

ESTIMATE OF NEED AND UTILIZATION  
OF HOME HEALTH SERVICES  
IN KANSAS

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## INTRODUCTION

The purpose of this study is to estimate need and utilization of certain home health services for Kansans in the following categories:

- Nursing and health aide services,
- Adult day health services,
- Physical and other therapy,
- Adult day care,
- Companion and sitter services,
- Nutrition services,
- Chore and homemaker services,
- Transportation, and
- Case management.

In order to arrive at an estimate of need, methods of estimating need used in other areas of the United States were assessed. Many methods provide estimates of the elderly non-institutionalized population at risk or sufficiently impaired to require help in day-to-day living. However, estimating the use of services requires more information than just the number of persons. Not all persons will use all services. Indeed the majority of physically or mentally handicapped elderly will not use any agency services. Their needs will be met by family members; therefore, need alone is not sufficient. Estimates of the amount of care provided by family members vary depending upon type of services from 60-80 percent of total needs. Some persons will use varying amounts of one or more services for differing amounts of time.

Given sufficient resources, surveys can determine the financial, physical, mental, and social characteristics of Kansas's elderly population; however as Pillemer[1] noted,

[s]omehow, patients must be determined appropriate for care in a skilled nursing facility, for home health care, for supportive housing, and so on. It is in this leap from scientific survey to level-of-care assignment that the validity of need-based methodologies begins to break down.

Persons who meet criteria for nursing home care can at times successfully live in the community. Need can be met in a variety of ways. Normative decisions by policy makers are made in assessing levels of care. Factors such as the role of the family, the amount of care assumed by the state, and the person who decides on appropriate placement all significantly affect the level of use of home health services.

The policy issues and value judgments used in determining need are not always explicit, but these issues have a great deal to do with utilization of home health care. In a study by Benjamin[2] of elderly receiving home health services under Medicare, there was a range from 9.4 to 68.6 recipients per thousand in the various states [Table One]. Since policies set by states determine home health care reimbursement (even though Medicare is a federal program), this wide variation may reflect differing state policies.

Because need assessments are very dependent upon normative assumptions, a range of estimates is desirable. Wherever possible a range of estimates will be given. A recent study done by Shapiro[3] in Canada could have some impact on estimates in the United States. Here in the United States, demand is highly dependent upon reimbursement levels and availability. In the Canadian study, home health care was available to all those who

TABLE 1

MEDICARE STANDARDIZED RECIPIENTS,  
VISITS AND EXPENDITURES 1982, BY STATE

	Recipients Per 1,000 Enrollees	Visits Per Recipient	Expenditures Per Visit	Expenditures Per Recipient
Alabama	39.9	33.7	\$30.60	\$1039.26
Alaska	9.4	24.6	55.00	1352.94
Arizona	16.4	17.3	44.72	773.67
Arkansas	33.3	25.7	32.88	846.02
California	39.3	21.7	50.62	1097.36
Colorado	44.6	26.9	45.03	1389.34
Connecticut	63.2	31.0	29.40	911.50
Delaware	45.7	33.7	25.20	849.19
District of Columbia	45.0	22.5	37.43	843.10
Florida	48.0	32.3	34.09	1100.82
Georgia	25.4	34.4	35.53	1082.33
Hawaii	25.1	26.9	53.82	1127.91
Idaho	33.3	21.8	45.40	991.51
Illinois	36.9	25.0	38.40	959.18
Indiana	22.2	20.6	31.58	651.76
Iowa	32.0	21.9	22.71	498.16
Kansas	30.2	30.7	29.35	899.98
Kentucky	27.0	15.3	37.90	731.83
Louisiana	31.7	36.9	35.52	1315.33
Maine	46.2	20.6	32.45	667.33
Maryland	40.3	24.5	42.98	1052.76
Massachusetts	64.3	34.8	25.78	898.18
Michigan	37.8	19.1	41.98	801.22
Minnesota	22.9	16.9	36.30	686.53
Mississippi	57.7	40.1	32.19	1356.74
Missouri	56.4	31.4	32.03	1047.45
Montana	26.9	20.9	31.91	678.80
Nebraska	28.1	20.5	40.56	833.28
Nevada	20.8	22.6	47.91	1083.14
New Hampshire	52.4	19.7	27.12	534.28
New Jersey	50.6	28.7	33.61	965.53
New Mexico	35.5	23.3	38.59	901.13
New York	41.9	24.6	38.36	944.73
North Carolina	28.1	21.4	35.31	820.62
North Dakota	25.8	24.0	26.09	625.19
Ohio	36.5	19.1	35.44	677.94
Oklahoma	28.1	21.8	44.20	963.65
Oregon	37.6	19.6	51.54	1010.43
Pennsylvania	63.0	25.9	31.11	801.47
Rhode Island	55.4	33.0	33.98	1121.27
South Carolina	35.8	26.6	35.87	841.21
South Dakota	21.6	18.7	29.25	481.22
Tennessee	38.6	37.2	34.56	1284.46
Texas	33.1	31.3	37.75	1181.68
Utah	24.3	23.5	28.32	665.35
Vermont	68.6	21.8	25.48	555.36
Virginia	22.5	24.4	39.71	968.59
Washington	38.4	24.2	43.69	1058.23
West Virginia	31.2	25.7	33.00	852.05
Wisconsin	33.8	21.2	32.49	686.97
Wyoming	29.6	38.6	32.80	1241.67
MEAN	37.2	25.7	36.35	914.93

SOURCE: Computed from HCFA tables

In Benjamin

desired the services, not to exceed the cost of nursing home services. Shapiro estimated that utilization or demand for services was 9.9 percent of the elderly (70+) population over a period of several years. Therefore, when need is the sole basis for admission, approximately 10 percent of the elderly population will use home health care in Manitoba, Canada.

## METHODS FOR ASSESSING NEED

### DEMAND-BASED METHODS

There are two general demand-based methods: case rate and referral rate. In the case rate method, the number of cases of home health care is estimated based on past experience and/or expectation of certain changes in the future.

