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Dual Eligibles : how do they utilize
health and long-term care services?

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**Dual Eligibles: How Do They
Utilize Health and
Long-Term Care Services?**

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April 2002

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Abstract

In this study, we examined dual-eligible persons in Ohio who were eligible for full Medicaid benefits for two consecutive years in order to investigate their demographic, health status, health and long-term care needs, use patterns, and Medicare and Medicaid roles in paying for their care. We also explored the relationship of Medicare managed care and the Medicaid program as the co-payer for dual eligible persons with full Medicaid benefits as well as the primary payer for prescription medication, long-term care, and supplementary services.

This study used the population of Qualified Medicare Beneficiaries with full Medicaid benefits in two urban counties (Franklin and Hamilton) in Ohio who were continuously enrolled in the Medicaid program during the 1997 and 1998 calendar years. Individuals in this study were qualified for full Medicaid benefits, including all deductibles, coinsurance, Part B premiums, and Part A premiums if needed. In addition, the Medicaid program paid for their prescription drugs, medical transportation, mental health and long-term services, dental care, eyeglasses, and hearing aids, as well as some other ancillary services.

Only 5,172 individuals met the selection criteria. The Health Plan enrollment data revealed that only 335 individuals enrolled in a Medicare managed-care health plan for at least a month, the remaining 4,837 continued with the original Medicare program benefits during the study period. We employed several different measures of utilization such as average annual health and long-term care utilization, average annual health and long-term care expenditures by category of service and by payer, and average annual total expenditures by source of payment and by category of service.

We learned that dual eligible persons in the younger age categories are more likely to be men, white and live in the community. A higher proportion of the older age group was minority population and a lower proportion was male. Dual eligible persons in the higher age categories were more likely to be female, minority, and reside in an institution or use PASSPORT long-term care services.

The total average expenditures per person ranged from a low of \$25,000 per year to a high of \$35,000. The Medicaid portion of these expenditures was always higher, ranging from 76 to 88 percent of total expenditures. The proportion of total expenditures paid by Medicaid went down with each higher age category.

We learned that there was no evidence of cost shifting from Medicare managed care plans to the Medicaid program, further, the case reviews did not reveal any apparent changes in care patterns within individual reviews or across the entire group.

Acknowledgments

This research was supported by a grant from the Ohio Department of Job and Family Services (ODJFS), and the Ohio Board of Regents (OBR) through the Medicaid Technical Assistance and Policy Program (MEDTAPP). The conclusions and the views expressed do not necessarily reflect the views or opinions of ODJFS, OBR, or MEDTAPP.

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Was funded as part of a grant from the Ohio General Assembly, through the Ohio Board of Regents to the Ohio-Long-Term Care Research Project. Reprints are available from the Scripps Gerontology Center, Miami University, Oxford, OH 45056; (513) 529-2914; FAX (513) 529-1476; <http://www.scripps.muohio.edu>.

We are grateful to Heather Menne, Matt Nalson, and Mihaela Popa, three graduate students in the Master of Gerontological Studies program at Miami University for help at various stages of this project.

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CHAPTER 1

STUDY BACKGROUND, DESIGN, AND RESEARCH QUESTIONS

QUESTIONS

Background

Low income Medicare beneficiaries who are also aged, blind and /or disabled are eligible for Medicaid benefits and are known as dual-eligible persons. Although all dual-eligible persons are qualified for the same health and long-term care benefits, they are a diverse population in terms of demographics characteristics, physical and mental health status, and health and long-term care needs. In 1973, Medicare extended beyond its original coverage of acute care services for older people (age 65 and over) to include disabled persons under 65 years of age who have been receiving Social Security Disability Insurance (SSDI) or received Railroad Retirement Board disability benefits for at least 24 consecutive months and those who have end-stage renal disease. Medicare eligibility for the under-65 population is determined by the applicants' extent and duration of disability. Typically, dual-eligible individuals require a disproportionate share of health care services. In response to the higher health care needs of dual-eligible persons, Congress enacted provisions in 1988, 1989, 1990, 1992, and 1997 that cumulatively mandate state Medicaid programs to assist different categories of low-income Medicare beneficiaries with their Medicare Part A and/or Part B premiums. In certain categories of dual eligibility, these provisions also require assistance with deductibles, co-pays, and (at the state's option) Medicare managed care (Part C) premiums. A detailed description of dual-eligibility categories is

presented in the Appendix, for reference, as we define the criteria for population selection for this study.

The dual-eligible population nationally was estimated at about 6.8 million or 17% of the Medicare population and 19% of the Medicaid population in 1997. In the same year, health and long-term care utilization by this population was estimated to account for about 28% of the total Medicare budget and 35% of states' Medicaid budgets (Murray & Shatto, 1998).

Compared to the Medicare-only population, a higher proportion of dual-eligible persons are female (66% versus 55%), and a higher proportion belong to one of the racial or ethnic minorities. Sixty-two percent of all Hispanic and thirty-seven percent of all black Medicare beneficiaries are dual eligible. About one-half of dual-eligible persons have cognitive or mental impairment, compared to only nine percent of Medicare-only beneficiaries. The vast majority of dual-eligible persons are over age 85 and live in the community, although a higher proportion of dual-eligible persons live in a long-term care institution than the Medicare-only population (Korbin, Long, & Aragon, 1998). In general, the dual eligible population is characterized as mostly older, sicker, less educated, living alone, unmarried, and female. In addition, they are more likely to be nonwhite, cognitively impaired, and in need of long-term care (Lyons & Rowland, 1996; Murray & Shatto, 1998; Riley, 1998; Rowland et al., 1998).

