-16)	9.8 (2.2)*	10.1 (2.1)	-0.3	.06	-0.3	.09

*Values within parentheses are standard deviations.

Table 9

MENTAL HEALTH STATUS OF AGED SAMPLE AT 1 YEAR FOLLOW-UP

	Pre-Paid	FFS	Difference in Means	P-Value	Difference in OLS Adjusted Means	P-Value
Well-Being Scale (mean) (Range 3-12)	10.0 (1.9)*	9.7 (2.1)	0.3	.07	0.2	.30
Depression Scale (mean) (Range 3-12)	8.2 (2.3)	8.2 (2.3)	0	.91	-0.1	.81
Anxiety Scale (mean) (Range 3-12)	9.3 (2.0)	9.3 (2.1)	0	.97	0.1	.76

*Values within parentheses are standard deviations.

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Table 10

VISUAL ACUITY OF AGED SAMPLE AT 1 YEAR FOLLOW-UP

	Pre-Paid	FFS	P-Value
% Near Vision			.23
20/20	0.6	0.6	
20/25 to 20/40	11.5	13.6	
20/50 to 20/100	41.7	34.1	
20/200 to 20/800	46.2	51.7	
% Far Vision			.19
20/20	0.0	1.0	
20/25 to 20/40	13.0	13.4	
20/50 to 20/100	87.0	85.6	

Table 11

PHYSIOLOGIC MEASURES FOR AGED SAMPLE AT 1 YEAR FOLLOW-UP

	Pre-Paid	FFS	Difference in Means	P-Value	Difference in OLS Adjusted Means	P-Value
Blood Pressure Level (for hypertensives)						
Systolic	146.0 (17.6)*	145.4 (22.7)	0.6	.82	1.7	.64
Diastolic	76.8 (10.5)	76.1 (12.3)	0.7	.61	-0.2	.96
Glycosylated Hemoglobin (for diabetics)	9.5 (3.3)	9.7 (3.3)	-0.2	.72	-1.0	.45
Peak Flow Measure (for asthma/COPD)	215.0 (110.4)	236.0 (96.2)	-21.0	.42	-56.1	.18

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*Values within parentheses are standard deviations.

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Table 12

DEPENDENCY IN INSTRUMENTAL ACTIVITIES OF DAILY LIVING
FOR AGED SAMPLE AT 1 YEAR FOLLOW-UP

	Pre-Paid	FFS	Difference in Means	P-Value	Difference in Tobit Adjusted Means	P-Value
% Dependent in						
Using Telephone	6.0	6.7		.80		
Taking Medications	8.1	14.5		<.01		
Doing Laundry	38.4	43.8		.15		
Doing Routine Housework	41.3	45.6		.26		
Cooking Own Meals	19.3	22.3		.36		
Managing Finances	15.7	23.8		<.01		
Shopping for Groceries	54.8	54.1		.91		
Traveling in Community	44.9	47.5		.51		
IADL Dependency Index (mean) (Range 0-8)	2.3 (2.2)*	2.6 (2.4)	-0.3	.08	0	.97

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*Values within parentheses are standard deviations.

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Table 13

DEPENDENCY IN PERSONAL SELF-MAINTENANCE ACTIVITIES
AND PHYSICAL FUNCTIONING FOR AGED SAMPLE AT 1 YEAR FOLLOW-UP

	Pre-Paid	FFS	Difference in Means	P-Value	Difference in Tobit Adjusted Means	P-Value
% Dependent in:						
Eating	1.0	3.1		.08		
Dressing	6.0	7.8		.41		
Grooming	5.5	8.3		.16		
Mobility	11.7	17.1		.04		
Transferring	5.7	9.6		.06		
Bathing	14.9	18.4		.23		
Toileting	4.7	7.0		.23		
Bowel and Bladder Control	27.8	30.6		.44		
Personal Self-Maintenance Index (mean) (Range 0-8)	0.8 (1.5)*	1.0 (1.8)	-0.2	.04	-0.3	.28
Physical Functioning Index (mean) (Range 0-9)	5.7 (3.0)	5.7 (3.0)	0	.94	0.1	.90

*Values within parentheses are standard deviations.

status. For the 8 IADL measures and the IADL Dependency Index, the fee-for-service sample was significantly more dependent on receiving assistance with taking medications (p<.01) and managing finances (p<.01). For the 8 personal self-maintenance activities and the personal self-maintenance index, the fee-for-service sample was significantly more dependent only on receiving assistance with mobility (p<.04).

Fee-for-service clients also had significantly lower unadjusted mean values for the overall personal self-maintenance index; however, this difference wasn't significant after adjusting for the tobit correction. The two samples had identical mean scores for the physical functioning index. As with health status, our results have not found any adverse effect on the functional status of non-institutionalized aged Medicaid clients who were enrolled in prepaid health plans. On the contrary, the functional status results that were significant suggest improved functional status for the prepaid care sample relative to the fee-for-service sample.

d. Use of Health Services

The use of health services was analyzed in two ways: (1) using self-reported data collected via in-person interviews and (2) using Medicaid, Medicare, and dummy claims data. Both approaches have possible limitations. The first approach may be limited by the accuracy of recall of health care use by non-institutionalized aged Medicaid beneficiaries. The second may be limited by problems with the completeness of the dummy claims data reported by the prepaid health plans.

To assess the completeness of the dummy claims submitted by the plans for services provided to subjects in the experimental group, we abstracted the medical records of a sample of the experimental subjects.* The abstracted

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*We did not abstract records from hospitals, nursing homes, or emergency rooms because of the more limited use of these types of facilities and their increased likelihood to submit claims.

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data was compared to the corresponding utilization data on the dummy claims tapes for the one year study period. Since the primary unit of comparison was a visit to a physician, the date of the visit as entered on the abstract was compared to the date of the visit as entered on the dummy claims tapes. To verify a match between the two data sources, diagnostic codes (ICD-9) and procedure codes (CPT and HCPCS-HCFA Common Procedure Coding System) were compared. Perfect congruence was not deemed necessary to determine that the two data sources matched. Frequently, different codes could be used for a given diagnosis or procedure. In such cases, verification was possible if the coded procedures or diagnoses were sufficiently similar to conclude that both data sources were referring to the same visit. Visits recorded on abstracts which did not appear on the dummy claims tapes most likely indicate a failure of the provider to submit a dummy claim.

Abstracts were completed for experimental group members who were enrolled in any of the prepaid health plans except the two largest IPA's (Blue Cross/Blue Shield or Physicians Health Plan) and who had physician visits reported on the dummy claims tapes. These 135 cases had a total of 1366 visits recorded on medical record abstracts and 1063 visits recorded on the dummy claims tapes. Thus, the dummy claims data appear to under-report physician use by approximately 22 percent.

Self-reported use of health services was summarized by the following measures — percent of the sample hospitalized during the past year, mean number of hospitalizations during the past year, percent of the sample with a nursing home admission during the past year, mean number of nursing home admissions during the past year, percent of the sample with at least 1 visit to a physician during the past 3 months, mean number of physician visits

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during the past 3 months, percent of the sample with at least one emergency room visit during the past 3 months, mean number of emergency room visits during the past 3 months, use of specific preventive services during the past year and a preventive services use index (Tables 14-15).

The self-reported utilization results highlight the importance of using logit and tobit models when dependent variables violate the OLS assumptions. At the one year follow-up period, there were no significant differences in the unadjusted utilization measures between the fee-for-service and prepaid plan samples. The only difference approaching significance was the greater proportion of the fee-for-service sample that had at least one hospital admission in the previous year. The mean number of annual hospitalizations (0.5 for both samples), the mean number of physician visits during the past 3 months (2.3 for each sample), the mean number of annual nursing home admissions (0.1 for each sample), the mean number of emergency room visits during the past 3 months (0.2 for each sample), and the preventive services use index (2.3 for the prepaid sample, 2.4 for the fee-for-service sample) were similar for both groups.

The logit and tobit results indicate significantly less self-reported use of hospitals, physicians, and emergency rooms by the non-institutionalized aged who were enrolled in prepaid health plans. Being enrolled in a prepaid health plan led to a 7.9% reduction in the likelihood of being hospitalized during the previous year, a 13.1% reduction in the likelihood of seeing a physician in the previous 3 months, and an 8.7% reduction in the likelihood of visiting an emergency room in the previous 3 months. The average use of hospitals, physicians, and emergency rooms also was significantly less for prepaid plan enrollees.

Table 14

SELF-REPORTED USE OF HEALTH SERVICES
BY AGED SAMPLE AT 1 YEAR FOLLOW-UP

	Pre-Paid	FFS	Diff.in Means	P-Value	%Impact on Probability	P-Value	Diff. in Tobit Adjusted Means	P-Value
% With Any Hospital Admissions Past 12 Months	25.7	31.4	-5.7	.10	-7.9	.13		
# Hospital Admissions Past 12 Months (mean)	0.5 (1.2)*	0.5 (1.0)	0	.83			-0.6	.04
% With Any Nursing Home Admissions Past 12 Months	9.1	11.6	-2.5	.30	5.0	.16		
# Nursing Home Admissions Past 12 months (mean)**	0.1 (0.3)	0.1 (0.4)	0	.25				
% With Any Physician Visit Past 3 Months	67.9	72.8	-4.9	.17	-13.1	.02		
# Physician Visits Past 3 Months (mean)	2.3 (3.9)	2.3 (3.3)	0	.93			-0.8	.04
% With Any E.R. Visit Past 3 Months	14.8	16.3	-1.5	.64	-8.7	.05		
# E.R. Visits Past 3 Months (mean)	0.2 (0.8)	0.2 (0.6)	0	.98			-0.9	.03

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* Values within parentheses are standard deviations.
** Tobit adjusted means were not calculated for nursing home admissions due to the limited number of admissions that occured.

Table 15

SELF-REPORTED USE OF PREVENTIVE HEALTH SERVICES
BY AGED SAMPLE AT 1 YEAR FOLLOW-UP

	Pre-Paid	FFS	Difference in Means	P-Value	Difference in OLS Adjusted Means	P-Value
Preventive Services Past 12 Months						
% Blood Pressure Checked	92.6	93.2	-0.6	.86		
% Eyes Examined	56.3	55.5	0.8	.89		
% Received Flu Shot	30.0	36.4	-6.4	.07		
% Feet Checked	29.3	28.5	0.8	.88		
% Hearing Tested	21.3	23.8	-2.5	.46		
Preventive Service Use Index (mean) (Range 0-5)	2.3 (1.2)*	2.4 (1.2)	-0.1	.36	-0.1	.56

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*Values within parentheses are standard deviations.

Similar utilization measures were analyzed using Medicaid, Medicare and dummy claims data (Table 16). The only changes were analysis of physician and emergency room use for a 12 month, rather than 3 month, period and inclusion of two new measures — the mean number of hospital days during the past 12 months and the mean number of nursing home days during the past 12 months.