#### A. Case rate methods

1. National League of Nursing - 15 cases per 1,000  
Based on 1990 Kansas population: 36,951 cases

2. Western Massachusetts HSA Future need - 30  
cases per 1,000. Based on 1990 Kansas population:  
73,951 cases

3. West Palm Beach HSA II - 41 cases per 1,000 +65  
Based on 1990 +65 Kansas population: 13,706 cases

4. Central NY State Status Quo - 70-100 cases per  
1,000 +65. Based on 1990 +65 Kansas population:  
23,401 - 33,430 cases

#### B. Referral rate method

The referral rate method is based on the assumption that the demand for home health care is generated based on referrals from hospital discharges and various community sources. In 1984, hospital discharges in Kansas numbered 356,697, or a discharge rate of 146 per 1,000 population [4]. Most of the methods

reviewed below were developed prior to the implementation of the Diagnostic Related Groups (DRG's) system of reimbursement for Medicare patients where hospitals are reimbursed on the basis of the standards for specific diagnoses and not upon the cost or length of stay. In most states, hospital admissions, and therefore, discharges decreased in 1983. Most methods used a discharge rate of 160 per 1,000 population. Since patients have gone into the hospital sicker and have been released earlier because of the DRG reimbursement system, it would be safe to assume that demand for home health care would increase. Therefore, the estimates in Table Two for the referral method have used a pre-DRG discharge rate of 160 per 1,000 as a conservative minimum amount.

Table Two presents comparative data from thirteen different estimates. Some methods used differing rates for discharge for elderly and non-elderly. Since Kansas discharge rates are not available by age, a percentage estimate was used. For more details on each method, see Richmond[5].

#### RANGE IN DEMAND-BASED METHODS

Table Three summarizes demand-based estimates for the number of Kansans over 65 needing home health services. Most estimates range from around 25,000 to 42,000 persons. This is approximately 7.5 percent to 12.5 percent of the total elderly population of Kansas.

In Tables Four and Five, employ these estimates as upper and lower limits. Using suggested guidelines from Western



DEMAND-BASED METHODS

TABLE 2

Method	Number of Cases Predicted in Kansas	Percent of Total Hospital Discharge	Case Mix	
			Percent from Discharge	Percent from Community
Western Pennsylvania HSA I	31,206	4 %	50%	50%
W. Palm Beach HSA I	15,603	2.5%	50%	50%
State of Florida Traxler	31,206	4 %	50%	50%
National League of Nursing	39,008	5 %	50%	50%
State of Kentucky	32,767	4.2%	50%	50%
Florida Panhandle HSA	29,646	3.8%	50%	50%
WICHE	29,533	5 %	73%	27%
Western NY HSA NY State Dept. of Health North Shore, MA HSA	41,795	6 % medical/ surgical 4.5% all	42%	58%
NY City HSA	35,824	6 % medical/ surgical 4.5% all	49%	51%
Central New Jersey HSA	25,077	3 %	35%	65%
Wisconsin Dept of Health	32,507	3 %	27%	73%
Central Jersey HSA I (current need)	45,010	6 % medical/ surgical 4.5% all	39%	61%
Central Jersey HSA II (future need)	103,259	6 % medical/ surgical 4.5% all	17%	83%

Source: Richmond, An Analysis of Non-Institutionalized Long-Term Care Planning Methods for Care in the Home.

Range of Demand-Based Methods

TABLE 3

Kansas Population over 65 needing Home Health Services

Benchmark 10% of Kansas elderly 33,430

A. Case rate method

1. NLN	36,951
2. W. Mass	73,951 *
3. W. Palm Beach	13,706 *
4. Central NY St	23,401 to 33430

B. Referral rate method

1. W Penn HSA	31,206
2. W. Palm Beach	15,603 *
3. Florida	31,206
4. NLN	39,008
5. Kentucky	32,767
6. Florida Pan	29,646
7. WICHE	29,533
8. W. NY HSA	41,795
9. NYC HSA	35,821
10. C. NJ HSA	25,077
11. Wisconsin	32,507
12. C. NJ HSA I	45,010 *
13. C. NJ HSA II	103,259 *

\*Less than 75% or more than 125% of Benchmark

SOURCE: Richmond, An Analysis of Non-Institutional Long-Term Care Planning Methods for Care in the Home

Pennsylvania HSA[6], four categories of service were estimated for nursing, home health aides, physical therapy and speech therapy. These guidelines were developed based on previous experience, current patterns and future projections. Conditions have changed since 1977 as previously noted. Costs are calculated based on estimated hours of service. No overhead is included, therefore these are direct costs of specific services only. The range is approximately \$6.7 million to \$11.1 million for these four categories.

#### POPULATION ASSESSMENT METHODS

The trend in estimating demand for home health services has turned toward population assessment. Berk and Bernstein[7] and Shapiro[8] found the perceived health status and age to be the best predictors of use of home health services. Shapiro also found that next to age, difficulty in coping with daily living activities was significant. This implies that medical services such as nursing are not always needed, but that homemakers and chore services can be instrumental in enabling elderly to remain at home for relatively long periods of time. Kentucky[9] also found that living arrangements and mental disorders or sensory impairments were other significant predictors.

Table Six provides ranges for three types of services: personal care, homemakers services, and nursing. Estimates generally fall within the demand-based range except for nursing services, which is lower, but only two methods estimated this service. Housekeeping services were at the higher end. Perhaps

Estimate Using Lower Limit

TABLE 4

TOTAL PERSONS IN NEED  
OF HOME HEALTH CARE            25,073

	% RECEIVING SERVICES	NO OF PATIENTS
NURSING	90%	22,566
HOME HEALTH AIDE	50%	12,537
PHYSICAL THERAPY	20%	5,015
SPEECH THERAPY	4%	1,003

	VISITS PER PATIENT	HOURS PER VISIT
NURSING-R.N.	9	1
L.P.N.	3	1
HOME HEALTH AIDE	18	3
PHYSICAL THERAPY	10	2
SPEECH THERAPY	4	2

	HOURS PER YEAR REQUIRED	COST PER HOUR	TOTAL COST
R.N. HOURS	203,091	\$9.31	\$1,890,780
L.P.N. HOURS	67,697	\$6.81	\$461,017
HOME HEALTH AIDE HRS	676,971	\$4.96	\$3,357,776
PHYSICAL THERAPY HRS	100,292	\$9.31	\$933,719
SPEECH THERAPY HOURS	8,023	\$9.31	\$74,697
TOTAL COST			\$6,717,989

Estimate Using Upper Limit

TABLE 5

TOTAL PERSONS IN NEED  
OF HOME HEALTH CARE 41,788

	% RECEIVING SERVICES	NO OF PATIENTS
NURSING	90%	37,609
HOME HEALTH AIDE	50%	20,894
PHYSICAL THERAPY	20%	8,358
SPEECH THERAPY	4%	1,672