In April 1999, there were about 148,000 dual-eligible persons in Ohio. More than two-thirds were female (69%) and about one-third resided in a nursing home. One-half of the PASSPORT recipients, Ohio's Home and Community-Based care Medicaid waiver, were also dual eligible. Forty-four percent of the 148,000 were under 65 years of age (Ranbom, 1999). Examining the continuously enrolled dual-eligible persons, a population with different

characteristics than presented above emerged in Ohio. Investigating individuals who were eligible for full Medicaid benefits and were continuously dual eligible over an 18-month period (January 1997-June 1998), we found that a much smaller population—31,300—were qualified for full Medicaid benefits including prescription medicine, medical transportation, and long-term care services.¹ A much smaller proportion (32%) of the continuously enrolled dual-eligible population was under 65 years old; a larger proportion was female (72.3%); and a much higher (46.3%) proportion was residing in a long-term care institution (Ohio's Medicaid recipient file, 1999).

A certain group of dual-eligible persons who meet income and asset eligibility criteria as described in the Appendix are qualified for full Medicaid benefits. That means these individuals are qualified to receive all services provided under original Medicare, plus prescription medication, long-term care services, medical transportation, eye, ear, and dental care; plus some other ancillary services. The Medicare and Medicaid programs jointly, when services are covered under Medicare benefits, and individually, in case of Medicaid-only benefits, will cover the total cost of health and long-term care.

Since 1985 some Medicare beneficiaries have been able to choose between the original Medicare services or join a Medicare managed-care health plan. The proportion of Medicare enrollees who have chosen to enroll in a Medicare managed-care health plan increased gradually and reached 17.9 percent nationally and 14.0 percent in Ohio in 1999. The same options were available to dual-eligible persons if one or more Medicare managed-care health plans operated in their county of residence.

¹The difference reflects the short periods of Medicaid eligibility for some beneficiaries due to the high cost of temporary medical care.

This study was proposed and funded in spring of 1999, when the rate of enrollment of Medicare beneficiaries in Medicare managed-care plans had slowed down but still was increasing. Since then, major changes such as plan withdrawal, pullbacks, service reduction, and increased premiums and co-pays in the Medicare managed-care industry have taken place. The capitation rates (the rates that the Center for Medicare and Medicaid pays to the managed Medicare health plans) are now risk adjusted for prior hospitalization that may reverse the lower participation rate by the health plans in Medicare managed care.

There has always been some ambiguity about the services covered by the Medicaid and Medicare programs for those dually eligible and some concern that providers may use that ambiguity to their financial advantage. The introduction of Medicare managed care has made understanding the situation even more difficult. Managed-care organizations usually do not notify the Medicaid program when they enroll dual-eligible persons in their health plans. It is not clear who actually absorbs the cost of extra benefits that these organizations offer. The programs' ambiguity and lack of information about dual-eligible persons enrolled in managed Medicare raises several questions: What are the expenditure patterns of dual-eligible persons? How are costs distributed between Medicare managed care and the Medicaid program? How are the expenditures distributed between the Medicare and Medicaid programs? Does the share of total health and long-term care expenditures paid by each program change as the disabled population ages? Are all dual-eligible persons high users of health and long-term care services?

In this study, we examine dual-eligible persons in Ohio who were eligible for full Medicaid benefits for two consecutive years in order to investigate their demographic, health

status, health and long-term care needs, use patterns, and Medicare and Medicaid roles in paying for their care. Specifically, we will attempt to answer the following questions:

- What are the health and long-term care utilization patterns of dual-eligible persons in Ohio?
- Are there differences between the health and long-term care utilization patterns of dual-eligible persons by expenditure level?
- Are there differences between the health and long-term care utilization patterns of dual-eligible persons by age?
- Is there potential for cost shifting? Does the record review show that certain services paid by the Medicare fee-for-service program were charged to Medicaid when a dual-eligible person was enrolled in a Medicare managed-care health plan?
- How do the care patterns of dual-eligible persons enrolled in a Medicare managed-care plan differ from those remaining in original Medicare?

Data

To obtain complete utilization data and to avoid recall bias, we elected to explore health and long-term care use patterns without directly contacting the study participants and by relying completely on the study population's Medicare and Medicaid records. Further, to account for all their health- and disability-related expenditures, we limited our analysis to those dual-eligible persons who have met the eligibility criteria for Medicaid and are deemed eligible for full Medicaid benefits. These dual-eligible persons are known as Qualified Medicare Beneficiaries with full Medicaid benefits or simply QMB Plus. As mentioned earlier, the definition of other dual-eligibility categories and the extent of their benefits are presented in the Appendix.

This study used the population of Qualified Medicare Beneficiaries with full Medicaid benefits in two urban counties (Franklin and Hamilton) in Ohio who were continuously enrolled in the Medicaid program during the 1997 and 1998 calendar years. Individuals in this study were qualified for full Medicaid benefits, including all deductibles, coinsurance, Part B premiums, and Part A premiums if needed. In addition, the Medicaid program paid for their prescription drugs, medical transportation, mental health and long-term services, dental care, eyeglasses, and hearing aids, as well as some other ancillary services. Having a continuously enrolled population allowed us to exclude those who were dual-eligible for a short period of time and those who died. This study design permitted us to limit the effect of these two sources of individual variation in utilization and expenditures.

We selected two urban counties in Ohio for four reasons: (1) a considerable proportion (16.9%) of Ohio's population lives in these two areas; (2) the percentages of the older population in poverty in these two counties are identical to the overall state poverty rate for older people (Chen, Kunkel, & Mehdizadeh, 1998); (3) Medicare managed-care plans have been operating in these counties since the mid-1980s; and (4) in 1998, many of the Medicare managed-care beneficiaries who had enrolled in a managed-health plan were enrolled in one of the two Medicare managed-care plans that had agreed to participate in this study.

We relied on the Ohio Department of Job and Family Services (ODJFS) Bureau of Health Plans to identify the dual-eligible population in Franklin and Hamilton Counties. This was accomplished by using the Medicaid *Recipient Master File* and identifying those who were continuously eligible for Medicaid (and Medicare) during 1997 and 1998. There were 5,559 individuals with full Medicaid benefits for the entire two years, from which 5,251 were also

identified as Medicare eligible by the Center for Medicare and Medicaid Services (CMS). Only 5,172 members of this group survived the entire study period (Figure 1). We also asked CMS for Medicare Health Plan enrollment data for the dual-eligible persons in this study for both the 1997 and 1998 calendar years. This helped us identify individuals who had enrolled in a Medicare managed-care plan and determine the duration of their membership. Most of the study members, 4,837, remained in original Medicare; only 335 members enrolled in a Medicare managed-care health plan.