At the one year follow-up period, there was significantly less use (unadjusted mean differences) of hospitals (number of hospital days), physician (% with any visit, number of visits), and emergency rooms (% with any emergency room visit) by the prepaid plan sample.* The logit and tobit results are even stronger, with significantly reduced use by the prepaid group on all of the hospital, physician, and emergency room use measures. Enrollment in a prepaid health plan resulted in an 11.2% reduction in the probability of being hospitalized during the previous year, a 17.1% reduction in the probability of seeing a physician in the previous year, and a 21.2% reduction in the probability of visiting an emergency room in the previous year. The average use of these providers also was significantly less for prepaid plan enrollees.

These results suggest that utilization patterns of the non-institutionalized aged were significantly affected by participation in the Medicaid Demonstration Project. Of particular interest is the relationship of the reduced use of health services to other outcomes such as health and functional status. The results of the previous sections suggest that the reduced use of health services by prepaid plan enrollees did not lead to adverse health outcomes that were detectable at the one year follow-up period.

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*The claims data report more emergency room visits and less physician visits than the self-reported data for both the prepaid plan sample and the fee-for-service sample. This could be due to the telescoping of physician visits into the three month self-report period, as well as the use of emergency rooms for non-emergency reasons which may have led to miscategorization of these visits in the self-reported data.

Table 16

USE OF HEALTH SERVICES BY AGED SAMPLE AT 1 YEAR FOLLOW-UP
(Using Medicaid, Medicare, and Dummy Claims Data)

	Pre-Paid	FFS	Diff.in Means	P-Value	%Impact on Probability	P-Value	Diff. in Tobit Adjusted Means	P-Value
% With Any Hospital Admissions Past 12 Months	22.8	26.2	-3.4	.25	-11.2	.03		
# Hospital Admissions Past 12 Months (mean)	0.4 (0.7)*	0.5 (1.0)	-0.1	.10			-0.6	.04
# Hospital Days Past 12 Months (mean)	2.0 (5.7)	3.2 (8.9)	-1.2	.02			-5.5	.03
% With Any Nursing Home Admissions Past 12 Months	6.5	7.8	-1.3	.50	5.2	.07		
# Nursing Home Admissions Past 12 months (mean)**	0.1 (0.4)	0.1 (0.4)	0	.34				
# Nursing Home Days** Past 12 Months (mean)	6.6 (33.8)	8.5 (35.2)	-1.9	.45				
% With Any Physician Visit Past 12 Months	57.2	75.8	-18.6	.001	-17.1	.001		
# Physician Visits Past 12 Months (mean)	2.5 (4.0)	5.3 (6.7)	-2.8	.001			-3.0	.001
% With Any E.R. Visit Past 12 Months	30.0	44.2	-14.2	.001	-21.2	.001		
# E.R. Visits Past 12 Months (mean)	1.9 (4.9)	2.2 (4.2)	-0.3	.42			-3.6	.001

* Values within parentheses are standard deviations.
** Tobit adjusted means were not calculated for nursing home admissions and nursing home days due to the limited number of admissions that occured.

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e. Use of Community-Based Services

The non-institutionalized elderly may use a wide array of community-based services in addition to their use of health services. We collected self-reported information on the use of the following types of community-based services: home nursing care, homemaker services, home health aide services, respite care, adult day care, meals on wheels/congregate dining, and transportation services.* For each type of service, the percent of the population that used the service in the past month and the mean use during the past month are reported in Table 17. Summary measures of the percent of the population that used at least one community-based service during the past month and the total number of community-based services used during the past month are also presented.

On average, approximately half of the prepaid and fee-for-samples used at least one community-based service during the previous month. Both groups averaged slightly more than one community-based service used per month with the reduced use by the prepaid sample approaching statistical significance after the tobit correction.

The most frequently used services were homemaker services and transportation services (each was used by almost 1/3 of both samples). In general, the proportion of the sample that used a particular service and the average amount of services used were not significantly different between the fee-for-service and prepaid samples.   The only significant difference was the more frequent use of meals on wheels/congregate dining by the fee-for-service sample.   However, this appears to reflect differences observed at

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*Inaccurate coding of community-based services in the dummy claims data prevented further analysis of the use of these services by the prepaid and fee-for-service groups.

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Table 17

USE OF COMMUNITY–BASED SERVICES BY AGED SAMPLE AT 1 YEAR FOLLOW–UP

	Pre–Paid	FFS	P–Value
Home Nursing Care			
% With Use Past Month	8.3	11.7	.15
# Visits Past Month (mean)	0.4 (2.4)*	0.6 (2.3)	.30
Homemaker Services			
% With Use Past Month	32.3	33.0	.90
# Hours Past Month (mean)	3.6 (9.6)	5.2 (17.4)	.11
Home Health Aide Services			
% With Use Past Month	9.1	11.4	.35
# Hours Past Month (mean)	1.3 (7.0)	1.8 (10.9)	.48
Respite Care			
% With Use Past Month	0.5	0.0	.48
# Hours Past Month (mean)	0.3 (5.1)	0.0 (0.0)	.32
Adult Day Care			
% With Use Past Month	1.3	2.3	.44
# Days Past Month (mean)	0.1 (0.8)	0.2 (1.8)	.13

Table 17 (cont.)

USE OF COMMUNITY-BASED SERVICES BY AGED SAMPLE AT 1 YEAR FOLLOW-UP

	Pre-Paid	FFS	Diff.in Means	P-Value	%Impact on Probability	P-Value	Diff. in Tobit Adjusted Means	P-Value
Meals-On-Wheels/ Congregate Dining								
% With Use Past Month	12.3	17.8	.04					
# Meals Past Month (mean)	1.8 (5.8)	2.7 (6.8)	.05					
Transportation Services								
% With Use Past Month	32.5	31.4	.80					
# Trips** Past Month (mean)	1.7 (4.8)	2.3 (7.6)	.17					
Summary Variables								
% With Any Community-Based Service Use Past Month	52.5	52.7	-0.5	1.00	-5.6	.17		
Total # Community-Based Services Used Past Month	1.1 (1.2)	1.2 (1.4)	-0.1	.13			-0.3	.08

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*Values within parentheses are standard deviations.

**Denotes number of one-way trips.

baseline rather than any Demonstration impact. Overall, the results indicate a relatively limited use of community-based services with a small (but not significant) effect toward greater use in the fee-for-service sample.

f. Health Care Expenditures

A public policy question of obvious interest is whether expenditures for care for the prepaid group were greater, or less than, expenditures for the group remaining in fee-for-service care. One hypothesis is that overall expenditures will be lower in the prepaid group, since Medicaid pays each health plan a capitated payment equal to 95 percent of historical costs of aged beneficiaries under the fee-for-service system, trended forward to the time period covered by our analysis. The monthly payments made by Medicaid to health plans during the study period are contained in Table 18.

The capitation rates in Table 18 were set based on expenditures for fiscal year 1982 and trended forward to calendar year 1985 using a 13.9 percent inflation factor. A five percent annual increase was then applied to those 1985 estimates to construct 1986 estimates. Projections for 1987 were set at 5 percent higher than 1986 estimates, and the prepaid plans were paid at 95 percent of this amount.

It is important to recognize the potential incentives for prepaid plans to shift expenditures among payers. Approximately ninety-six percent of experimental and control group members held Medicare Part A coverage for hospitalization. Subject to a deductible and/or copayment, Medicare paid most hospitalization expenses for participants in both the prepaid and fee-for-service groups. Furthermore, seventy-one percent of the prepaid group and sixty-eight percent of the fee-for-service group also were enrolled in Medicare Part B, with the premium paid by the State. Some unknown, but most likely small, portion of the remaining beneficiaries may also have purchased

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Table 18

MONTHLY CAPITATION RATES FOR
PREPAID PLANS ENROLLING AGED MEDICAID BENEFICIARIES (1987)

Medicare*	Female	Male
SSI/MSA		
65-74	146.38	170.30
75+	136.62	145.33
Non-SSI/MSA		
All ages	379.95	379.95
Non-Medicare**		
SSI/MSA		
65-74	275.49	229.75
75+	333.93	470.81
Non-SSI/MSA		
All ages	638.07	638.07

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* The SSI/MSA category includes all aged individuals who qualified for supplemental social security insurance payments or Minnesota assistance payments and were enrolled in Medicare Part A, Part B or both.

** About four percent of the enrollees in prepaid plans did not have Medicare coverage of any type. Therefore these rates apply to a very small number of enrollees.

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Part B coverage using their own funds. Thus, a substantial majority of both fee-for-service and prepaid groups had partial coverage for physician and other outpatient services. In effect, this Medicare coverage acted as a very comprehensive "reinsurance" policy for the health plans, limiting their financial risk for any single individual. Furthermore, the State provided some reinsurance for nursing home expenditures and for hospitalizations not covered by Medicare. As a result, the health plans may have had few incentives to contain expenditures covered by Medicare and, indeed, may have had positive incentives to shift expenditures out from under their capitation payments to Medicare coverage, when possible. While their ability to do so in practice may have been limited, shifting of this type could result in increases in Medicare expenditures, so that total expenditures for the prepaid group could increase. Therefore, it is important to examine expenditures from both Medicare and Medicaid to assess relative expenditures for the prepaid and fee-for-service groups.

As the results in Table 19 indicate, total expenditures for members of the prepaid group were significantly less than expenditures for fee-for-service group members, primarily because capitation payments, adjusted for reinsurance, were lower than fee-for-service Medicaid expenditures. Medicare expenditures were also lower for the prepaid group, but the difference was not statistically significant due to the substantial variation in these expenditures. There is no evidence that the health plans shifted a substantial portion of their expenditures to Medicare. However it is impossible to rule out the hypothesis that shifting may have occurred that resulted in a smaller difference than would have been observed without shifting.

Table 19

AVERAGE ANNUAL PER PERSON EXPENDITURES FOR AGED SAMPLE

	Pre-Paid	FFS	Diff.in Means	P-Value
Medicaid Expenditures ($)				
Capitation Payments	2295			
Reinsurance*	280			
Subtotal	2015 (1855)	2780 (5379)	-765	.01
Medicare Expenditures ($)	1874 (3978)	2236 (5257)	-462	.27
Total Expenditures ($)	3889 (4086)	5015 (8733)	-1126	.02

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* The reinsurance amounts are estimates based on the most recent data available to the State. There were no state payments for reinsurance for hospitalizations among study participants, since virtually all were covered by Part A of Medicare. With respect to skilled nursing care, if a health plan enrollee entered a nursing home, the plan was responsible for payment of the first 90 days of care and twenty percent of any additional days. However, the plan's liability under this arrangement was limited to the contract year. At the beginning of a new contract year, the enrollee was reclassified into a different rate cell. In practice, the state paid the nursing homes directly and then was reimbursed by the plans for their liability at the end of their contracts.

Whereas Medicaid capitation rates were set equal to 95 percent of historical expenditures of fee-for-service enrollees, the actual Medicaid expenditures for enrollees in prepaid plans were 72.5 percent of current expenditures for fee-for-service beneficiaries. This suggests that the factors used to trend forward historical expenditures were low relative to actual inflation in those expenditures.