	VISITS PER PATIENT	HOURS PER VISIT
NURSING-R.N.	9	1
L.P.N.	3	1
HOME HEALTH AIDE	18	3
PHYSICAL THERAPY	10	2
SPEECH THERAPY	4	2

	HOURS PER YEAR REQUIRED	COST PER HOUR	TOTAL COST
R.N. HOURS	338,483	\$9.31	\$3,151,275
L.P.N. HOURS	112,828	\$6.81	\$768,356
HOME HEALTH AIDE HRS	1,128,276	\$4.96	\$5,596,249
PHYSICAL THERAPY HRS	167,152	\$9.31	\$1,556,185
SPEECH THERAPY HOURS	13,372	\$9.31	\$124,495
TOTAL COST			\$11,196,560

TABLE 6

## POPULATION ASSESSMENT METHOD

## 1990 KANSAS ELDERLY REQUIRING HOME HEALTH SERVICES

STUDY	Personal Care	House- keep/Chore Service	Nursing & Related Services
Shanas	26,744-33,430	48,062-51,495	
Levison Inst.	26,777		
Glassman	40,509		
CNY HSA	43,256		
Nagi	17,852	39,136	
Greenberg	24,031	54,928	
Monroe County			23,001
CNY HSA(Oars)	23,344-43,942	42,226-85,138	13,045-23,001
RANGE			
LOW	17,852	85,138	13,045
HIGH	43,256	39,136	23,001

SOURCE:Richmond,An Analysis of Non-Institutional  
Long-Term Care Planning Methods for Care in the Home

some referral rate methods are biased toward medical need because of demand based in large part upon hospital discharges.

#### LINKAGE BETWEEN NEED AND USAGE OF HOME HEALTH SERVICES

Population assessment methods usually provide some link between the kind of service need and numbers of persons. Table Seven presents the findings of a survey by the Comptroller General [10] of persons over 65 receiving medical and supportive services from agencies or family. Table Eight applies the percentages from Table Seven to arrive at the number of Kansans likely to use various services.

#### Kentucky Methodology

The state of Kentucky developed a model for predicting usage of home health services. The development took four years from 1979 to 1983, and was updated and refined for two more years. Kentucky based estimates on age, instrumental limitations, living arrangements, and sensory impairment or mental disorders. The normative impact on estimates was mentioned earlier, but should be taken into account in all estimates discussed. State differences and similarities can be viewed indirectly and used in assessing some normative assumptions. From Table Nine, one can determine that roughly the same percent of elderly in both Kentucky and Kansas receive services at a slightly lower rate than the U.S. average. Kansas expenditures per visit are lower, probably reflecting lower health costs in general in Kansas. But expenditures per recipient for Medicare are higher in Kansas. This means that Kansas Medicare home health users receive more

TABLE 7A - MEDICAL CARE

	NURSING CARE	PHYSICAL THERAPY
TOTAL (N=1609)		
%RECEIVING SERVICE	7.0%	.4%
%FAMILY PROVIDED	38.6%	2.5%
%AGENCY PROVIDED	61.4%	97.5%
AVG FREQ PER MONTH	15.3	9.7
UNIMPAIRED(N=344)		
%RECEIVING SERVICE	1.5%	1.8%
%FAMILY PROVIDED	20.0%	.0%
%AGENCY PROVIDED	80.0%	100.0%
AVG FREQ PER MONTH	13	8.2
SLIGHTLY(N=340)		
%RECEIVING SERVICE	2.4%	2.4%
%FAMILY PROVIDED	25.0%	100.0%
%AGENCY PROVIDED	75.0%	.0%
AVG FREQ PER MONTH	16	9.5
MILDLY(N=295)		
%RECEIVING SERVICE	4.7%	5.4%
%FAMILY PROVIDED	36.2%	5.6%
%AGENCY PROVIDED	63.8%	94.4%
AVG FREQ PER MONTH	17.8	8.7
MODERATELY(N=266)		
%RECEIVING SERVICE	8.0%	5.3%
%FAMILY PROVIDED	28.7%	.0%
%AGENCY PROVIDED	71.3%	100.0%
AVG FREQ PER MONTH	13.2	10.4
GENERALLY(N=144)		
%RECEIVING SERVICE	9.0%	3.4%
%FAMILY PROVIDED	23.3%	20.6%
%AGENCY PROVIDED	76.7%	79.4%
AVG FREQ PER MONTH	16.5	10.8
GREATLY(N=108)		
%RECEIVING SERVICE	14.7%	4.6%
%FAMILY PROVIDED	37.4%	.0%
%AGENCY PROVIDED	62.6%	100.0%
AVG FREQ PER MONTH	14.9	11.1
EXTREMELY(N=109)		
%RECEIVING SERVICE	33.1%	9.2%
%FAMILY PROVIDED	58.3%	.0%
%AGENCY PROVIDED	41.7%	100.0%
AVG FREQ PER MONTH	15.2	10

SOURCE:Richmond,An Analysis of Non-Institutional Long-Term Care Planning Methods for Care in the Home