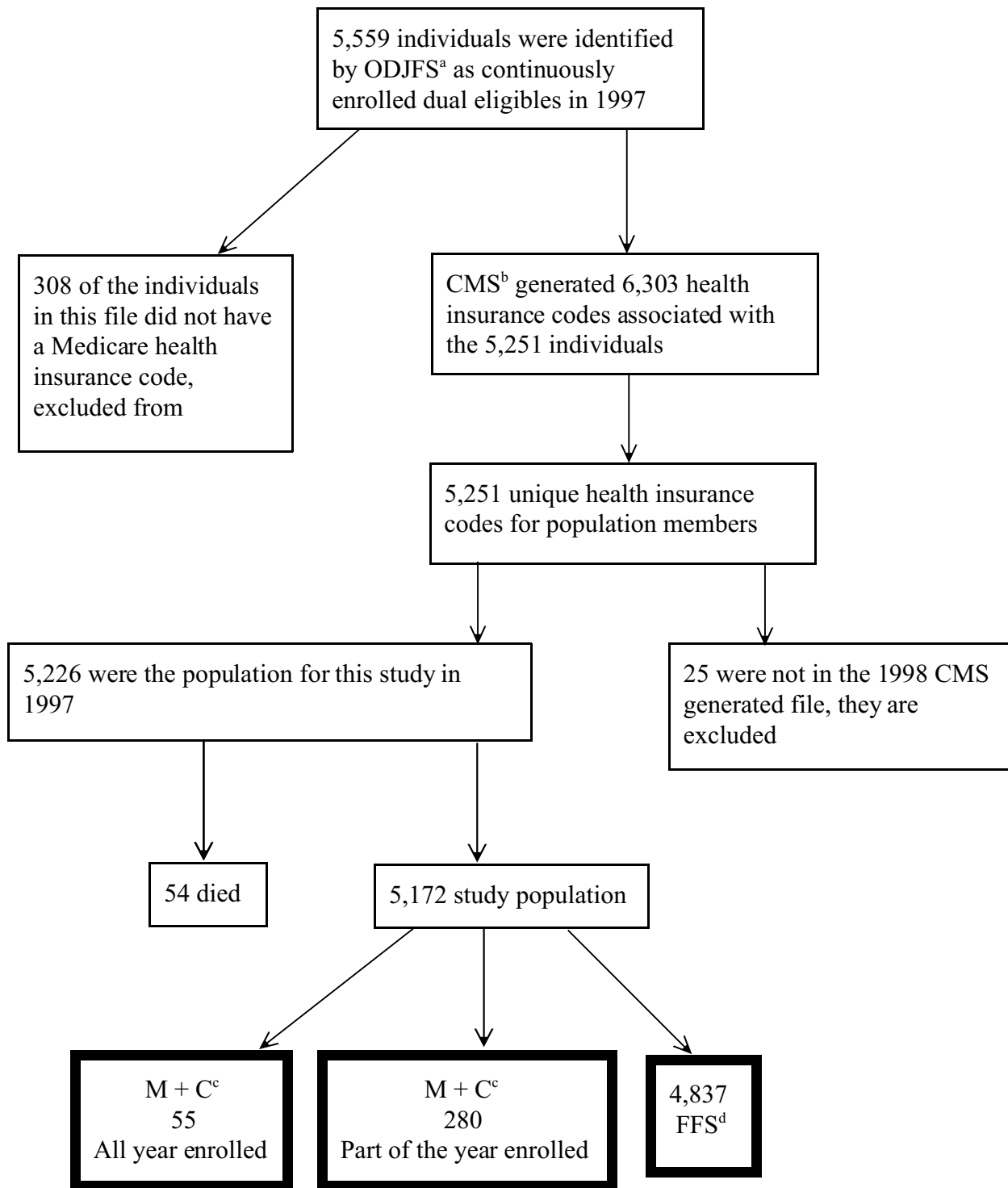
Measures of Utilization

We employed four different measures of utilization in this study: (1) average annual health and long-term care utilization, including number of hospital and nursing home admissions and number of physician and outpatient visits per 100 persons-year; (2) percentage of study members who utilized each category of service; (3) average annual health and long-term care expenditures on hospital inpatient and outpatient care, nursing home care, home health care, physician services, and home and community-based care, durable medical equipment, hospice care, medication, Medicaid home care, and other Medicaid services such as medical transportation, by payer source; and (4) average annual total expenditures by source of payment and by category of service.

Health Status Data

Information on disease diagnosis came from Medicare physician claims, the HCFA 1500 forms submitted by physicians to Medicare intermediaries after each visit. The form allows for a primary diagnosis and up to three other diagnoses. Although physician offices did not complete all the diagnosis fields, the primary diagnosis field (first field) was almost always complete.

Figure 1
Population Selection, Identification, and Exclusion



^a Ohio Department of Job and Family Services

^b Centers for Medicare & Medicaid Services

^c Medicare Plus Choice

^d Fee-for-service Medicare

Because the dual-eligible persons in the study had used physician services more frequently than other services, and since even those with very little use of hospital or nursing home services saw a physician during the study period, we chose physician claims to determine the health condition of the study participants. A small number of study members had no physician visits; for these individuals no diagnosis or condition is identified.