It should be noted that program administrative costs, medical education reimbursement, and aggregate risk sharing payments to the plans were excluded from the calculations in Table 19. If annual per-person administrative costs for the prepaid plan enrollees exceeded those for fee-for-service beneficiaries, as seems likely during the start-up period for the demonstration, differences in overall expenditures (i.e., medical and other expenditures listed above) would be less than the differences displayed in Table 19.

g.   Access to Health Care Services

Access to health care is a multi-dimensional concept. The following measures of access were used in the study — percent who had a specific doctor or other health professional as their usual source of care, travel time to usual source, office wait at usual source, appointment wait for usual source, percent with some or a lot of difficulty getting emergency care and percent refused health care during the past year. There were no significant differences (unadjusted means, OLS adjusted means, logit) between the groups in any of the access measures at the one year follow-up (Table 20).

Both groups were very likely to have a usual source of care and were rarely refused care. The results indicate that the non-institutionalized aged did not encounter significant access barriers when attempting to use the health services provided by prepaid health plans participating in the Demonstration Project.

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Table 20

ACCESS TO HEALTH CARE FOR AGED SAMPLE AT 1 YEAR FOLLOW-UP

	Pre-Paid	FFS	Diff.in Means	P-Value	%Impact on Probability	P-Value	Diff. in OLS Adjusted Means	P-Value
% With Usual Source of Health Care	86.5	86.0	0.5	.94	-0.4	.91		
Travel Time for Health Care (minutes)(mean)	23.4 (16.4)*	21.2 (14.6)	2.2	.06			2.7	.30
Office Wait at Health Care Provider (minutes)(mean)	28.7 (28.5)	28.2 (23.7)	0.5	.79			-2.5	.32
# Days Usual Wait for Health Care Appointment (mean)	4.7 (5.6)	6.3 (11.6)	-1.6	.16			-2.0	.19
% With At Least Some Difficulty Getting Emergency Care	16.5	18.6	-2.2	.54	1.0	.82		
% Refused Care During Past Year	1.1	0.6	0.5	.70				

*Values within parentheses are standard deviations.

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h. Satisfaction

Satisfaction with health care was measured by questions asking about satisfaction in general and satisfaction with specific aspects of the health care that individuals received during the previous year. An overall index of health care satisfaction (based on the responses to satisfaction with 5 specific aspects of health care received) was also constructed.

There were no significant differences in any of the satisfaction measures at baseline or at the one year follow-up between the fee-for-service sample and the prepaid care sample (Table 21). Both groups reported a high degree of satisfaction with the health care they received.

i. Social Support

Measures of social support included the amount of informal care provided by friends and relatives to assist with IADL functions and Personal Self-Maintenance Activities and a social contact index which reflects client interaction with family members and friends as well as participation in the activities of organizations. There were no significant differences in any of the social support measures at the one-year follow-up (Table 22).

Of note, the tobit adjustment for informal care hours produced a large, but not statistically significant, difference as compared to the unadjusted means results. This was due to the distribution of hours of informal care provided to sample members, with 59% receiving no informal care and 2% receiving more than 100 hours of informal care in the past month. In cases where a dependent variable has a large amount of censoring at 0 and substantial variance, the tobit model may not provide a good fit to the data and, in fact, may be less desirable to use than the OLS model (the difference in OLS adjusted means was 1.3, with p = .59).

Table 21

SATISFACTION WITH HEALTH CARE FOR AGED SAMPLE AT 1 YEAR FOLLOW-UP

	Pre-Paid	FFS	Difference in Means	P-Value	Difference in OLS Adjusted Means	P-Value
% Very Satisfied or Satisfied With						
Health Care in General	92.1	94.0		.40		
Getting Appointment	95.6	96.7		.64		
Amount of Time Provider Spends	95.2	94.6		.90		
Amount of Health Provider Concern	95.2	94.0		.65		
Amount of Treatment Provided	95.2	94.0		.65		
Way Treated by Office Staff	97.6	98.2		.78		
Health Care Satisfaction Index (mean) (Range 5-20)	8.6 (2.2)*	8.7 (2.1)	-0.1	.75	-0.3	.24

*Values within parentheses are standard deviations.

Table 22

SOCIAL SUPPORT FOR AGED SAMPLE AT 1 YEAR FOLLOW-UP

	Pre-Paid	FFS	Diff.in Means	P-Value	Diff. in Tobit Adjusted Means	P-Value	Diff. in OLS Adjusted Means	P-Value
Total Hours Informal Care Past Month (mean)	9.6 (27.7)*	9.9 (29.4)	−0.3	.89	6.4	.21		
Social Contact Index (mean) (Range 0–120)	31.8 (22.9)	33.3 (21.7)	−1.5	.37			−3.2	.66

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*Values within parentheses are standard deviations.

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The results indicate a limited use of informal care, with less than 3 hours per week on average for both groups. Combined with the results for the use of formal community-based services, it suggests that the sample of non-institutionalized aged Medicaid clients did not receive substantial amounts of social services from either formal or informal caregivers.

VI. Conclusions

This report analyzes the effect of using prepaid health plans to serve non-institutionalized aged Medicaid beneficiaries. The findings suggest that significant cost savings were achieved without any adverse effects on the health status, functional status, access, satisfaction, and social support of the non-institutionalized aged.

Before discussing the implications of these results, it is important to recognize the limitations of the study. First, the study site was Hennepin County, Minnesota (which includes Minneapolis). The health care environment in Hennepin County is characterized by health care providers that are used to practicing as part of prepaid health plans. The findings may not be generalizable to other settings where providers have limited experience with prepaid plans. Second, the follow-up study period was limited to one year, permitting assessment only of short-term effects of the Demonstration Project. This may be particularly relevant for the assessment of changes in health status and functional status for the chronically ill. Third, no attempt was made to evaluate individual prepaid health plan effects in part because the limited sample size used in the study resulted in very small numbers of individuals in some plans. Fourth, there are potential limitations in using self-reported data and dummy claims data to assess the use of health and social services. For self-reported data, the issue of recall is important for

an aged population. For dummy claims data, the issue of health plan incentives to accurately and completely report dummy claims is of concern. Fifth, neither tobit nor OLS models are ideal for multivariate analyses with dependent variables which are heavily truncated and have substantial variance. Unfortunately, there are no better techniques that have been developed to handle this situation.

Despite these limitations, the study results suggest that in the short run it was cost-effective to serve the non-institutionalized aged in prepaid health plans participating in the Hennepin County Medicaid Demonstration Project. The capitation payments (adjusted for reinsurance) for prepaid health plan members were significantly less than fee-for-service Medicaid expenditures for the control group during the one year study period. It should be reiterated that the differences in expenditures are not due to favorable selection of beneficiaries into prepaid plans, since the random assignment process used in the demonstration means that the prepaid plans did not enroll a healthier group of beneficiaries than the fee-for-service group. The analysis of baseline health status and utilization measures, which found no significant differences, provides confirming evidence that favorable selection into prepaid plans did not occur. There also was no evidence of substantial cost shifting by the plans from Medicaid to Medicare coverage.

These results raise the critical issue of setting appropriate capitation rates for prepaid plans willing to enroll Medicaid beneficiaries. The plans participating in the Demonstration Project have complained from the onset of the project that the capitation payments used in the rate cell approach established by the state were not fairly determined. The study results suggest that the initial capitation rates were set too low for aged, non-

institutionalized individuals based on the observed experience of the fee-for-service group. However, the significant disparity between experimental and control group expenditures should be reduced from 1989 forward due to the rebasing of the capitation payments on more recent expenditure data. It will be imperative for the State to continually rebase their capitation payments using recent expenditure histories of fee-for-service clients. If not, the State is likely to have a limited set of plans willing to share the risk of enrolling aged Medicaid beneficiaries.

The above cost savings were not accomplished at the expense of other outcomes for the non-institutionalized aged. After one year, prepaid plan members were as healthy, as functionally independent, as satisfied with the care they received, and able to access the health care system as well as fee-for-service non-institutionalized aged Medicaid clients. One characteristic of the Hennepin County Demonstration Project that may have contributed to these results is the use of multiple health plans with a broad provider network. This led to minimum disruption of client relationships with health providers. Less than 10 percent of the experimental group had to change their physician after enrolling in a prepaid health plan since all of the major plans (including several IPA's) in Hennepin County agreed to participate in the Demonstration Project. The vast majority of Medicaid beneficiaries did not have their freedom of choice of health providers restricted by the Demonstration Project.

As mentioned earlier, there was some initial concern about the financial incentive of prepaid plans to undertreat chronically ill patients with the potential for adverse health outcomes. The prepaid plans did, in fact, reduce hospital, emergency room, and physician use for enrollees but not at the

expense of adverse outcomes as measured by any of our multiple health status (including physiologic measures) and functional status measures. It appears that non-institutionalized Medicaid beneficiaries were not undertreated in the prepaid plans; rather, they may have been overtreated in the fee-for-service system. It is not possible to provide unequivocal judgment on this issue given the limited length of the study period, the difficulty in precisely measuring health status, and the growing debate over what is appropriate medical treatment. However, one can conclude that prepaid plan members used hospitals and physicians less than fee-for-service members and had at least as good, if not better, outcomes after one year.

In summary, the results of the study support current efforts to expand the use of prepaid health plans to meet the needs of non-institutionalized aged beneficiaries in Hennepin County and the State of Minnesota. For future expansion to be successful, policymakers need to set fair capitation rates that will create appropriate economic incentives for prepaid plans to enroll the non-institutionalized aged, yet still maintain the control of Medicaid expenditures that program administrators require. In addition, policymakers should take advantage of the current interest in research on the effectiveness of medical treatment to assure that the health outcomes and quality of care provided to Medicaid beneficiaries are monitored on an ongoing, long-term, basis.