TABLE 7B - HOME MANAGEMENT

	HOME- MAKER	PERSONAL CARE	MEAL PREPA- RATION	CONTINUOUS SUPER- VISION	TRANS- PORTATION
TOTAL (N=1609)					
%RECEIVING SERVICE	26.0%	11.8%	22.0%	8.1%	67.7%
%FAMILY PROVIDED	76.6%	90.7%	60.4%	72.8%	88.6%
%AGENCY PROVIDED	23.4%	9.3%	39.6%	27.2%	11.4%
AVG FREQ PER MONTH	25.9	21.7	17.3	30.5	13.2
UNIMPAIRED(N=344)					
%RECEIVING SERVICE	3.9%	1.5%	4.7%	.3%	53.0%
%FAMILY PROVIDED	46.2%	73.3%	12.8%	100.0%	93.8%
%AGENCY PROVIDED	53.8%	26.7%	87.2%	.0%	6.2%
AVG FREQ PER MONTH	19.5	21.7	17.3	30.5	18.6
SLIGHTLY(N=340)					
%RECEIVING SERVICE	8.9%	3.1%	11.7%	1.8%	61.5%
%FAMILY PROVIDED	62.9%	90.3%	33.6%	66.7%	86.7%
%AGENCY PROVIDED	37.1%	9.7%	66.4%	33.3%	13.3%
AVG FREQ PER MONTH	24.7	21.7	17.3	30.5	16.5
MILDLY(N=295)					
%RECEIVING SERVICE	21.2%	6.6%	19.6%	4.3%	69.8%
%FAMILY PROVIDED	79.7%	80.3%	44.9%	62.8%	87.4%
%AGENCY PROVIDED	20.3%	19.7%	55.1%	37.2%	12.6%
AVG FREQ PER MONTH	26.4	21.7	17.3	30.5	13.9
MODERATELY(N=266)					
%RECEIVING SERVICE	39.2%	15.0%	26.0%	8.7%	75.7%
%FAMILY PROVIDED	77.8%	97.3%	69.6%	69.0%	86.5%
%AGENCY PROVIDED	22.2%	2.7%	30.4%	31.0%	13.5%
AVG FREQ PER MONTH	23.8	21.7	17.3	30.5	10.8
GENERALLY(N=144)					
%RECEIVING SERVICE	45.6%	17.2%	30.5%	9.2%	79.6%
%FAMILY PROVIDED	74.6%	95.9%	62.3%	81.5%	85.4%
%AGENCY PROVIDED	25.4%	4.1%	37.7%	18.5%	14.6%
AVG FREQ PER MONTH	22.5	21.7	17.3	30.5	10.8
GREATLY(N=108)					
%RECEIVING SERVICE	52.8%	22.6%	3.8%	19.4%	82.3%
%FAMILY PROVIDED	79.0%	83.6%	73.2%	76.3%	88.9%
%AGENCY PROVIDED	21.0%	16.4%	26.8%	23.7%	11.1%
AVG FREQ PER MONTH	27.3	21.7	17.3	30.5	7.8
EXTREMELY(N=109)					
%RECEIVING SERVICE	78.1%	60.8%	72.5%	46.7%	80.7%
%FAMILY PROVIDED	82.3%	91.0%	84.8%	76.4%	93.2%
%AGENCY PROVIDED	17.7%	9.0%	15.2%	23.6%	6.8%
AVG FREQ PER MONTH	35.5	21.7	17.3	30.5	6.5

SOURCE:Richmond,An Analysis of Non-Institutional Long-Term Care Planning Methods for Care in the Home

TABLE 8A- ESTIMATE OF KANSANS RECEIVING HOME MEDICAL CARE

	NURSING CARE	PHYSICAL THERAPY
TOTAL (in thousands)		
RECEIVING SERVICE	23.4	1.3
FAMILY PROVIDED	9.0	.0
AGENCY PROVIDED	14.4	1.3
UNIMPAIRED		
RECEIVING SERVICE	5.0	6.0
FAMILY PROVIDED	1.0	0.0
AGENCY PROVIDED	4.0	6.0
SLIGHTLY		
RECEIVING SERVICE	8.0	8.0
FAMILY PROVIDED	2.0	8.0
AGENCY PROVIDED	6.0	0.0
MILDLY		
RECEIVING SERVICE	15.7	18.1
FAMILY PROVIDED	5.7	1.0
AGENCY PROVIDED	10.0	17.0
MODERATELY		
RECEIVING SERVICE	26.7	17.7
FAMILY PROVIDED	7.7	0.0
AGENCY PROVIDED	19.1	17.7
GENERALLY		
RECEIVING SERVICE	30.1	11.4
FAMILY PROVIDED	7.0	2.3
AGENCY PROVIDED	23.1	9.0
GREATLY		
RECEIVING SERVICE	49.1	15.4
FAMILY PROVIDED	18.4	0.0
AGENCY PROVIDED	30.8	15.4
EXTREMELY		
RECEIVING SERVICE	110.7	30.8
FAMILY PROVIDED	64.5	0.0
AGENCY PROVIDED	46.1	30.8

TABLE 8B- ESTIMATE OF KANSANS RECEIVING HOME MANAGEMENT ASSISTANCE

TOTAL (in thousands)	HOME- MAKER	PERSONAL CARE	MEAL PREPA- RATION	CONTINUOUS SUPER- VISION	TRANS- PORTATION
RECEIVING SERVICE	86.9	39.4	73.5	27.1	226.3
FAMILY PROVIDED	66.6	35.8	44.4	19.7	200.5
AGENCY PROVIDED	20.3	3.7	29.1	7.4	25.8
UNIMPAIRED					
RECEIVING SERVICE	13.0	5.0	15.7	1.0	177.2
FAMILY PROVIDED	6.0	3.7	2.0	1.0	166.2
AGENCY PROVIDED	7.0	1.3	13.7	.0	11.0
SLIGHTLY					
RECEIVING SERVICE	29.8	10.4	39.0	6.0	205.6
FAMILY PROVIDED	18.7	9.4	13.1	4.0	178.3
AGENCY PROVIDED	11.0	1.0	25.9	2.0	27.3
MILDLY					
RECEIVING SERVICE	70.9	22.1	65.5	14.4	233.3
FAMILY PROVIDED	56.5	17.7	29.4	9.0	203.9
AGENCY PROVIDED	14.4	4.3	36.1	5.3	29.4
MODERATELY					
RECEIVING SERVICE	131.0	50.1	86.9	29.1	253.1
FAMILY PROVIDED	102.0	48.8	60.5	20.1	218.9
AGENCY PROVIDED	29.1	1.4	26.4	9.0	34.2
GENERALLY					
RECEIVING SERVICE	152.4	57.5	102.0	30.8	266.1
FAMILY PROVIDED	113.7	55.1	63.5	25.1	227.3
AGENCY PROVIDED	38.7	2.4	38.4	5.7	38.9
GREATLY					
RECEIVING SERVICE	176.5	75.6	12.7	64.9	275.1
FAMILY PROVIDED	139.4	63.2	9.3	49.5	244.6
AGENCY PROVIDED	37.1	12.4	3.4	15.4	30.5
EXTREMELY					
RECEIVING SERVICE	261.1	203.3	242.4	156.1	269.8
FAMILY PROVIDED	214.9	185.0	205.5	119.3	251.4
AGENCY PROVIDED	46.2	18.3	36.8	36.8	18.3