Method

This study explores the use patterns of dual-eligible persons in Ohio. The study also compares the health care utilization patterns of dual-eligible persons who remained in fee-for-service Medicare with those who enrolled in a managed Medicare health plan.² The number of dual-eligible persons enrolled in a managed Medicare health plan was smaller than anticipated; therefore, some of the analyses are based on reviewing utilization patterns case by case for the managed Medicare health plan enrollees instead of examining average annual utilization and expenditures. The analysis includes the mean utilization rates in a single year, the year-to-year consistency in utilization and average annual expenditures, and the proportion of total care costs paid by Medicare and Medicaid.

The National and the State Dual-Eligible Population

Nationally about a third of the dual-eligible population is under 65. Table 1 shows that Ohio's dual-eligible persons have about the same age distribution as the national population.

² The comparisons are somewhat limited due to small population sizes. One of the health-plan administrators who had agreed to share utilization data for this study later withdrew stating that data extraction would create an undue burden on the staff at a time when they were trying to comply with new regulations.

Table 1
Demographic Characteristics of the Continuously Enrolled
Dual-Eligibles in State of Ohio and the Two Selected Counties

Age	State^a	Population^b
	(Percent)	(Percent)
0 - 44	12.9	11.5
45 - 54	9.8	8.6
55 - 64	9.1	9.6
65+	68.2	70.4
Sex		
Female	72.3	73.0
Race		
White	77.4	59.3
Black	20.3	38.5
Other	2.3	2.2
Living Arrangement		
Adult Family Home	0.4	0.0
Non-Institution	50.8	61.9
Nursing Home	46.3	38.0
Institution, Mental Health	2.6	0.1
Total	31,317	5,172

^a The dually eligible clients that had a Medicaid claim during the period of January 1, 1997 to June 30, 1998.

^b The dually eligible clients that had a Medicaid claim during January 1, 1997 and December 31, 1998 and their county of residence was either Hamilton or Franklin.

Source: Medicaid recipient file, Ohio Department of Job and Family Services.

More than 70 percent of Ohio's dual-eligible population is female. As it is nationally, a higher proportion of the minority population is eligible for both Medicare and Medicaid.³ A higher proportion, almost half, of the dual-eligible persons in Ohio were institutionalized either in a nursing home or a mental health institution. Our study population differs from Ohio's dual-eligible population, but represents the counties from which they were drawn. Our population is slightly older than the state dual-eligible population, has about the same proportion of females, and has a much higher number of minorities reflecting the population of the two counties. A considerably lower proportion of our population, compared to the state dual-eligible persons, is institutionalized. Although there are some demographic differences between Franklin and Hamilton counties' population and their dual-eligible population, we analyzed the data for both counties together.

As Table 2 shows, the two urban counties (Franklin and Hamilton) from which the population was drawn have median annual incomes of \$39,498 and \$38,763 respectively. About 11 percent were at or below poverty, comparable to the overall state rate. The percentage of the population which is black or other minorities in the two counties are 24.5 and 27.1 respectively (compared to the state overall rate of 14.0 percent). The two counties in the study have median ages of 32.5 (Franklin) and 35.5 (Hamilton), compared to 36.2 for the state (U.S. Census Bureau, 2001).

We do not have a profile of dual-eligible persons who enrolled in a Medicare managed-care plan in Ohio. However, the characteristics of those in our population, Table 3, who enrolled in a Medicare managed-care plan, are more similar to the overall Medicare managed-care

³ In the year 2000 about 14 percent of Ohio's population were non-white; only 2 percent were members of other than black ethnicity groups.

Table 2
Demographic Characteristics of the Two Counties and
the Associated Study Populations

	Franklin		Hamilton	
	County	Study Population	County	Study Population
No. of Persons^a	1,068,978	2,283	845,303	2,889
No. of Person 65+^a	104,306	1,514	113,898	2,127
Median Age^a	32.5	67	35.5	70
Median Income	\$39,498	—	\$38,763	—
Percent at or below poverty^b	11.1	NA	11.4	NA
Gender (% female)^a				
Total	48.6	70.1	52.3	75.2
65+	60.7	80.5	61.7	83.0
Race (%)				
White	75.5	67.8	72.9	52.7
Black	17.9	29.6	23.4	45.5
Other	6.6	2.6	3.7	1.8
No. of Persons Medicare eligible^c	121,170	2,283	134,956	2,889

^a U.S. Census Bureau. *Profile of General Demographic Characteristics: 2000*. Retrieved July 2001.
<http://www.adod.state.oh.us.osr>.

^b U.S. Census Bureau. *Estimated Number and Percent People of all Ages in Poverty by County: Ohio 1998*.
Retrieved 3/2002. http://www.census.gov/hhes/www/saife/stcty/a98_39.htm

^c Center for Medicare and Medicaid Services. Retrieved 10/15/2001. *Medicare Aged and Disabled Enrollees by Type of Coverage*. <http://www.hcfa.gov>

Table 3
Demographic Characteristics of the Continuously Enrolled
Dual-Eligible Population Members in Fee for Service and
in Medicare Managed Care

Age	Fee for Service	Medicare Managed Care
	(Percent)	(Percent)
0 - 44	11.7	7.5
45 - 54	8.7	6.0
55 - 64	9.7	8.7
65+	69.9	77.8
Sex		
Female	72.4	80.6
Race		
White	59.8	52.5
Black	37.8	47.5
Other	2.4	0.0
Living Arrangement		
Non-Institution	60.1	89.0
Nursing Home	39.9	11.0
Total	4,837	335

Source: Medicaid recipient file, Ohio Department of Job and Family Services.

enrollees in some respects than to the rest of the study population (Rotisser, 2001). About three-fourths of the managed-care enrollees are 65 or older, almost 81 percent are female, and almost half are black. The overwhelming majority (89%) is living in the community.

Organization of the Report

In the remaining chapters of this report we answer the research questions raised here. In Chapter 2 we will use the merged Medicare Medicaid claims data to answer the questions “What are the health and long-term care utilization patterns of the dual-eligible persons in Ohio?” and “Are there differences between the health and long-term care utilization patterns of dual-eligible persons by age?”