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APPENDIX 1

FOLLOW-UP SURVEY INSTRUMENT

UNIVERSITY OF MINNESOTA
SENIOR-C SURVEY - II

DATE OF INTERVIEW: ___ ___ ___ ___
                        (MO) (DAY) (YR)

STARTING TIME   ___ ___ : ___ ___ ___ AM / PM

ENDING TIME   ___ ___ : ___ ___ ___ AM / PM

INTERVIEWER   ___ ___

EXPCD

1 = Experimental
2 = Control
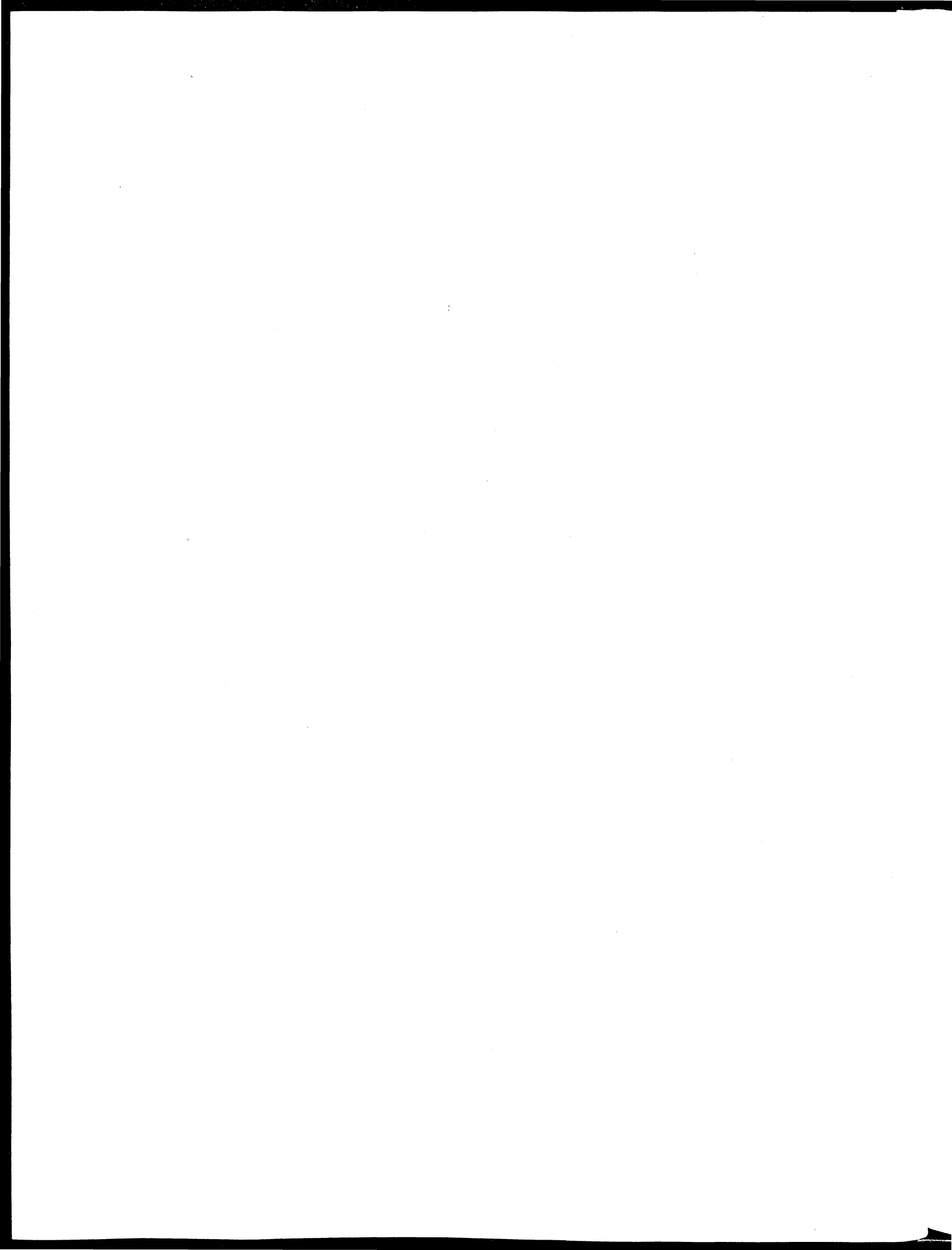
UNIVERSITY OF MINNESOTA
SENIOR-C SURVEY - II

1. In general, would you say your health is: (READ OPTIONS)

    __1__ Excellent

    __2__ Good

    __3__ Fair, or

    __4__ Poor

    __7__ Not applicable

    __8__ Don't know

    __9__ Refused answer

2. Are you: (READ OPTIONS)

    __1__ Currently married

    __2__ Widowed

    __3__ Divorced or separated

    __4__ Single or never married

    __7__ Not applicable

    __8__ Don't know

    __9__ Refused answer

3. Are you currently on Medicaid or Medical Assistance?

    __1__ Yes

    __2__ No

    __7__ Not applicable

    __8__ Don't know

    __9__ Refused answer

The next set of questions are being asked about the period from (ORIGINAL INTERVIEW MONTH) until today.

4. I'm going to ask you some questions about the health care that you have received. Is there a specific doctor or other health professional you have usually seen for your health care from (ORIGINAL INTERVIEW MONTH) until today?

     __1__   Yes ----------> What is their name?
                                  (INTERVIEWER USE ONLY)

                                  _____

                                  _____

                                  _____

     __2__   No

     __7__   Not applicable

     __8__   Don't know

     __9__   Refused answer

5. Since (ORIGINAL INTERVIEW MONTH), where have you usually gone for your health care? (DON'T READ OPTIONS; CHECK ONLY ONE; PROBE FOR LOCATION) (IF NO IN #4, ASK: I KNOW YOU SAID THERE IS NO SPECIFIC DOCTOR YOU SAW FOR HEALTH CARE, BUT IS THERE A PLACE YOU USUALLY WENT FOR HEALTH CARE?) (USE RESPONSE CARD)

     __1__   Doctor's office (INCLUDING HMO)

     __2__   Hospital outpatient clinic

     __3__   Community health clinic

     __6__   Hospital emergency room

     __10__   Other (SPECIFY: _____)

     __11__   Doctor comes to nursing home

     __7__   Not applicable

     __8__   Don't know

     __9__   Refused answer

     __4__   Nowhere (MEANS: NO MEDICAL CARE SINCE ORIGINAL INTERVIEW MONTH) (SKIP TO BOTTOM OF #11)

     __5__   No usual place

6. Since (<u>ORIGINAL INTERVIEW MONTH</u>), in general how satisfied have you been with the health care you have received? Would you say you have been very satisfied, satisfied, dissatisfied, or very dissatisfied?
(USE RESPONSE CARD)

<u> 1 </u>   Very satisfied

<u> 2 </u>   Satisfied

<u> 3 </u>   Dissatisfied

<u> 4 </u>   Very dissatisfied

<u> 7 </u>   Not applicable

<u> 8 </u>   Don't know

<u> 9 </u>   Refused answer

7. Since (<u>ORIGINAL INTERVIEW MONTH</u>), about how long have you usually had to travel to get health care?

<u>   </u>   Minutes

<u> 97 </u>   Not applicable

<u> 98 </u>   Don't know

<u> 99 </u>   Refused answer

8. Since (<u>ORIGINAL INTERVIEW MONTH</u>), when you went for health care, have
you <u>usually</u> had a prescheduled appointment or did you call and make an
appointment?

<div style="margin-left: 2em;">

    <u> 1 </u>   Prescheduled
appointment --------->How often did you have
an appointment? (CODE
WEEKS OR MONTHS)

Every _____ week(s)
Every _____ month(s)

    <u> 2 </u>   Call and make
an appointment ------>How many days did you
usually wait from the day
you <u>called</u> to the day you
actually saw your doctor
or other health professional?
_____ Days (IF SAME
DAY, PUT 0)

    <u> 3 </u>   Unable to make an appointment

    <u> 4 </u>   Never try to make an appointment (INCLUDE: USES
EMERGENCY ROOM)

    <u> 7 </u>   Not applicable

    <u> 8 </u>   Don't know

    <u> 9 </u>   Refused answer

</div>

9. Since (<u>ORIGINAL INTERVIEW MONTH</u>), how long have you <u>usually</u> had to
wait to be seen by the doctor (the <u>PROVIDER</u>) once you got to the office or
clinic?

<div style="margin-left: 2em;">

    <u>   </u>   Minutes

    <u> 97 </u>   Not applicable

    <u> 98 </u>   Don't know

    <u> 99 </u>   Refused answer

</div>

10. Now, I would like to find out how satisfied you have been with specific aspects of the care you received for your health from (ORIGINAL INTERVIEW MONTH) until today. How about getting an appointment, have you been extremely satisfied, satisfied, dissatisfied, or extremely dissatisfied? (USE RESPONSE CARD)

		Extremely Satisfied	Satisfied	Dis-Satisfied	Extremely Dis-Satisfied	Not Ap-plicable	Don't Know	Refused Answer
a.	Getting an appointment?	1	2	3	4	7	8	9

How about:

b.	The amount of time the doctor spent with you?	1	2	3	4	7	8	9
c.	The amount of concern the doctor showed toward you?	1	2	3	4	7	8	9
d.	The amount of treatment given to you?	1	2	3	4	7	8	9
e.	The way you were treated by the office staff?	1	2	3	4	7	8	9

11. Now, I'd like to ask you about the number of visits you made for your
health care. This does <u>not</u> include staying overnight in a hospital.
In the PAST 3 MONTHS since, _____, did you go to a doctor's
office for your own health care?

		Yes	No	Not Ap-plicable	Don't Know	Refused Answer	IF YES, How many visits did you make there in the PAST 3 MONTHS?	DK	RA
a.	Doctor's office (INCLUDE HMO)	1	2	7	8	9 ---->	_____ Visits	8	9

In the PAST 3 MONTHS, did you
go to (see) a _____ for
health care?

		Yes	No	Not Ap-plicable	Don't Know	Refused Answer			DK	RA
b.	Hospital outpatient clinic?	1	2	7	8	9 ---->	_____ Visits		8	9
c.	Hospital emergency room?	1	2	7	8	9 ---->	_____ Visits		8	9
d.	Community health clinic?	1	2	7	8	9 ---->	_____ Visits		8	9
e.	Podiatrist (foot doctor)?	1	2	7	8	9 ---->	_____ Visits		8	9
f.	Optometrist (eye doctor)?	1	2	7	8	9 ---->	_____ Visits		8	9
g.	Audiologist (ear doctor)?	1	2	7	8	9 ---->	_____ Visits		8	9
h.	Doctor in nursing home?	1	2	7	8	9 ---->	_____ Visits		8	9
i.	Other health professional?									
	(SPECIFY _____)	1	2	7	8	9 ---->	_____ Visits		8	9
j.	(SPECIFY _____									
	_____)	1	2	7	8	9 ---->	_____ Visits		8	9

IF NO VISITS/NOWHERE, ASK: When was your last visit for health care?

_____

(IF RESPONDENT GIVES INFORMATION THAT IS IN THE PAST 3 MONTHS, GO BACK AND ASK #11.)