TABLE 9

## MEDICARE HOME HEALTH USERS - KANSAS AND KENTUCKY

	PERCENT OF ELDERLY	EXPENDITURES PER VISIT
KANSAS	3.28	\$29.39
KENTUCKY	3.14	\$37.90
U.S. MEAN	4.59	\$36.35

## EXPENDITURES PER RECIPIENT

	MEDICARE	MEDICAID
KANSAS	\$899.98	\$482.81
KENTUCKY	\$731.83	\$751.32
U.S. MEAN	\$919.93	\$779.75

## POPULATION AND PROJECTIONS

KANSAS	1980	PERCENT OF TOTAL	1990	PERCENT OF TOTAL
65-74	173,400	7.30%	180,100	7.30%
75+	132,800	5.60%	154,200	6.26%
TOTAL +65	306,200	12.96%	334,300	13.60%
KENTUCKY				
65-74	249,000	6.80%	279,600	6.90%
75+	160,800	4.40%	220,100	5.40%
TOTAL +65	409,800	11.20%	499,700	12.20%

SOURCE: Benjamin, State Variations in Home Health Expenditures and Utilization Under Medicare and Medicaid  
U.S. Bureau of the Census

Kentucky Methodology Applied to Kansas

TABLE 10

AGE	FUNCTIONAL ABILITY	SOMEWHAT IMPAIRED (B)			MODERATELY IMPAIRED (C,D, AND OTHER)			SEVERELY IMPAIRED (E,F,G)		
		LIVE WITH OTHERS<65	LIVE ALONE OR WITH +65	LIVE WITH OTHERS<65	LIVE ALONE OR WITH +65	LIVE WITH OTHERS<65	LIVE ALONE OR WITH +65	LIVE WITH OTHERS<65	LIVE ALONE OR WITH +65	
65-74	CELL	3	9	15	21	27	33			
	NO. IN KS USE IN KS	1,170 117	8,625 1,294	702 140	525 105	100 40	1,738 1,478			
65-74 MENTAL DISORDER OR SENSORY IMP	CELL	4	10	16	22	28	34			
	NO. IN KS USE IN KS	669 201	5,048 1,514	568 227	4,446 2,223	167 84	1,939 1,745			
>=75	CELL	5	11	17	23	29	35			
	NO. IN KS USE IN KS	936 281	9,728 2,918	501 150	6,452 3,226	100 70	3,410 3,239			
>=75 MENTAL DISORDER OR	CELL	6	12	18	24	30	36			
	NO. IN KS USE IN KS	836 418	9,996 4,998	702 527	9,394 7,045	401 401	9,260 9,260			

visits than their Kentucky counterparts. Medicare recipients in Kansas receive far fewer visits. In Kentucky not much difference is noted between Medicare and Medicaid users.

Table Ten presents the percentages used to determine service needed in Kansas. Appendix A shows more detailed calculations for each cell. Table Eleven estimates total hourly or daily need in four categories and full-time equivalent (FTE) personnel needs based on Kentucky productivity norms.

TABLE 11

Services	Estimated Requirement	Estimated FTE
Homemaker Aide	2,370,181 hr/yr	1,581
Nurse	545,930 hr/yr	417
Health Aide	676,971 hr/yr	622
Adult Day Care	254,870 days/yr	N/A

#### SUMMARY AND CONCLUSIONS

Table Twelve presents a summary of all services estimated with cost wherever possible. More literature focuses on the medical care side of home health services rather than home management. Therefore, cost estimates for medical care are more readily available. Nursing aide, including R.N., L.P.N., and health aides, is estimated between \$5.7 and \$10 million per year.

The availability of data reflects the bias in the United States of requiring health assistance in order to also receive home management assistance. As indicated in the Shapiro study, many elderly would be able to remain at home given more home

SUMMARY OF ESTIMATES

TABLE 12

Service	Method of Estimate	Units Per Year (hrs, days, visits)	Cost per Hour (if known)	Total Cost (millions)
Nursing and Health Aide	A. Table 4 & 5 Demand-Based R.N. L.P.N. Health aide	203,091 to 338,483 hrs	\$9.31/hr	\$1.9-3.
		67,697 to 112,828 hrs	6.81/hr	.5-
		676,971 to 1,128,276 hrs	4.96/hr	<u>3.4-5.</u> \$5.7-9.
	B. Table 7 & 8	184 visits/yr x 14,400 persons 82,643,840 visits/yr		
	C. Kentucky-Nurse	545,930 hrs	\$8.42/hr (weighted average)	\$4.6
	Health aide	1,086,902 hrs	\$4.96/hr	<u>5.4</u> \$10.0
Adult Day Health Services	Weiler	2.5-3.5 places per 1000 836-1,170 places in Kansas		
Physical Therapy	A. Tables 4 & 5	100,292 to 167,152	\$9.31/hr	\$ .9-1.6
	B. Tables 7 & 8	116.4 visits x 1,300 persons = 151,320 hrs	9.31/hr	\$1.4
Speech Therapy	Tables 4 & 5	8,023 to 13,372 hrs	9.31/hr	\$ .07-.11
Adult Day Care	Kentucky	254,870 days/yr		

Table 12 (cont.)

Service	Method of Estimate	Units Per Year (hrs, days, visits)	Cost per Hour (if known)	Total Co. (million)
Companion & Sitter	Tables 7 & 8	120 visits*/yr x 7,400 persons = 888,000 visits/yr *Agency provided average less than family average		
Nutrition Services	Tables 7 & 8	207.6 visits/yr x 29,100 persons = 6,041,160 visits/yr		
Chore and Homemaker Services	A. Tables 7 & 8	310.8 visits/yr x 20,300 persons = 6,309,240 visits/yr		
	B. Kentucky	2,370,181 hr/yr	\$4.96/hr	\$11.8
Transportation	A. Dept on Aging Survey	46,802 elderly		
	B. Tables 7 & 8	158.4 visits/yr x 25,800 persons = 4,086,720 visits/yr 8 mile round trip \$.205/mile		\$16.7 (not including driver)
Case Management	Moderately & Severely Impaired Living at Home from Kentucky Estimates	20,000 persons		



management assistance. The Kentucky estimates show that approximately 1.5 million hours per year of nursing care is needed and 2.3 million hours per year of homemaker services at a total cost of \$21.8 million.

Finally, it should be noted again that the methodologies used will reflect the biases and normative assumptions of those who developed those methods. They may not reflect the goals in home health care of Kansas.