Chapter 3 examines the following question “Is there potential for cost shifting in a Medicare managed-care health plan?” and investigates any obvious care-pattern differences between those who enrolled in a Medicare managed-care health plan and those who remained in the original Medicare.

Chapter 4 summarizes the information from preceding chapters that is relevant for policy and offers policy recommendations.

CHAPTER 2

PROFILE OF OHIO'S DUAL ELIGIBLE PERSONS IN MEDICARE

FEE-FOR-SERVICE

A dual eligible person is able to utilize any needed health and long-term care services and Medicare or Medicaid, based on the utilized service, will cover the cost of that service. To qualify for this status a person must meet eligibility criteria for both programs. In addition to those who have reached age 65 and have made contributions to the Medicare trust fund for a sufficient length of time, individuals under age 65 who meet Medicare disability criteria are also qualified for Medicare services. A relatively small subset of all disabled persons qualifies for Medicare disability benefits. Only those who have been determined as disabled and qualified for Social Security Disability Insurance, or Railroad Retirement Board Disability benefits for 24 consecutive months can receive Medicare reimbursed services. The criteria for being deemed disabled is rather restrictive and is based on inability to engage in gainful activity because of physical or mental impairments. The number of individuals classified as disabled has been increasing steadily, reaching 5.2 million persons in 1999. These persons comprised 13 percent of the total Medicare population (Center for Medicare and Medicaid Services, 2001). Medicaid eligibility on the other hand is asset and income based. All individuals meeting social security disability criteria and are considered poor, would be paid Supplementary Security Income and qualify for full Medicaid benefits. The disabled Medicare beneficiaries and the low-income Medicare beneficiaries who meet Medicaid eligibility criteria are referred to as *dual eligible persons*.

It is estimated that about four to five percent of dual eligible persons in the past had enrolled in Medicare managed care (Rossiter, 2001; Gold, Nelson, Brown, Ciemnecki, Aizer, & Docteur, 1997). States that offer Medicaid managed care to their Medicaid eligible population typically exclude dual eligible persons from their health plan (Mehdizadeh, 2000). Therefore, the vast majority of dual eligible persons utilize Medicare and Medicaid services on a fee-for-service basis. In this chapter, we analyze health and long-term utilization, and expenditure patterns of the dual eligible persons in our Medicare fee-for-service population by expenditure levels and by age groups.

Dual eligible persons are a diverse population, not only based on age, race and ethnicity, physical and mental health status, and functional ability, but also based on health and long-term care services that they utilize. Although dual eligible persons as a group account for a higher proportion of Medicare and Medicaid budgets than their share of either the Medicare or Medicaid population in general, not all persons classified as dual eligible require intense use of health and long-term care services. In fact, the individual's total annual expenditures (Medicare + Medicaid) ranged from \$0 to \$205,000, with median expenditures of \$18,248 and average expenditures of \$26,520 in 1997. The wide range of expenditures and the skewed distribution suggest that within the dual eligible population needs for care are different for different sub-populations. Thus we divide the fee-for-service population into three sub-groups: low, medium and high based on their total annual expenditures.

About a third of the dual eligible persons in general, and in our population, are under 65, and have reached dual eligibility status by meeting and maintaining Medicare disability criteria. The literature suggests (Ware, Bayliss, Rogers, Kosinski, & Tarlov, 1996) that the younger

disabled population has different physical and mental health status and will use a different mix of health and long-term care services, therefore we will also examine the use patterns and total expenditures by two age groups.

Use Patterns and Characteristics by Expenditures

The total fee-for-service population was divided into thirds on the basis of their 1997 total annual expenditures: those with less than total annual expenditures of \$4,000 (hereafter low expenditures sub-population) those with annual expenditures between \$4,001 and less than \$38,000, (hereafter medium expenditures sub-population) and those with annual expenditures in excess of \$38,000, (hence forth high expenditures sub-population). More than 83 percent of this population maintained their group membership or shifted to a lower expenditure category in 1998. Within each of these sub-populations total annual expenditures was still widely distributed. For example, the average total annual expenditures for the low expenditures group was \$1,226 and the median expenditure was \$871. Ten percent of the population members in the low expenditure sub-population had zero annual expenditures. The total annual expenditures in the medium expenditure sub-population were equally broadly distributed, with average annual expenditures of \$20,050 and median expenditures of \$18,185. The high expenditure category comprised of individuals with annual expenditures in excess of \$38,000. The annual expenditures of ninety percent of population members in this group were under \$88,000, while ten percent had expenditures reaching as high as \$205,000.

We anticipated that the difference in expenditure levels was indicative of the population members' health and disability status. We found demographic differences as well. We did not have direct access to population members or their medical charts to identify their health status,

diseases and conditions. However, we had their entire health services utilization claims data. Based on the most often used service, physician services, we extracted the primary diagnosis for each visit and compiled the frequency of physician visits for each category of diagnosis. Data presented here and in Figure 2 reflect that analysis. The most common primary diagnosis among all three expenditure sub-populations was circulatory and respiratory diseases. Mental disorders were also high in the list of conditions among high and medium expenditure sub-populations.

The low expenditure sub-population on average were younger, more likely to belong to a minority race or ethnicity, and almost all lived in the community (Table 4). The health care utilization of each group reflects their health and disability status and the severity of their conditions. Table 5 presents the proportion of the population members in each expenditure sub-population that used health and long-term care services. In comparison to the other two expenditure groups, the low expenditure sub-population's use of health and long-term care services was limited in 1997. About two-thirds had at least one outpatient treatment, and over 80 percent had at least one physician visit and slightly more than half had at least one prescription filled. The use of health care services by members of this sub-population increased in the second year of the study but still mainly concentrated in the same three categories of services. Disease progression and the presence of impairments in at least some activities of daily living in the medium and high expenditure sub-populations was evident from their use of long-term care services, and inpatient and outpatient hospital services.