12. Since (<u>ORIGINAL INTERVIEW MONTH</u>), how many separate times have you been admitted as a patient to a hospital for at least one night? (EXCLUDE SAME DAY SURGERY)

    ____ Admissions (PUT 0 IF NONE; ELSE CODE # OF ADMISSIONS AND ASK NAME AND CITY OF HOSPITAL)

(DO NOT CODE)   HOSPITAL NAME _____

                     CITY _____

(DO NOT CODE)   HOSPITAL NAME _____

                     CITY _____

    97   Not applicable

    98   Don't know

    99   Refused answer

13. Since (<u>ORIGINAL INTERVIEW MONTH</u>), have you been admitted as a patient to a nursing home?

    1   Yes ------> How many separate times?
                             ____ Times

                           (PUT 0 IF NONE; ELSE CODE # OF ADMISSIONS AND ASK NAME AND CITY OF NURSING HOME)

(DO NOT CODE)   NURSING HOME NAME _____

                       CITY _____

(DO NOT CODE)   NURSING HOME NAME _____

                       CITY _____

    7   Not applicable

    8   Don't know

    9   Refused answer

    2   No

    7   Not applicable

    8   Don't know

    9   Refused

14. Since (<u>ORIGINAL INTERVIEW MONTH</u>), <u>approximately</u> how much of your own money that was not reimbursed did you spend for health care, including prescription medications, eyeglasses, and medical equipment and supplies? (EXCLUDE NON-PRESCRIPTION MEDICATIONS, NON-PRESCRIPTION VITAMINS, INSURANCE PREMIUMS, AND DENTAL EXPENSES) (ROUND TO THE NEAREST DOLLAR)

$ _____

<u>9998</u>   Don't know

<u>9999</u>   Refused answer

15. Since (<u>ORIGINAL INTERVIEW MONTH</u>), have you had your blood pressure checked?

		Yes	No	Not Applicable	Don't Know	Refused Answer
a.	Blood pressure checked?	1	2	7	8	9

How about:

		Yes	No	Not Applicable	Don't Know	Refused Answer
b.	Your eyes examined?	1	2	7	8	9
c.	A flu shot?	1	2	7	8	9
d.	Your feet checked?	1	2	7	8	9
e.	Your hearing tested?	1	2	7	8	9

16. If you needed medical care because you were seriously ill or injured, how much trouble would you have getting emergency medical care? Would it be: (READ OPTIONS)

<u>1</u>   A lot of trouble

<u>2</u>   Some trouble, or

<u>3</u>   No trouble at all

<u>7</u>   Not applicable

<u>8</u>   Don't know

<u>9</u>   Refused answer

17. Since (<u>ORIGINAL INTERVIEW MONTH</u>), have you ever been refused health care that you thought you needed? (EXCLUDE DENTAL CARE)

<u>1</u>	Yes
<u>2</u>	No
<u>7</u>	Not applicable
<u>8</u>	Don't know
<u>9</u>	Refused answer

SKIP TO #21

18. What were you refused care for?

_____

_____

_____

19. How many times has this happened?

_____	Times
<u>97</u>	Not applicable
<u>98</u>	Don't know
<u>99</u>	Refused answer

20. How many of these were emergencies?

_____	Emergencies (PUT 0 IF NONE)
<u>97</u>	Not applicable
<u>98</u>	Don't know
<u>99</u>	Refused answer

21. Since (ORIGINAL INTERVIEW MONTH), have you been covered by Medicare?
    (IF ON MEDICARE FOR ANY PORTION OF PERIOD, MARK YES)

           __1__   Yes

           __2__   No

           __7__   Not applicable

           __8__   Don't know   SKIP TO #23

           __9__   Refused answer

22. Have you been covered by Medicare for doctor bills?

           __1__   Yes

           __2__   No

           __7__   Not applicable

           __8__   Don't know

           __9__   Refused answer

23. Since (ORIGINAL INTERVIEW MONTH), have you been covered by private
    health insurance? (IF COVERED FOR ANY PORTION OF PERIOD, MARK YES)

           __1__   Yes ----------> What is the name of your
                                     private health insurance plan?

                                     _____

                                     _____

                                     _____

           __2__   No

           __7__   Not applicable

           __8__   Don't know

           __9__   Refused answer

24. I am going to read a list of services that some people receive. Please tell me if you have received any of these services. DURING THE PAST MONTH since _____, have you received: (USE RESPONSE CARDS WITH PROVIDER NAMES ONLY IF RESPONDENT HAS USED A PARTICULAR SERVICE.) (DO NOT ASK QUESTION ON PAST MONTH IF CLIENT HAS BEEN IN A NURSING HOME FOR THE WHOLE MONTH.)

			No	Not Ap-plicable	Don't Know	Refused Answer	Yes	IF YES, Who provided the service? (PROBE: UNPAID/PAID RELATIVES/FRIENDS?) Unpaid Relatives/ Friends	Any Agency	Paid Relatives/ Friends	IF YES, Approximately how many _____ did you have DURING THE PAST MONTH? (ROUND TO THE NEAREST HALF HOUR) (CALCULATE FOR ONE MONTH)
a.	Home nursing care?		2	7	8	9	1	1	2	3	_____/hours by unpaid rel/frd _____/visits by agency or paid rel/frd

1. Since (ORIGINAL INTERVIEW MONTH), have you received home nursing care from an (any other) agency or paid friend or relative?

    ___1___   Yes ----------> What is the name of the agency (or relative or friend)? (ALSO GET TELEPHONE # FOR RELATIVE OR FRIEND)

    (RESPONSE CARD CODE)

    1. _____

    (RESPONSE CARD CODE)

    2. _____

    ___2___   No

    ___7___   Not applicable

    ___8___   Don't know

    ___9___   Refused answer

What is the (name and address of the agency/name, address or telephone number of paid relative or friend) who provided the service?

(RESPONSE CARD CODE)

Name _____

Address _____

					IF YES, Who provided the service? (PROBE: UNPAID/PAID RELATIVES/FRIENDS?)				IF ANY AGENCY OR PAID RELATIVES OR FRIENDS, Approximately how many ____ did you use this service DURING THE PAST MONTH? What is the (name and address of the agency/name, address or telephone number of relative or friend) who provided the service?
	No	Not Ap-plicable	Don't Know	Refused Answer	Yes	Unpaid Relatives/ Friends	Any Agency	Paid Relatives/ Friends	
b. Homemaker services such as housekeeping, laundry, shopping, and errands?	2	7	8	9	1	1	2	3 -------->	____/hrs.

<u>(RESPONSE</u> CARD CODE)

Name _____

Address _____

1. Since (ORIGINAL INTERVIEW MONTH), have you received home-maker services from an (any other) agency or <u>paid</u> friend or relative?

    1   Yes ----------> What is the name of the agency (or relative or friend)? (ALSO GET TELEPHONE # FOR RELATIVE OR FRIEND)

                  1. _____
<u>(RESPONSE</u> CARD CODE)

                  2. _____
<u>(RESPONSE</u> CARD CODE)

    2   No

    7   Not applicable

    8   Don't know

    9   Refused answer

	No	Not Ap-plicable	Don't Know	Refused Answer	Yes	IF YES, Who provided the service? (PROBE: UNPAID/PAID RELATIVES/FRIENDS?) Unpaid Relatives/ Friends	Any Agency	Paid Relatives/ Friends	IF ANY AGENCY OR PAID RELATIVES OR FRIENDS, Approximately how many ____ did you use this service DURING THE PAST MONTH? What is the (name and address of the agency/name, address or telephone number of relative or friend) who provided the service?
c. Home health aide services such as help with bathing, feeding, or walking?	2	7	8	9	1	1	2	3	--------> ____ /hrs.

(RESPONSE CARD CODE)

Name _____

Address _____

_____

1. Since (ORIGINAL INTERVIEW MONTH), have you received home health aide services from an (any other) agency or paid friend or relative?

    __1__   Yes ----------> What is the name of the agency (or relative or friend)? (ALSO GET TELEPHONE # FOR RELATIVE OR FRIEND)

         (RESPONSE CARD CODE)

1. _____

         (RESPONSE CARD CODE)

2. _____

    __2__   No

    __7__   Not applicable

    __8__   Don't know

    __9__   Refused answer

9   Refused answer

	No	Not Ap- plicable	Don't Know	Refused Answer		IF YES, Who provided the service? (PROBE: UNPAID/PAID RELATIVES/FRIENDS?)			IF ANY AGENCY OR PAID RELATIVES OR FRIENDS, Approximately how many ____ did you use this service DURING THE PAST MONTH? What is the (name and address of the agency/name, address or telephone number of relative or friend) who provided the service?
					Yes	Unpaid Relatives/ Friends	Any Agency	Paid Relatives/ Friends	
d. Adult day care?	2	7	8	9	1	1	2	3 -------->	____/days

(RESPONSE CARD CODE)

Name _____

Address _____

1. Since (ORIGINAL INTERVIEW
    MONTH), have you received adult
    day care from an (any other)
    agency or <u>paid</u> friend or relative?

    __1__   Yes ----------> What is the name of the agency
                            (or relative or friend)?
                            (ALSO GET TELEPHONE # FOR
                            RELATIVE OR FRIEND)

            _____
            (RESPONSE
             CARD CODE)

    1. _____

            _____
            (RESPONSE
             CARD CODE)

    2. _____

    __2__   No

    __7__   Not applicable

    __8__   Don't know

    __9__   Refused answer

		Not Ap- No plicable	Don't Know	Refused Answer	Yes	IF YES, Who provided the service? (PROBE: UNPAID/PAID RELATIVES/FRIENDS?) Unpaid Relatives/ Friends	Any Agency	Paid Relatives/ Friends	IF ANY AGENCY OR PAID RELATIVES OR FRIENDS, Approximately how many ____ did you use this service DURING THE PAST MONTH? What is the (name and address of the agency/name, address or telephone number of relative or friend) who provided the service?
e. Respite care (such as temporary or extended help for family or friends who help you)?		2 7	8	9	1	1	2	3 --------->	____/hrs. Name _____ (RESPONSE CARD CODE) Address _____

1. Since (ORIGINAL INTERVIEW
    MONTH), have you received respite
    care from an (any other) agency
    or <u>paid</u> friend or relative?

     <u> 1 </u>   Yes ----------> What is the name of the agency
                                     (or relative or friend)?
                                     (ALSO GET TELEPHONE # FOR
                                     RELATIVE OR FRIEND)

                                 1. _____
         (RESPONSE
         CARD CODE)
                                   2. _____
         (RESPONSE
         CARD CODE)

     <u> 2 </u>   No

     <u> 7 </u>   Not applicable

     <u> 8 </u>   Don't know

     <u> 9 </u>   Refused answer

9   Refused answer

		No	Not Ap- plicable	Don't Know	Refused Answer		Yes	IF YES, Who provided the service? (PROBE: UNPAID/PAID RELATIVES/FRIENDS?) Unpaid Relatives/ Friends	Any Agency	Paid Relatives/ Friends	IF ANY AGENCY OR PAID RELATIVES OR FRIENDS, Approximately how many ____ did you use this service DURING THE PAST MONTH? What is the (name and address of the agency/name, address or telephone number of relative or friend) who provided the service?
f.	Meals on wheels or congregate dining?	2	7	8	9		1	1	2	3 ------>	____/meals

(RESPONSE
CARD CODE)

Name _____

Address _____

1.   Since (ORIGINAL INTERVIEW MONTH),
    have you received meals on wheels or
    congregate dining from an (any other)
    agency or paid friend or relative?

    __1__   Yes ----------> What is the name of the agency
                         (or relative or friend)?
                         (ALSO GET TELEPHONE # FOR
                         RELATIVE OR FRIEND)

                     1. _____
      (RESPONSE
      CARD CODE)
                     2. _____
      (RESPONSE
      CARD CODE)

    __2__   No

    __7__   Not applicable

    __8__   Don't know

    __9__   Refused answer

	No	Not Ap-plicable	Don't Know	Refused Answer	Yes	IF YES, Who provided the service? (PROBE: UNPAID/PAID RELATIVES/FRIENDS?) Unpaid Relatives/ Friends	Any Agency	Paid Relatives/ Friends	IF ANY AGENCY OR PAID RELATIVES OR FRIENDS, Approximately how many ____ did you use this service DURING THE PAST MONTH? What is the (name and address of the agency/name, address or telephone number of relative or friend) who provided the service?
g. Transportation services?	2	7	8	9	1	1	2	3	--------> ____/one-way trips

(RESPONSE CARD CODE)   Name _____

Address _____

1. Since (ORIGINAL INTERVIEW MONTH),
    have you received transportaton
    services from an (any other)
    agency or paid friend or relative?