#### FOOTNOTES

- [1] Pillemer, p. 285.
- [2] Benjamin, pp. 10-12
- [3] Shapiro, p. 38
- [4] Appendix I to Kansas Health Facility Plan (in preparation, March, 1986).
- [5] Richmond, Figure 1, p. 10
- [6] Home Health Services Need Versus Demand, Monograph, p. 16
- [7] Berk and Bernstein, p. 15
- [8] Shapiro, p. 42
- [9] Kentucky, p. 1
- [10] Richmond, Table Five, pp. 30-33

## REFERENCES

### I. GENERAL

- Benjamin, A.E., "State Variations in Home Health Expenditures and Utilization Under Medicare and Medicaid, Home Health Care Services Quarterly, Vol.7 (1), Spring 1986.
- Berk, Marc L. and Amy Bernstein, "Use of Home Health Services: Some Findings from the National Medical Care Expenditure Survey," Home Health Case Services Quarterly, Vol. 6(1), Spring 1985.
- Branch, Lawrence G., and Neil Stuart, "Towards a Dynamic Understanding of the Care Needs of the Non-Institutionalized Elderly," Home Health Services Quarterly, Vol. 6(1), Spring 1985.
- Kansas Department on Aging, Statewide Summary Report, Needs Assessment Survey of Non-Institutionalized Older Kansans, Winter 1979-80.
- Kansas Health Facilities Plan (in preparation), Institute for Health Planning, March, 1986.
- "Home Health Services Need versus Demand," monograph, unknown author.
- National Center for Health Statistics, B. Feller: "Americans Needing Help to Function at Home," Advance Data from Vital and Health Statistics, No. 92, DHHS Pub. No. (PHS) 83-1250, Public Health Service, Hyattsville, MD., September, 1983.
- Pillemer, Karl, "How Do We Know How Much We Need? Problems in Determining Need for Long-Term Care," Journal of Health Politics, Policy, and Law, Vol. 9, No. 2, Summer 1984.
- Reif, Laura, "Predicting the Use of Home Health Services: Problems and Prospects," Home Health Care Services Quarterly, Vol. 7(1), Spring 1986.
- Riley County Long-Term Care Task Force Report, Center for Aging, Kansas State University and Health Systems Agency of Northeast Kansas, February 1986.
- Shapiro, Evelyn, "Patterns and Predictors of Home Care Use by the Elderly When Need is the Sole Basis for Admission," Home Health Care Services Quarterly, Vol. 7(1), Spring 1986.
- U.S. Bureau of the Census, Current Population Reports, Series P-25, No. 937, Provisional Projections of the Population of States, by Age and Sex: 1980-2000, U.S. Government Printing Office, Washington, D.C., 1983.

Weiler, Philip G., "Estimating Need for Adult Day Health Care," Home Health Care Services Quarterly, Col. 6(1), Spring 1985, pp. 39-43.

## II. DEMAND-BASED METHODS

- Bureau of Health Facilities and Services, Home Health Services in Wisconsin. Wisconsin, Division of Health, January 1, 1977.
- Central Jersey Health Planning Council, Inc. 1981 Health Systems Plan.
- Central Massachusetts Health Systems Agency, Inc. Health Systems Plan of Central Massachusetts. Shrewsbury, MA: 1977.
- Central New York Health Systems Agency. Minutes of the Long-Term Initiative Committee. Syracuse, NY: 1979-1980.
- Comprehensive Health Planning Association of Western Pennsylvania, Inc. Guidelines for the Planning and Development of Home Health Services in Western Pennsylvania Pittsburgh: July 1973.
- Florida Panhandle Health Systems Agency, Inc. Health Systems Plan: 1977-1982. Tallahassee: 1977.
- HSA of New York City. Health Systems Plan for New York City. New York.
- Health Planning Council. A Planning and Review Document for Home Health Care Services in Health Service Area VII. West Palm Beach, FL: 1977 (Draft)
- Health Planning Council. A Planning Document for Health Care for Indian River, Martin, Olceehokee, Palm Beach, and St. Lawrence Counties. West Palm Beach, FL: c. 1976.
- New York State Bureau of Facility Planning. Draft Methodology of Home Health Establishment Council. Albany, NY: 1977.
- National League for Nursing. Estimate of Home Health Needs. New York, NY: April 1977.
- Post Acute Care Task Force. Summary Information of the HSP Component for Home Care. North Shore Health Planning Council. Massachusetts: 1977.
- Regional Plan Development Task Force on Aging and Long-Term Care. An Initial Plan for the Development of Long-Term Care Health Services in Western New York. Buffalo, NY: Comprehensive Health Planning Council of Western New York, 1975.

State Comprehensive Health Planning Council. Guidelines for Developing Regional In-Home Health Plans. Kentucky: July 1974.

Traxler, H., A Methodology for Estimating the "Need" for Home Health Care. Tallahassee, FL: Florida State Dept. of Health and Rehabilitation Services, Office of Comprehensive Health Planning. (Presented at the 105th Annual Meeting of the American Public Health Association, Washington, DC: October 31, 1977)

WICHE. Nursing Resources and Requirements. A Guide for State-Level Planning. Boulder, CO: 1979.

### III. POPULATION ASSESSMENT METHODS

Allan, K., First Findings of the 1972 Survey of the Disabled: General Characteristics. Social Security Bulletin, 1976, 39(10), 18-37.

Berg, R., Browning, F., Hill, J., & Werkert, W., Assessing the Health Care Needs of the Aged. Health Services Research, 1970, 5(1), 36-59.

Comptroller General of the United States. Home Health-The Need for a National Policy to Better Provide for the Elderly. United States General Accounting Office, April 19, 1977.

Comptroller General of the United States. The Well-Being of Older People in Cleveland, Ohio. United States General Accounting Office, April 19, 1977.

Glassman, J.J., et al. Towards an Estimation of Service Need in Community Planning for an Aging Society: Designing Services and Facilities. M. Lawton, J. Newcomer, & T. Byerts, (eds.) Stroudsburg, PS: Dowden, Hutchinson and Ross, 1976, 258-265.

Greenburg, J., Supportive Services: 1974 Status and Needs Survey of the Elderly. Staff Paper, Minneapolis, MN: September 1974.

Morris, R., Alternatives to Nursing Home Care: A Proposal. Special Committee on Aging, U.S. Senate. Levinson Gerontological Policy Institute, October 1971.