The frequency and extent of use of the health and long-term care services by expenditure level are shown on Table 6. The low expenditure sub-population used mostly physician and outpatient services and very little of any other service. The medium expenditure group utilized all services and used the services more frequently. Members of the medium expenditure sub-

Figure 2

Percentage of Dual Eligible Persons With Health Care Needs In Each Major Group of Chronic or Disabling Diagnosis by Total Health and Long-Term Care Expenditures Level

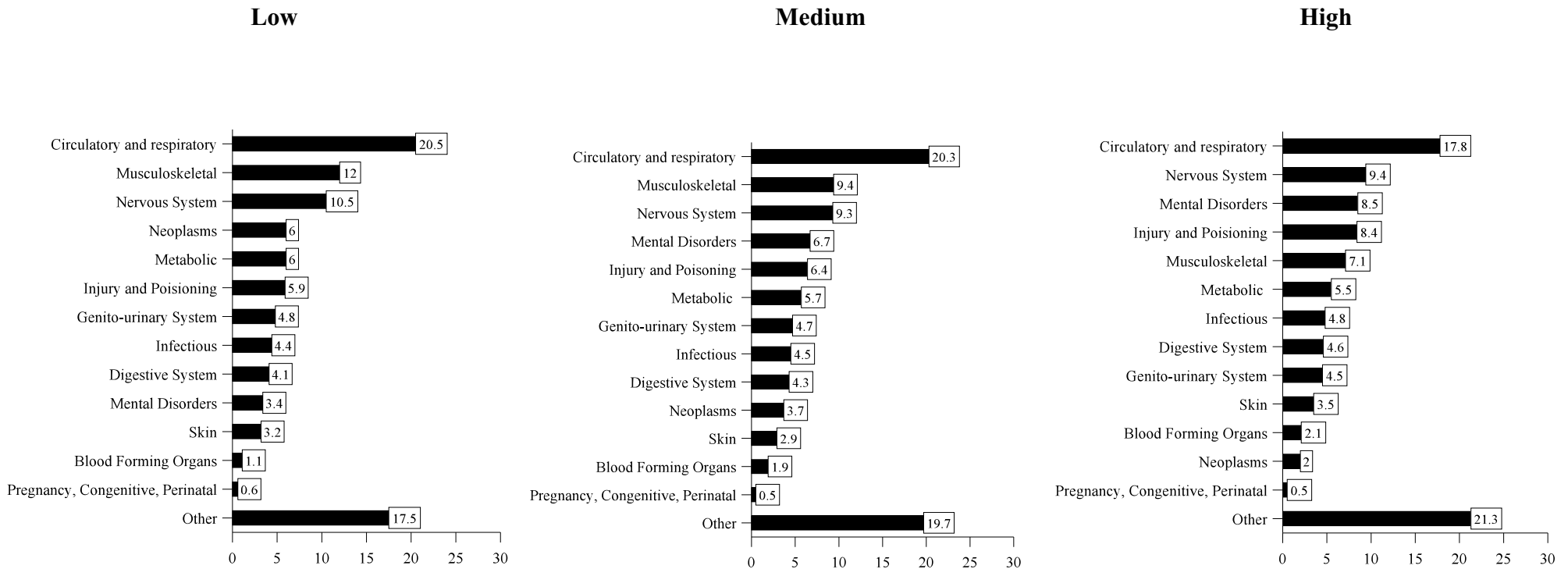


Table 4
Demographic Characteristics of Continuously Enrolled Dual-Eligible Persons
in the Fee for Service Population by Expenditure Level

	Low	Medium	High
	(Percent)	(Percent)	(Percent)
Age			
0 - 44	14.9	8.4	11.2
45 - 54	8.8	7.0	10.4
55 - 64	10.1	9.2	9.6
65+	66.2	75.4	68.8
Sex			
Female	71.5	77.5	69.1
Male	28.5	22.5	30.9
Race			
White	51.2	58.6	69.7
Black	43.7	40.0	29.7
Others	5.1	1.4	0.6
Living Arrangements			
Non-Institution	99.8	67.6	11.6
Nursing Home	0.1	32.4	88.4
County			
Franklin	42.9	42.2	48.8
Hamilton	57.1	57.8	51.2
Population	1,589	1,591	1,592

Source: Medicaid recipient file, Ohio Department of Job and Family Services.

Table 5
Health and Long-Term Care Utilization Patterns by Total Annual Expenditures Level

	Low		Medium		High	
	1997	1998	1997	1998	1997	1998
	(Percent)	(Percent)	(Percent)	(Percent)	(Percent)	(Percent)
Hospitalized	0.9	12.7	31.6	28.2	36.4	28.5
Had outpatient treatment	63.3	65.3	84.4	85.0	88.3	87.8
Admitted to a nursing home^a	0.1	1.9	4.7	6.7	11.8	8.5
Visited a physician	83.1	83.6	99.1	98.2	99.9	99.8
Used home health services	0.9	4.6	15.7	12.9	7.0	4.0
Used home care (Medicaid Waiver) services	0.0	1.1	2.5	2.8	4.2	4.1
Used PASSPORT services^b	0.2	1.5	3.4	14.1	3.8	3.0
Had a prescription filled	52.2	54.1	89.8	90.1	99.1	99.2

^a New admission or readmission to a nursing home after hospitalization.

^b PASSPORT is Ohio's Medicaid waiver home and community-based care services for 60 and older population.

Source: Medicare and Medicaid claims data: 1997-1998

Table 6
Average Annual Health Care Services Utilization Per 100 Persons-Year by Total Annual Expenditures Level

	Low		Medium		High	
	1997	1998	1997	1998	1997	1998
	(Number)	(Number)	(Number)	(Number)	(Number)	(Number)
Hospital days	2.8	99.6	206.0	330.0	480.0	330.0
Nursing home days^a	1.0	57.0	930.0	226.0	543.0	368.0
Physician visits	799.0	1,136.0	2,505.0	2,698.0	3,679.0	3,404.0
Home health visits	2.3	9.8	75.0	52.0	42.2	21.5
Outpatient visits	249.0	322.0	574.0	605.0	772.0	836.0

^a Medicare nursing home days only. It is not possible to estimate number of Medicaid nursing home days from Medicaid institutional claims in Ohio of the way the reimbursement system is set up.