    ___1___ Yes ----------> What is the name of the agency
                             (or relative or friend)?
                             (ALSO GET TELEPHONE # FOR
                             RELATIVE OR FRIEND)

             _____   1. _____
             (RESPONSE
             CARD CODE)
             _____   2. _____
             (RESPONSE
             CARD CODE)

    ___2___ No

    ___7___ Not applicable

    ___8___ Don't know

    ___9___ Refused answer

25. Since (<u>ORIGINAL INTERVIEW MONTH</u>), are there any other agencies or providers of services for seniors that you have used?

<u> 1 </u>   Yes ----------> What are their names and addresses?

                 1. _____

                     _____

                 2. _____

                     _____

                 3. _____

                     _____

<u> 2 </u>   No

<u> 7 </u>   Not applicable

<u> 8 </u>   Don't know

<u> 9 </u>   Refused answer

26. Now, I am going to make some statements about your general health. Tell me if you strongly agree, agree, disagree, or strongly disagree with them. First, my health is excellent. Do you strongly agree, agree, disagree or strongly disagree with what I'm saying? (USE RESPONSE CARD)

		Strongly Agree	Agree	Disagree	Strongly Disagree	Not Applicable	Don't Know	Refused Answer
a.	My health is excellent.	1	2	3	4	7	8	9

What about the statement:

b.	I have been feeling bad lately.	1	2	3	4	7	8	9
c.	I expect to have a healthy life.	1	2	3	4	7	8	9
d.	I am somewhat ill.	1	2	3	4	7	8	9

Refused answer

9

27. How would you compare your health now with your health in (<u>ORIGINAL INTERVIEW MONTH</u>)? Is it: (USE RESPONSE CARD)

     <u> 1 </u>   Much better

     <u> 2 </u>   Better

     <u> 3 </u>   About the same

     <u> 4 </u>   Worse, or

     <u> 5 </u>   Much worse

     <u> 7 </u>   Not applicable

     <u> 8 </u>   Don't know

     <u> 9 </u>   Refused answer

28. Do you drink beer, wine, or other alcoholic beverages?

     <u> 1 </u>   Yes

     <u> 2 </u>   No

     <u> 7 </u>   Not applicable

     <u> 8 </u>   Don't know   SKIP TO #32

     <u> 9 </u>   Refused answer

29. How often do you drink alcoholic beverages? Would you say: (READ OPTIONS) (YOU MUST CHECK SEASONAL YES OR NO--DON'T ASK, ONLY MARK YES, IF IT IS MENTIONED) (USE RESPONSE CARD)

     <u> 1 </u>   Only on holidays (SKIP TO #32)

     <u> 2 </u>   Once a month or less

     <u> 3 </u>   2 or 3 times a month

30. SEASONAL   <u> 4 </u>   About once a week

   <u> 1 </u> Yes   <u> 5 </u>   Several times a week, or

   <u> 2 </u> No   <u> 6 </u>   Every day

     <u> 7 </u>   Not applicable

     <u> 8 </u>   Don't know

     <u> 9 </u>   Refused answer

31. When you have a drink, how many alcoholic beverages do you usually drink in a day?

      ___ ___   Drinks, glasses of wine, beers OR ___ ___ Pints (1oz.)

         97   Not applicable

         98   Don't know

         99   Refused answer

32. (I know you said you don't drink or only drink on holidays but...) Since, (ORIGINAL INTERVIEW MONTH), have you been drinking more, less, or about the same amount of alcoholic beverages?

         1   More

         2   About the same

         3   Less

         4   Didn't drink since (ORIGINAL INTERVIEW MONTH)

         7   Not applicable

         8   Don't know

         9   Refused answer

33. I'm going to read you a list of activities. For each, please tell me if you <u>can</u> do the activity without any help, with some help, or if you are fully dependent on others? First, can you use <u>the</u> telephone without any help, with some help, or are you fully dependent on others? (USE RESPONSE CARD)

		No Help	Some Help	Fully Dependent	Not Ap-plicable	Don't Know	Refused Answer	(IF ANSWER IS "SOME HELP" OR "FULLY DEPENDENT" ASK:) Who helped you?			(IF HELPED BY UNPAID FRIEND/ RELATIVE, ASK:) Approximately how many hours did you need help with this activity DURING THE PAST MONTH? (ROUND TO THE NEAREST HALF HOUR) (CALCULATE FOR ONE MONTH)
								Paid Frd/Rel/ Agency/ NH Staff	No One	Unpaid Frd/Rel	
a.	Use the telephone?	1	2	3	7	8	9 ------> 1	2	3 ------>	_____ hrs/mo

Can you:

b.	Get medications ready and take them?	1	2	3	7	8	9 ------> 1	2	3 ------> _____ hrs/mo
c.	Do all of your laundry?	1	2	3	7	8	9 ------> 1	2	3 ------> _____ hrs/mo
d.	Do all of your routine housework?	1	2	3	7	8	9 ------> 1	2	3 ------> _____ hrs/mo
e.	Cook your own meals? (DO NOT INCLUDE MEALS ON WHEELS OR CONGRE-GATE DINING)	1	2	3	7	8	9 ------> 1	2	3 ------> _____ hrs/mo
f.	Manage money, finances?	1	2	3	7	8	9 ------> 1	2	3 ------> _____ hrs/mo
g.	Shop for groceries including going to and from the store?	1	2	3	7	8	9 ------> 1	2	3 ------> _____ hrs/mo
h.	Travel around the community?	1	2	3	7	8	9 ------> 1	2	3 ------> _____ hrs/mo

Now, I have some questions about needs some people (in the community) have, such as eating and dressing.

34. Do you eat without help, with some help, or does someone feed you?

    __3__   Without any help (SKIP TO #37)

    __2__   With some help (cutting food, identifying for blind, etc.)

    __1__   Someone feeds you

    __7__   Not applicable

    __8__   Don't know   SKIP TO #37

    __9__   Refused answer

35. Who provides this help? (CHECK ONLY ONE)

    __1__   Agency/organization or _paid_ friends or relatives (SKIP TO #37)

    __2__   Friends/relatives not paid

    __3__   Both

    __4__   Nursing home staff (SKIP TO #37)

    __7__   Not applicable

    __8__   Don't know   SKIP TO #37

    __9__   Refused answer

36. On the average, how many hours DURING THE PAST MONTH since _____, did you receive help from _unpaid_ friends/relatives with eating? (ROUND TO NEAREST HALF HOUR) (NOTICE: THIS IS PER MONTH)

    __ __.__   Hours per month

    __97__   Not applicable

    __98__   Don't know

    __99__   Refused answer

37. Do you dress and undress yourself without any help, with some help, or does someone dress and undress you?

     __3__   Without any help (pick out clothes, dress and undress yourself) (SKIP TO #40)

     __2__   With some help (dressing _or_ undressing)

     __1__   Someone dresses _and_ undresses you

     __7__   Not applicable ⎤

     __8__   Don't know   ⎥— SKIP TO #40

     __9__   Refused answer ⎦

38. Who provides this help? (CHECK ONLY ONE)

     __1__   Agency/organization or paid friends or relatives (SKIP TO #40)

     __2__   Friends/relatives not paid

     __3__   Both

     __4__   Nursing home staff (SKIP TO #40)

     __7__   Not applicable ⎤

     __8__   Don't know   ⎥— SKIP TO #40

     __9__   Refused answer ⎦

39. On the average, how many hours <u>DURING THE PAST MONTH</u> since _____, did you receive help from <u>unpaid</u> friends/relatives with dressing? (ROUND TO NEAREST HALF HOUR) (NOTICE: THIS IS PER MONTH)

     ___ ___.___   Hours per month

     __97__   Not applicable

     __98__   Don't know

     __99__   Refused answer

40. Do you take care of your own appearance, things like combing your hair (FOR MEN: and shaving) without help, with some help, or does someone do all of this for you?

    3   Without help (SKIP TO #43)

    2   With some help

    1   Someone does all of this for you

    7   Not applicable ⌉

    8   Don't know   ⎬ SKIP TO #43

    9   Refused answer ⌋

41. Who provides this help?

    1   Agency/organization or paid friends or relatives (SKIP TO #43)

    2   Friends/relatives not paid

    3   Both

    4   Nursing home staff (SKIP TO #43)

    7   Not applicable ⌉

    8   Don't know   ⎬ SKIP TO #43

    9   Refused answer ⌋

42. On the average, how many hours DURING THE PAST MONTH since _____, did you receive help from <u>unpaid</u> friends/relatives with taking care of your own appearance? (ROUND TO NEAREST HALF HOUR) (NOTICE: THIS IS PER MONTH)

    __ __ . __   Hours per month

    97   Not applicable

    98   Don't know

    99   Refused answer

43. (CAN OBSERVE AND CODE) Do you get around your (house/apartment/room) without help of any kind, with some help, or do you not get around your home at all unless someone else moves you?

       3   Without help of any kind (except for a cane)

       2   With some help (from a person or using a walker, crutches, chair)

       1   You don't get around your home at all unless someone moves you

       7   Not applicable

       8   Don't know

       9   Refused answer

44. (CAN OBSERVE AND CODE) Do you get in and out of bed or a chair without any help or aid, only with some help, or do you not get in and out of bed unless someone lifts you?

       3   Without any help or aid

       2   Only with some help (from a person or device)

       1   You don't get in and out of bed unless someone lifts you

       7   Not applicable

       8   Don't know

       9   Refused answer

45. Do you bathe - that is, take a bath, shower, or sponge bath - without any help, with some help, or only when someone bathes you?

    __3__   Without any help (SKIP TO #48)

    __2__   With some help (from a person or device)

    __1__   Only when someone bathes you (lifted in and out or bathed)

    __7__   Not applicable

    __8__   Don't know   SKIP TO #48

    __9__   Refused answer

46. Who provides this help?

    __1__   Agency/organization or paid friends or relatives (SKIP TO #48)

    __2__   Friends/relatives not paid

    __3__   Both

    __4__   Nursing home staff (SKIP TO #48)

    __7__   Not applicable if a device

    __8__   Don't know   SKIP TO #48

    __9__   Refused answer

47. On the average, how many hours DURING THE PAST MONTH since _____, did you receive help from unpaid friends/relatives with bathing (ROUND TO NEAREST HALF HOUR) (NOTICE: THIS IS PER MONTH)

    __ __.__   Hours per month

    __97__   Not applicable

    __98__   Don't know

    __99__   Refused answer

48. Do you get to the bathroom, clean yourself, and arrange your clothes without any help, with some help, or do you not go to the bathroom for bladder or bowel movement?