Nagi, S., An Epidemiology of Disability Among Adults in the United States. MMFQ/Health and Society, 1976, 54(4), 439-467.

- New York State Health Planning Commission. A Population Based Approach to Planning for Long-Term Care. Draft, Albany, NY: 1977. (Contains data from NYS survey of the elderly population sponsored by the NYS Office on Aging.)
- Pfeiffer, E., Multidimensional Assessment: The OARS Methodology. A Manual. Center for Study of the Aging and Human Development, 1976.
- Posner. Functional Capacity Limitations and Disability. Social Security Administration, 1972 Survey of Disabled and Nondisabled Adults: Report No. 2.
- Shanas, E., Measuring the Home Health Needs of the Aged in Five Counties. Journal of Gerontology, 1971, 26(11), 37-40.
- Shanas, E., et al., Old People in Three Industrial Societies. New York: Atherton Press, 1968.
- Sproat, B.J., Three Approaches to Estimating Need for Personal Care Services. Waltham, MA: Levinson Gerontological Policy Institute, Brandeis University, June 1972.

APPENDIX A-KENTUCKY METHODOLOGY FOR KANSAS

	Cell 3	Cell 4	Cell 5	Cell 6	Alone Cell 9
Estimated Number	.35%	.20%	.25%	.25%	2.58%
Estimated Usage	10%	30%	30%	38%	15%

SERVICES

Homemaker Aide(hr/yr)	9.3	12.8	17.4	17.4	34.8
Nurse(hrs/yr)	1.9	1.9	3.8	3.8	3.8
Health Aide(hrs/yr)	22	22	26	26	16
Adult Day Care(days/y)		164	104	104	

Estimated Number	1,170	669	836	836	8,625
Estimated Usage	117	201	251	313	1,294

SERVICES

Homemaker Aide(hr/yr)	1,088	2,567	4,363	4,090	8,329
Nurse(hrs/yr)	222	381	953	893	909
Health Aide(hrs/yr)	2,574	4,413	6,519	6,111	3,829
Adult Day Care(days/y)		32,895	17,384	8,067	

	With Cell 9	Alone Cell 10	With Cell 10	Alone Cell 11	With Cell 11
Estimated Number	2.58%	1.51%	.0151	2.91%	.0291
Estimated Usage	15%	30%	.3	30%	.3

SERVICES

Homemaker Aide(hr/yr)	30.2	52.2	40.6	78.3	53.6
Nurse(hrs/yr)	3.8	3.8	3.8	3.8	3.8
Health Aide(hrs/yr)	16	16	16	26	26
Adult Day Care(days/y)	104		104		104

Estimated Number	8,625	5,048	5,048	9,728	9,728
Estimated Usage	1,294	1,514	1,514	2,918	2,918

SERVICES

Homemaker Aide(hr/yr)	27,115	12,058	35,181	64,441	99,488
Nurse(hrs/yr)	3,412	878	3,293	3,127	7,053
Health Aide(hrs/yr)	14,366	3,696	13,865	21,398	48,259
Adult Day Care(days/y)	3,735	33,468			11,582

	Alone Cell 12	With Cell 12	C Cell 15	D Cell 15	C Cell 16
Estimated Number	2.99%	.0299	.21%	.21%	.17%
Estimated Usage	50%	.5	20%	20%	40%

SERVICES

Homemaker Aide(hr/yr)	95.7	75.4	37.1	40.6	42.9
Nurse(hrs/yr)	3.8	3.8	3.8	7.8	3.8
Health Aide(hrs/yr)	32	26	18	20	18
Adult Day Care(days/y)		104		70	

Estimated Number	9,996	9,996	702	702	568
Estimated Usage	4,998	4,998	140	140	227

SERVICES

Homemaker Aide(hr/yr)	134,877	206,113	1,250	4,332	2,341
Nurse(hrs/yr)	5,356	10,388	128	832	207
Health Aide(hrs/yr)	45,100	71,073	607	2,134	982
Adult Day Care(days/y)		100,575		393	

	D Cell 16	C Cell 17	D Cell 17	C Cell 18	D Cell 18
Estimated Number	.17%	.15%	.15%	.21%	.0021
Estimated Usage	.4	.3	.3	.75%	.75

SERVICES

Homemaker Aide(hr/yr)	46.4	40.6	44.7	42	48.7
Nurse(hrs/yr)	7.8	5.8	11.6	5.8	11.6
Health Aide(hrs/yr)	20	24	24	24	24
Adult Day Care(days/y)	70		70	70	70

Estimated Number	568	501	501	702	702
Estimated Usage	227	150	150	527	527

SERVICES

Homemaker Aide(hr/yr)	8,016	2,321	4,169	3,715	13,641
Nurse(hrs/yr)	1,348	332	1,082	513	3,249
Health Aide(hrs/yr)	3,455	1,372	2,238	2,123	6,723
Adult Day Care(days/y)	6,365		1,053	5,160	



	C Cell 21	D Cell 21	C Cell 22	D Cell 22	C Cell 23
Estimated Number	.0157	.0157	.0133	1.33%	1.93%
Estimated Usage	.2	.2	.5	50%	50%

SERVICES

Homemaker Aide(hr/yr)	60.3	75.4	77.1	89.9	88.7
Nurse(hrs/yr)	7.8	15.5	9.7	15.5	17.5
Health Aide(hrs/yr)	24	24	24	24	36
Adult Day Care(days/y)	70		70	70	

Estimated Number	5,249	5,249	4,446	4,446	6,452
Estimated Usage	1,050	1,050	2,223	2,223	3,226

SERVICES

Homemaker Aide(hr/yr)	15,191	60,152	37,845	139,739	68,675
Nurse(hrs/yr)	1,965	12,365	4,761	24,093	13,549
Health Aide(hrs/yr)	6,046	19,147	11,781	37,305	27,873
Adult Day Care(days/y)	2,939		14,317		

	D Cell 23	C Cell 24	D Cell 24	D Cell 27	D Cell 28
Estimated Number	.0193	2.81%	.0281	.03%	.05%
Estimated Usage	.5	75%	.75	40%	50%

SERVICES

Homemaker Aide(hr/yr)	104.4	101.5	156.6	134.4	139.8
Nurse(hrs/yr)	23.3	17.5	23.3	46.5	46.5
Health Aide(hrs/yr)	36	36	36	60	60
Adult Day Care(days/y)	70		70		