Note: The data averages the utilization of infrequent users and high users, except for physician and outpatient services which are used by almost everyone.

Source: Medicare claims data: 1997-1998

population had at least 25 physician and six outpatient visits per person per year. The use of nursing home, hospital, and home health services are noticeably higher in this group than the low expenditure sub-population. The high expenditure sub-population had used more of all health care services. Tables 5 and 6 show that not only more of the high expenditure sub-population members used health and long-term care services, but those who did use the services did so more often or for a longer period of time.

Next we examined average annual health and long-term care expenditures by level of expenditures and category of service. Tables 7, 8, and 9 present that analysis. As Table 7 shows in 1997, medication expenditures followed by physician care were the most expensive health care expenditure category for the low expenditure sub-population members. There were almost no long-term care expenditures. The medium expenditure sub-population showed signs of disease progression and onset of impairments. This group used both nursing home care and PASSPORT services (Table 8). The persistent use of long nursing home stays by the high expenditure sub-population attest to the disabling conditions of the high expenditure sub-population members. Fewer members of the high expenditure sub-population used PASSPORT services, perhaps reflecting the extent of their disability (Table 9).

Average annual overall expenditures ranged from \$1,227 for the low expenditure sub-population to \$58,000 in the high expenditure sub-population. Medicaid paid a higher proportion of expenditures as the expenditure levels increased as shown in Figures 3 and 4. The distribution of expenditures regardless of payer showed that in the low expenditure sub-population medication, physician and outpatient services accounted for more than 85 percent of all expenditures. About half of all expenditure dollars in the medium expenditure sub-population

Table 7
Average Annual Health and Long-Term Care Expenditures
Low Total Annual Expenditures Range: \$0 - \$4006

Outcome Variables (Average Annual Expenditures)	1997			1998		
	Medicare	Medicaid	Total	Medicare	Medicaid	Total
Inpatient Hospital	\$14.2	\$5.3	\$19.5	\$1,363.7	\$84.7	\$1,448.4
Outpatient Hospital Care	165.3	94.2	259.5	303.6	148.2	451.8
Nursing Home Care	1.0	0.0	1.0	135.4	233.0	368.4
Home Health Care	7.1	7.2	14.3	60.6	7.4	68.0
Physician Care	259.0	71.2	330.2	559.0	96.4	655.4
Medical Equipment	20.1	25.7	45.8	42.8	30.4	73.2
Hospice	0.0	0.0	0.0	22.2	---	22.2
Medicaid Waiver Services (PASSPORT)	---	1.8	1.8	---	39.3	39.3
Medicaid Waiver Services (Home Care)	---	0.0	0.0	---	68.0	68.0
Prescription Medication	---	458.3	458.3	---	591.6	591.6
Other^a	---	96.9	96.9	---	357.7	357.7
Overall Health and Long-term Care	466.7	760.6	1,227.3	2,487.3	1,656.7	4,144.0

^a Includes mental health services.

Source: Medicare beneficiary inpatient claims filed 1997-1998.
Medicaid claims filed 1996-1999.

Table 8
Average Annual Health and Long-Term Care Expenditures
Medium Total Annual Expenditures Range: \$4,006 - \$37,945

Outcome Variables (Average Annual Expenditures)	1997			1998		
	Medicare	Medicaid	Total	Medicare	Medicaid	Total
Inpatient Hospital	2,362.0	247.3	2,609.3	3,105.3	217.2	3,322.5
Outpatient Hospital Care	729.3	316.2	1,045.5	741.8	301.0	1,042.8
Nursing Home Care	202.2	9,859.4	10,061.6	546.2	11,889.8	12,436.0
Home Health Care	536.6	115.6	652.2	376.1	61.3	437.4
Physician Care	1,284.5	171.1	1,455.6	1,409.6	179.4	1,589.0
Medical Equipment	319.4	180.4	499.8	340.1	190.2	530.3
Hospice	4.1	4.6	8.7	65.4	47.9	113.3
Medicaid Waiver Services (PASSPORT)	---	908.0	908.0	---	847.2	847.2
Medicaid Waiver Services (Home Care)	---	245.6	245.6	---	197.9	197.9
Prescription Medication	---	1,824.5	1,824.5	---	2,126.9	2,126.9
Other^a	---	740.1	740.1	---	1,101.6	1,101.6
Overall Health and Long-term Care	5,438.1	14,612.8	20,050.9	6,584.5	17,160.4	23,744.9

^a Includes mental health services.

Source: Medicare beneficiary inpatient claims file 1997-1998.

Medicaid claims file 1996-1999.

Table 9
Average Annual Health and Long-Term Care Expenditures
High Total Annual Expenditures Range: \$37,950 - \$205,460

Outcome Variables (Average Annual Expenditures)	1997			1998		
	Medicare	Medicaid	Total	Medicare	Medicaid	Total
Inpatient Hospital	\$4,917.4	\$358.7	\$5,276.1	\$3,496.2	\$228.9	\$3,725.1
Outpatient Hospital Care	1,577.2	398.0	1,975.2	1,394.8	366.8	1,761.6
Nursing Home Care	1,126.6	39,214.0	40,340.6	719.5	41,583.1	42,302.6
Home Health Care	606.3	373.9	980.2	286.9	195.4	482.3
Physician Care	2,029.9	217.2	2,247.1	1,850.7	190.1	2,040.8
Medical Equipment	716.4	226.6	943.0	712.4	230.1	942.5
Hospice	58.9	80.6	139.5	100.1	125.7	225.8
Medicaid Waiver Services (PASSPORT)	---	201.2	201.2	---	163.9	163.9
Medicaid Waiver Services (Home Care)	---	1,269.9	1,269.9	---	711.2	711.2
Prescription Medication	---	2,497.0	2,497.0	---	2,778.4	2,778.4
Other^a	---	2,361.3	2,361.3	---	3,795.7	3,795.7
Overall Health and Long-term Care	11,032.7	47,199.4	58,232.1	8,560.6	50,369.3	58,929.9

^a Includes mental health services.