      __3__   Without any help (SKIP TO #51)

      __2__   With some help (from a person or device)

      __1__   You don't go to the bathroom for bladder/bowel movement

      __7__   Not applicable

      __8__   Don't know   SKIP TO #51

      __9__   Refused answer

49. Who provides this help?

      __1__   Agency/organization or paid friends or relatives (SKIP TO #51)

      __2__   Friends/relatives not paid

      __3__   Both

      __4__   Nursing home staff (SKIP TO #51)

      __7__   Not applicable if a device

      __8__   Don't know   SKIP TO #51

      __9__   Refused answer

50. On the average, how many hours DURING THE PAST MONTH since _____, did you receive help from unpaid friends/relatives with going to the bathroom? (ROUND TO NEAREST HALF HOUR) (NOTICE: THIS IS PER MONTH)

      ___ ___.___ Hours per month

      __97__   Not applicable

      __98__   Don't know

      __99__   Refused answer

51. Which of the following best describes your control of your urination and bowel movements: you never have accidents, occasionally you have accidents, you have frequent accidents or you are incontinent, or you use a catheter or colostomy bag? (USE RESPONSE CARD)

__4__	You never have accidents
__3__	Occasionally you have accidents
__2__	You have frequent accidents or are incontinent
__1__	You use a catheter or colostomy bag
__7__	Not applicable
__8__	Don't know
__9__	Refused answer

52. I am going to read a list of activities you might do. <u>Even if you do not usually do these activities</u>, please tell me how much trouble it would be to do them. First, <u>walking one block?</u> Would this be no trouble at all, some trouble, a lot of trouble, or you can't do it at all? (USE RESPONSE CARD)

		No Trouble	Some Trouble	A Lot of Trouble	Can't do at all	Not Applicable	Don't Know	Refused Answer
a.	Walking one block?	1	2	3	6 (SKIP TO d.)	7	8	9
	How about:							
b.	Walking several blocks?	1	2	3	6 (SKIP TO d.)	7	8	9
c.	Walking more than a mile?	1	2	3	6	7	8	9
d.	Going up one flight of stairs?	1	2	3	6 (SKIP TO f.)	7	8	9
e.	Going up several flights of stairs?	1	2	3	6	7	8	9
f.	Bending, kneeling, or stooping?	1	2	3	6	7	8	9
g.	Doing activities such as moving a table or pushing a vacuum cleaner?	1	2	3	6	7	8	9
h.	Doing activities such as running or lifting heavy objects?	1	2	3	6	7	8	9
i.	Lifting or carrying groceries?	1	2	3	6	7	8	9

53. How satisfied are you with the level of physical activity you are able to do now? Are you: (USE RESPONSE CARD)

_1_	Very satisfied
_2_	Satisfied
_3_	Dissatisfied, or
_4_	Very dissatisfied
_7_	Not applicable
_8_	Don't know
_9_	Refused answer

54. DURING THE PAST MONTH since _____, how often did you get together with members of your
family other than someone you live with? Would you say every day, several times a week, about once a
week, 2 to 3 times in the past month, once in the past month, or not at all in the past month?
(USE THE RESPONSE CARD)

	Every Day	Sev. /week	X's Once /week	2-3 X's Past month	Once Past month	None Past month	Not Ap- plicable	Don't Know	Refused Answer
a. Get together with members of your family other than someone you live with?	1	2	3	4	5	6	7	8	9
b. Get together with friends other than someone you live with? (planned or unplanned activities)	1	2	3	4	5	6	7	8	9
c. Talk on the phone with friends or relatives other than someone you live with?	1	2	3	4	5	6	7	8	9
d. Participate in the activities of an organization such as a senior center or club?	1	2	3	4	5	6	7	8	9

55. If you had a problem, is there anyone you feel you could talk to?

<u> 1 </u>   Yes ------>Who would you talk to?   (CIRCLE THE
NUMBER 1 NEXT TO ALL MENTIONED)

           <u> 1 </u> a. Spouse
           <u> 1 </u> b. Child
           <u> 1 </u> c. Parent
           <u> 1 </u> d. Other relative
           <u> 1 </u> e. Friend
           <u> 1 </u> f. Neighbor
           <u> 1 </u> g. Social worker
           <u> 1 </u> h. Mental health professional
           <u> 1 </u> i. Other (SPECIFY _____)

<u> 2 </u>   No

<u> 7 </u>   Not applicable

<u> 8 </u>   Don't know

<u> 9 </u>   Refused answer

56. Does anyone rely on you for help?

<u> 1 </u>   Yes -------> Who is that?   (CIRCLE THE NUMBER 1
NEXT TO ALL MENTIONED)

           <u> 1 </u> a. Spouse
           <u> 1 </u> b. Child
           <u> 1 </u> c. Parent
           <u> 1 </u> d. Other relative
           <u> 1 </u> e. Friend
           <u> 1 </u> f. Neighbor
           <u> 1 </u> g. Other (SPECIFY _____)

<u> 2 </u>   No

<u> 7 </u>   Not applicable

<u> 8 </u>   Don't know

<u> 9 </u>   Refused answer

57. DURING THE PAST MONTH since _____, how much of the time were you generally enjoying things? Would you say most of the time, some of the time, very little of the time, or none of the time? (USE RESPONSE CARD)

		Most	Some	Very Little	None	Not Applicable	Don't Know	Refused Answer
a.	Generally enjoying things?	1	2	3	4	7	8	9

How much of the time were you:

		Most	Some	Very Little	None	Not Applicable	Don't Know	Refused Answer
b.	Tense or keyed up? (being nervous or anxious)	1	2	3	4	7	8	9
c.	Feeling cheerful?	1	2	3	4	7	8	9
d.	Not able to "get going"?	1	2	3	4	7	8	9
e.	Feeling depressed?	1	2	3	4	7	8	9
f.	Feeling hopeful about the future?	1	2	3	4	7	8	9
g.	Feeling sad?	1	2	3	4	7	8	9
h.	Bothered by trembling? (or shaking)	1	2	3	4	7	8	9
i.	Feeling that something bad was going to happen to you?	1	2	3	4	7	8	9

58. Do you consider that you have major problems with remembering frequently, sometimes, seldom, or never? (USE RESPONSE CARD)

1	Frequently
2	Sometimes
3	Seldom
4	Never
7	Not applicable
8	Don't know
9	Refused answer

59. Do you feel that most of the things that happen to you are the result of your own decision, or things over which you have no control?

       __1__   Own decision

       __2__   No control

       __7__   Not applicable

       __8__   Don't know

       __9__   Refused answer

60. How difficult is it for you to make and carry out plans? Would you say it's been very difficult, a little difficult, or not at all difficult?

       __1__   Very difficult

       __2__   A little difficult, or

       __3__   Not at all difficult

       __7__   Not applicable

       __8__   Don't know

       __9__   Refused answer

61. Now, I'm going to read you two statements. Please tell me "yes" or "no" for each. First, some people feel that everytime they try to get ahead, something or somebody stops them. Do you feel like this?

       __1__   Yes

       __2__   No

       __7__   Not applicable

       __8__   Don't know

       __9__   Refused answer

62. Second, some people feel it is hard for them to do what they really want in life. Do you ever feel like this?

        __1__   Yes

        __2__   No

        __7__   Not applicable

        __8__   Don't know

        __9__   Refused answer

63. How much control do you feel you have over your life these days? Do you feel you have a great amount of control, a moderate amount of control, little control, or no control over your life? (USE RESPONSE CARD)

        __1__   A great amount of control

        __2__   A moderate amount of control

        __3__   Little control, or

        __4__   No control over your life

        __7__   Not applicable

        __8__   Don't know

        __9__   Refused answer

64. Now, a few questions about you and your family. How many living children do you have?

        _____   Children (PUT 0 IF NONE, SKIP TO #66)

        __97__   Not applicable

        __98__   Don't know

        __99__   Refused Answer

65. How many of your children live within one hour travel time of where you live, including those who may live with you?

        _____   Children

        __97__   Not applicable

        __98__   Don't know

        __99__   Refused answer

66. (OBSERVE AND CODE IF OBVIOUS) Do you live in: (READ OPTIONS)

    __1__   A house

    __2__   An apartment, or ------>Is this housing used
                                  mostly for seniors?

                                      __1__ Yes
                                      __2__ No
                                      __7__ Not applicable
                                      __8__ Don't know
                                      __9__ Refused answer

    __3__   Some other type of group setting such as a group home or board and care facility (SKIP TO #71)

    __4__   Nursing home (SKIP TO #71)

    __7__   Not applicable

    __8__   Don't know

    __9__   Refused answer

67. Do you own or rent your (apartment OR house)?

    __1__   Own

    __2__   Rent

    __3__   Other (SPECIFY _____)

    __7__   Not applicable

    __8__   Don't know

    __9__   Refused answer

68.   Do you live alone?

          __1__   Yes   (SKIP TO #71)

          __2__   No

          __7__   Not applicable ⌐

          __8__   Don't know   ⎬ SKIP TO #71

          __9__   Refused answer ⌐

69.   Who do you live with?   (CIRCLE THE NUMBER 1 NEXT TO ALL MENTIONED)

          __1__   a.   Spouse

          __1__   b.   Children

          __1__   c.   Other relatives

          __1__   d.   Other unrelated people

          __1__   e.   Other (SPECIFY _____)

70.   Including yourself, how many people usually live in your household?

          _____   People

          __97__ Not applicable

          __98__ Don't know

          __99__ Refused answer

71. DURING MOST OF THE PERIOD since (ORIGINAL INTERVIEW MONTH), were you:
    (READ ALL OPTIONS) (USE RESPONSE CARD)

        __1__   Retired and not working

        __2__   Homemaker

        __3__   Employed full-time

        __4__   Employed part time

        __5__   Laid off -----------> Are you currently looking for work?

                                __1__ Yes
                                __2__ No
                                __7__ Not applicable
                                __8__ Don't know
                                __9__ Refused answer

        __6__   Unemployed and looking for work

        __10__   Other

        __7__   Not applicable

        __8__   Don't know

        __9__   Refused answer

72. DURING THE PAST MONTH since _____, what was your (and your spouse's) approximate total income including all assistance such as food stamps, financial support from family or friends, and energy assistance? (TOTAL INCOME MEANS ALL CASH INCOME BEFORE TAXES ARE DEDUCTED)

       $ _____

       __9997__   Not applicable ____   SKIP TO END

       __9998__   Don't know ____

       __9999__   Refused answer ____   GO TO #73

73. If you cannot tell me the exact amount, can you give me an estimate? Was your total income during the past month ... (USE RESPONSE CARD)

     __1__   Less than $300 per month

     __2__ $300-$399 per month

     __3__ $400-$499 per month

     __4__ $500-$999 per month

     __5__ $1000 or more per month

     __7__   Not applicable

     __8__   Don't know

     __9__   Refused answer

Today, before I go, I'd like to check your vision. What I will do is ask you to read the eye charts I will hold up for you. Each time, I'd like you to cover a different eye with this card. If you will hold the string end I give you, it will help me know where to hold the eye chart. Okay?