Estimated Number	6,452	9,394	9,394	100	167
Estimated Usage	3,226	7,045	7,045	40	84

SERVICES

Homemaker Aide(hr/yr)	255,963	85,813	419,256	5,392	5,842
Nurse(hrs/yr)	57,126	14,795	62,380	1,865	1,943
Health Aide(hrs/yr)	88,263	30,436	96,381	2,407	2,507
Adult Day Care(days/y)	16,936				

	Cell 29	Cell 30	Cell 33	Cell 34	Cell 35
Estimated Number	.03%	.12%	.52%	.58%	1.02%
Estimated Usage	70%	100%	85%	90%	95%

SERVICES

Homemaker Aide(hr/yr)	131.7	137.5	145	150.8	150.8
Nurse(hrs/yr)	54.3	54.3	69.8	69.8	77.6
Health Aide(hrs/yr)	100	100	108	108	130
Adult Day Care(days/y)					

Estimated Number	100	401	1,738	1,939	3,410
Estimated Usage	70	401	1,478	1,745	3,239

SERVICES

Homemaker Aide(hr/yr)	7,397	27,580	75,417	122,735	109,472
Nurse(hrs/yr)	3,050	10,891	36,304	56,809	56,333
Health Aide(hrs/yr)	5,616	20,058	56,173	87,900	94,372
Adult Day Care(days/y)					

	Cell 36
Estimated Number	2.77%
Estimated Usage	100%

SERVICES

Homemaker Aide(hr/yr)	159.5
Nurse(hrs/yr)	77.6
Health Aide(hrs/yr)	130
Adult Day Care(days/y)	

Estimated Number	9,260
Estimated Usage	9,260

SERVICES

		Total
Homemaker Aide(hr/yr)	294,216	2,370,181
Nurse(hrs/yr)	143,142	545,930
Health Aide(hrs/yr)	239,800	1,086,902
Adult Day Care(days/y)		254,870

APPENDIX B - PERSONS NEEDING HELP TO FUNCTION AT HOME

NUMBER OF KANSANS PROJECTED TO HAVE NEED

TYPE OF NEED	65-74 YEARS	75-84 YEARS	85+ YEARS	TOTAL OVER 65
1 OR MORE BASIC PHYSICAL ACTIVITIES	95	12,928	14,215	27,237
1 OR MORE HOME MAN- AGEMENT ACTIVITIES	10,320	16,080	16,279	42,679
USUAL STAYS IN BED	2,035	2,903	2,089	7,027
PERSONAL CARE	955	1,225	1,163	3,342
HELP OF ANOTHER PERSON IN 1 OR MORE	12,589	1,848	17,809	32,247

APPENDIX B - PERSONS NEEDING HELP TO FUNCTION AT HOME

TYPE OF NEED	RATE PER 1,000 PERSONS			
	65-74 YEARS	75-84 YEARS	85+ YEARS	TOTAL OVER 65
1 OR MORE BASIC PHYSICAL ACTIVITIES	.5	114.0	348.4	154.3
1 OR MORE HOME MAN- AGEMENT ACTIVITIES	57.3	141.8	399.0	199.4
USUAL STAYS IN BED	11.3	25.6	51.2	29.4
PERSONAL CARE	5.3	10.8	28.5	14.9
HELP OF ANOTHER PERSON IN 1 OR MORE	69.9	16.3	436.5	174.2

SOURCE: National Center for Health Statistics, Americans  
Needing Help to Function at Home

APPENDIX B - NEED IN HOME MANAGEMENT AREAS

	RATE PER 1000 PERSONS		
	65-74 YEARS	75-84 YEARS	85+ YEARS
ALL ADULTS NEEDING HELP	57.3	141.8	399
SHOPPING ONLY	11.1	25.6	71.2
CHORES ONLY	9	12.1	26.6
MEALS ONLY	1.3	1	5.8
SHOPPING AND CHORES	7.6	23.6	43.4
OTHER 2 ACTIVITIES	3.1	10.5	21.4
MEALS, SHOPPING AND CHORES	10.4	18.3	60.9
OTHER 3 ACTIVITIES	3.2	8.4	31.1
NO HELP NEEDED	942.7	858.2	601
ANY MENTION OF SHOPPING	161.8	118.5	354.9
ANY MENTION OF CHORES	134.1	98.3	293.4
ANY MENTION OF MEALS	94.6	65.4	224.7

	PERSONS IN KANSAS			TOTAL
ALL ADULTS NEEDING HELP	10,320	16,080	16,279	42,679
SHOPPING ONLY	1,999	2,903	2,905	7,807
CHORES ONLY	1,621	1,372	1,085	4,078
MEALS ONLY	234	113	237	584
SHOPPING AND CHORES	1,369	2,676	1,771	5,816
OTHER 2 ACTIVITIES	558	1,191	873	2,622
MEALS, SHOPPING AND CHORES	1,873	2,075	2,485	6,433
OTHER 3 ACTIVITIES	576	953	1,269	2,798
NO HELP NEEDED	169,780	97,320	24,521	291,621
ANY MENTION OF SHOPPING	29,140	13,438	14,480	57,058
ANY MENTION OF CHORES	24,151	11,147	11,971	47,269
ANY MENTION OF MEALS	17,037	7,416	9,168	33,622

SOURCE: National Center for Health Statistics, Americans  
Needing Help to Function at Home

APPENDIX B - TYPE OF HEALTH TREATMENTS RECEIVED AT HOME

CARE RECEIVED	65-74 YEARS	75-84 YEARS	85+ YEARS	TOTAL OVER 65
	RATE PER THOUSAND			
1 OR MORE TREATMENTS	14.8	38.0	88.7	47.2
INJECTIONS	8.7	20.4	33.7	20.9
PHYSICAL THERAPY	2.2	6.1	14.2	7.5
BANDAGES	.9	5.1	9.7	5.2
OTHER	5.3	14.6	46.6	22.2

	NUMBER OF KANSANS			
1 OR MORE TREATMENTS	2,665	4,309	3,619	10,594
INJECTIONS	1,567	2,313	1,375	5,255
PHYSICAL THERAPY	396	692	579	1,667
BANDAGES	162	578	396	1,136
OTHER	955	1,656	1,901	4,511

SOURCE: National Center for Health Statistics, Americans Needing Help to Function at Home