(NEAR VISION CHECK) Do you wear glasses for reading? You may want to use them in this eye check.

        Right eye: ____ /____

        Left eye: ____ /____

(FAR VISION CHECK) Do you wear glasses for seeing things far away? You might want to use them in this eye check.

        Right eye: ____ /____

        Left eye: ____ /____

As a "thank you" for participating in this survey, I'm going to give you the $5.00 as promised.

FOR THOSE WITH HIGH BLOOD PRESSURE: Just like last year, Dr. Lurie would like to come back and check how well your blood pressure is doing. When would be the best time for Dr. Nicole Lurie or her assistant to call and set up a convenient time to come back and give you a free blood pressure test?

        __1__   Yes   Time _____

        __2__   No

        __7__   Not applicable

        __8__   Don't know

        __9__   Refused answer

FOR THOSE WITH DIABETES: Just like last year, Dr. Lurie would like to come back and check how well your blood sugar level is doing. When would be the best time for Dr. Nicole Lurie or her assistant to call and set up a convenient time to come back and give you a free blood test?

        __1__   Yes   Time _____

        __2__   No

        __8__   Don't know

        __9__   Refused answer

FOR THOSE WITH BREATHING PROBLEMS: Just like last year, Dr. Lurie would like to come back and check how well your breathing is doing. When would be the best time for Dr. Nicole Lurie or her assistant to call and set up a convenient time to come back and give you a free breathing test?
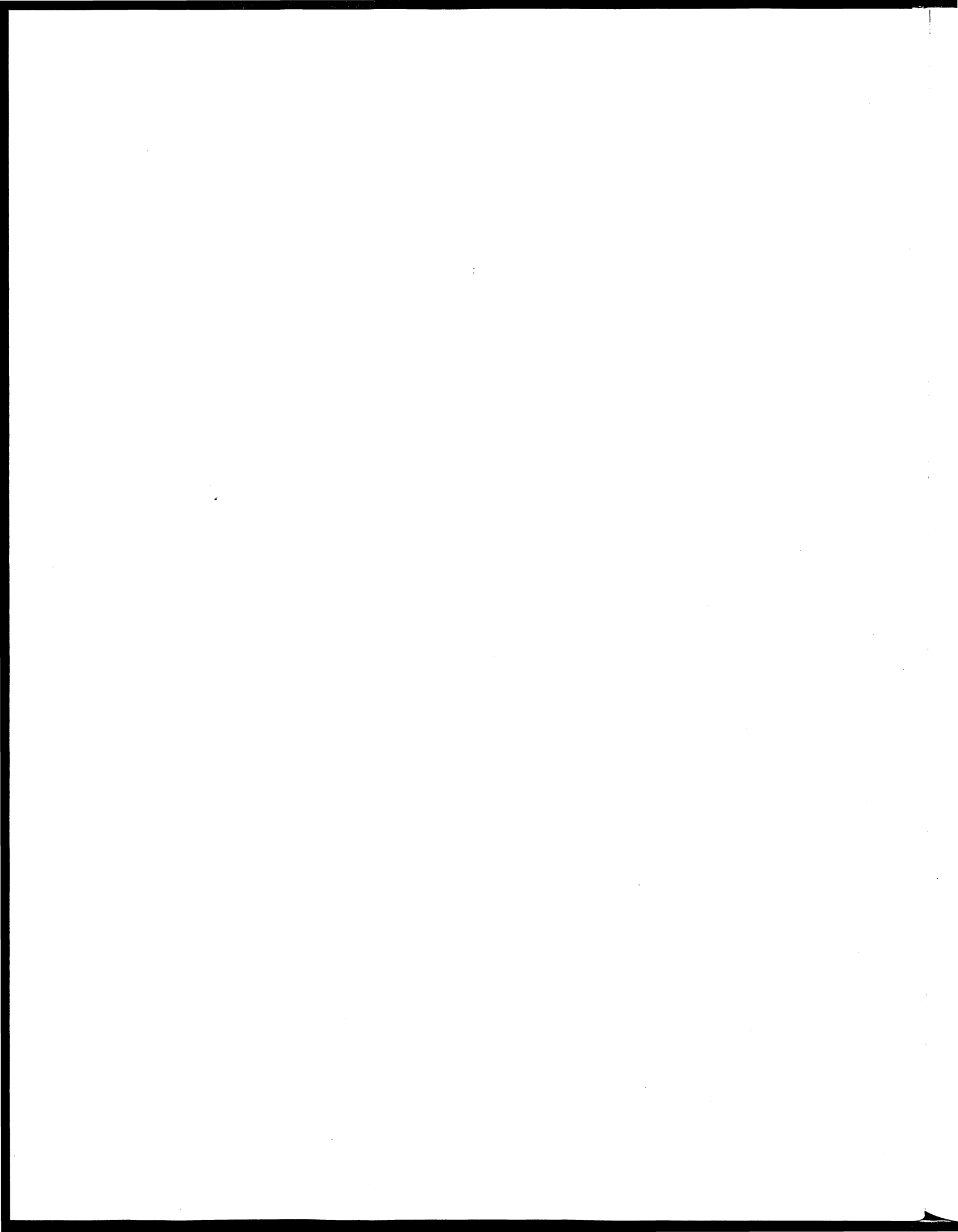
<u> 1 </u>   Yes   Time _____

<u> 2 </u>   No

<u> 8 </u>   Don't know

<u> 9 </u>   Refused answer

Once again, thank you for your time.

im/3
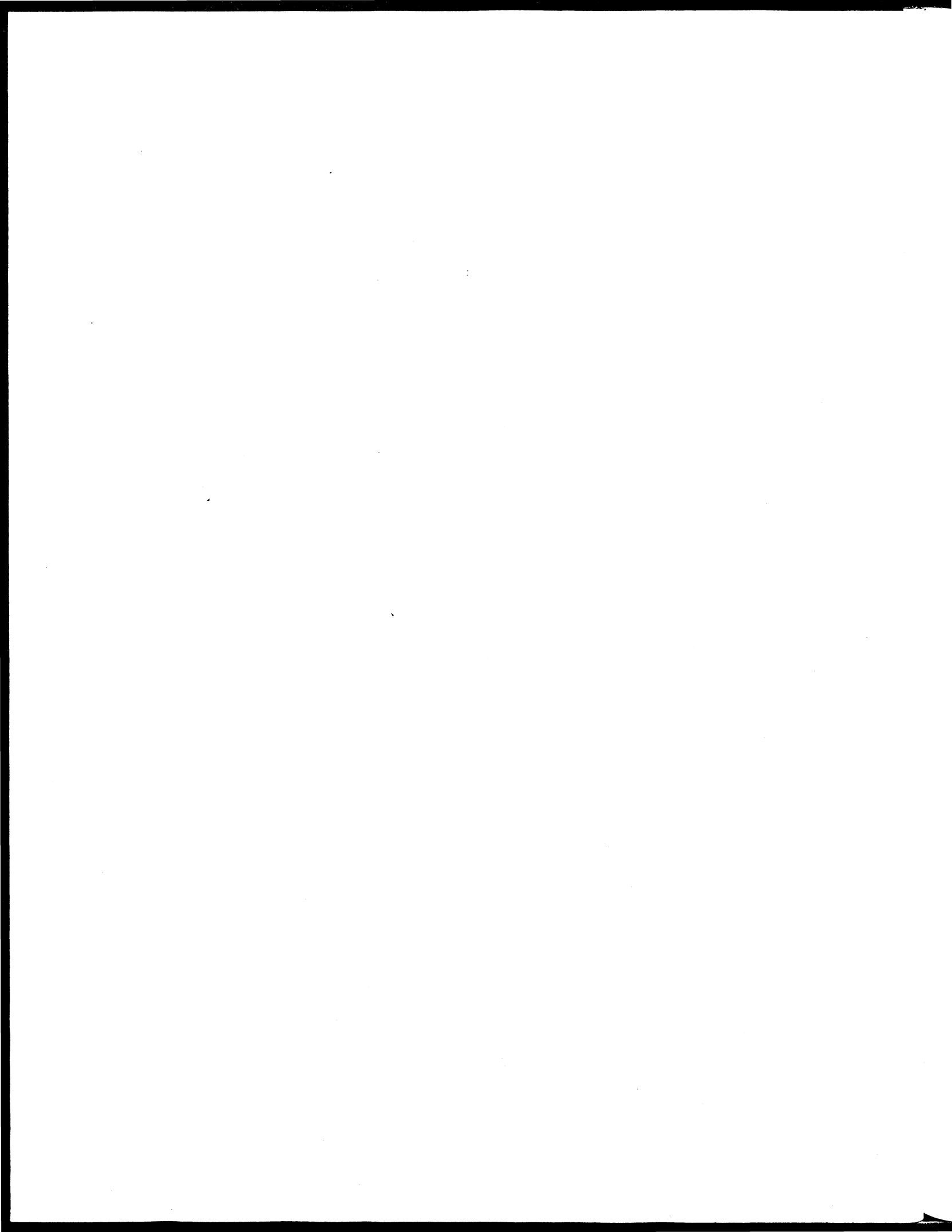
APPENDIX 2

DEFINITION OF INDICES AND SCALES

Health Status

1. General Health Status Index

   This index is an adaptation of the general health status index developed
   at the RAND Corporation. It includes 4 items and has a possible range
   of scores from 4-16. A higher score indicates poorer health.

2. Well-Being Scale, Depression Scale and Anxiety Scale

   These scales are derived from items on the Positive Well Being Scale of
   Veit and Ware, the Zung Depression Scale and the Hopkins Symptom
   Checklist. Each has 3 items and a possible range of scores from 3-12.
   A higher score indicates better mental health status.

Functional Status

1. IADL Dependency Index

   This index measures dependencies in completing the Instrumental
   Activities of Daily Living. It includes 8 items and has a possible
   range of scores from 0-8. A higher score indicates greater dependency.

2. Personal Self-Maintenance Index

   This index measures dependencies in completing the Personal Self-
   Maintenance Activities (equivalent to the ADL). It includes 8 items and
   has a possible range of scores from 0-8. A higher score indicates
   greater dependency.

3. Physician Functioning Index

   This index (developed at the RAND Corporation) assesses physical
   limitations in nine areas ranging from walking one block to doing
   strenuous activities such as running or lifting heavy objects. Possible
   scores range from 0-9 with a higher score indicating more limitations in
   physical functioning.

Use of Health Services

1. Preventive Services Use Index

   This index measures the use of 5 specific types of preventive services
   during the past year. Possible scores range from 0 to 5 with a higher
   score indicating greater use of preventive services.

Satisfaction

1. Health Care Satisfaction Index

    This index measures satisfaction with 5 specific aspects of the health
    care received by individuals. Possible scores range from 5 to 20 with a
    higher score indicating less satisfaction.

Social Support

1. Social Contact Index

    This index measures interaction with friends and family as well as
    participation in the activities of organizations. It includes 4 items
    and has a possible range of scores from 0-120. A higher score indicates
    more social interaction.