Source: Medicare beneficiary inpatient claims filed 1997-1998.

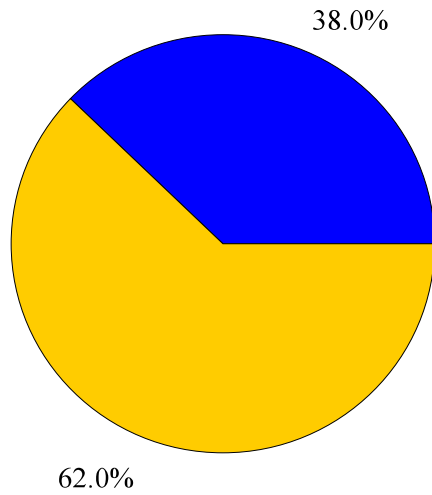
Medicaid claims filed 1996-1999.

Figure 3

Health and Long-Term Care Annual Expenditures by Payer

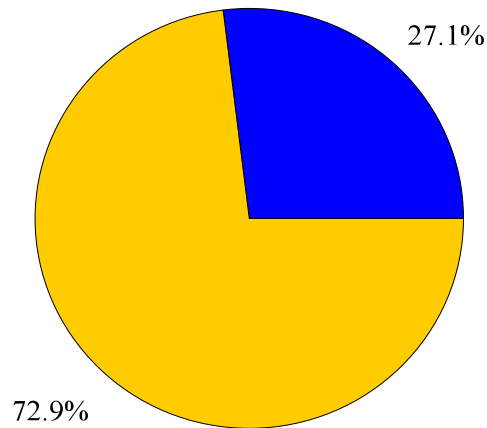
1997

Low Total Annual Expenditures
(\$0.00 - \$4,000)



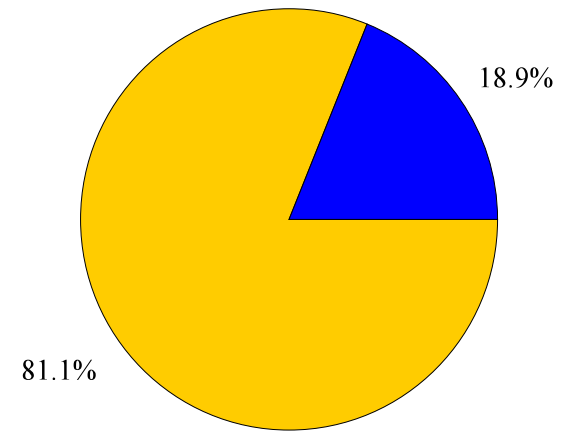
■ Medicare ■ Medicaid

Medium Total Annual Expenditures
(\$4,006 - \$37,945)



■ Medicare ■ Medicaid

High Total Annual Expenditures
(\$37,950 - \$205,466)



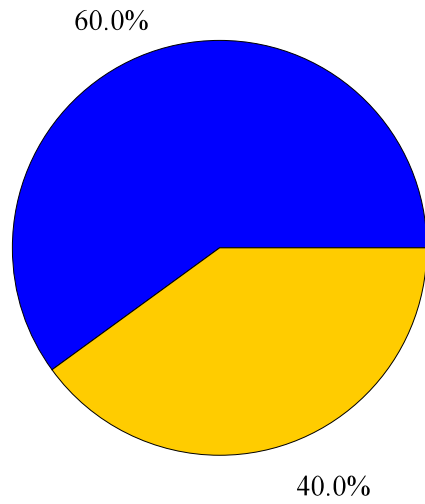
■ Medicare ■ Medicaid

Figure 4

Health and Long-Term Care Annual Expenditures by Payer

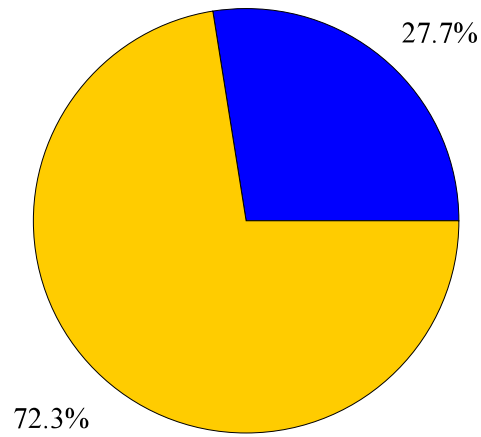
1998

Low Total Annual Expenditures
(\$0.00 - \$4,500)



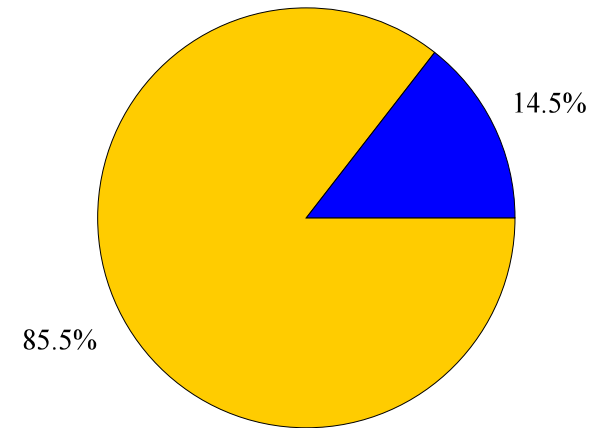
■ Medicare ■ Medicaid

Medium Total Annual Expenditures
(\$4,500 - \$30,000)



■ Medicare ■ Medicaid

High Total Annual Expenditures
(\$30,000 - \$205,466)



■ Medicare ■ Medicaid

Figure 5

Health and Long-Term Care Expenditures by Type of Services

Total Annual Expenditures

1997

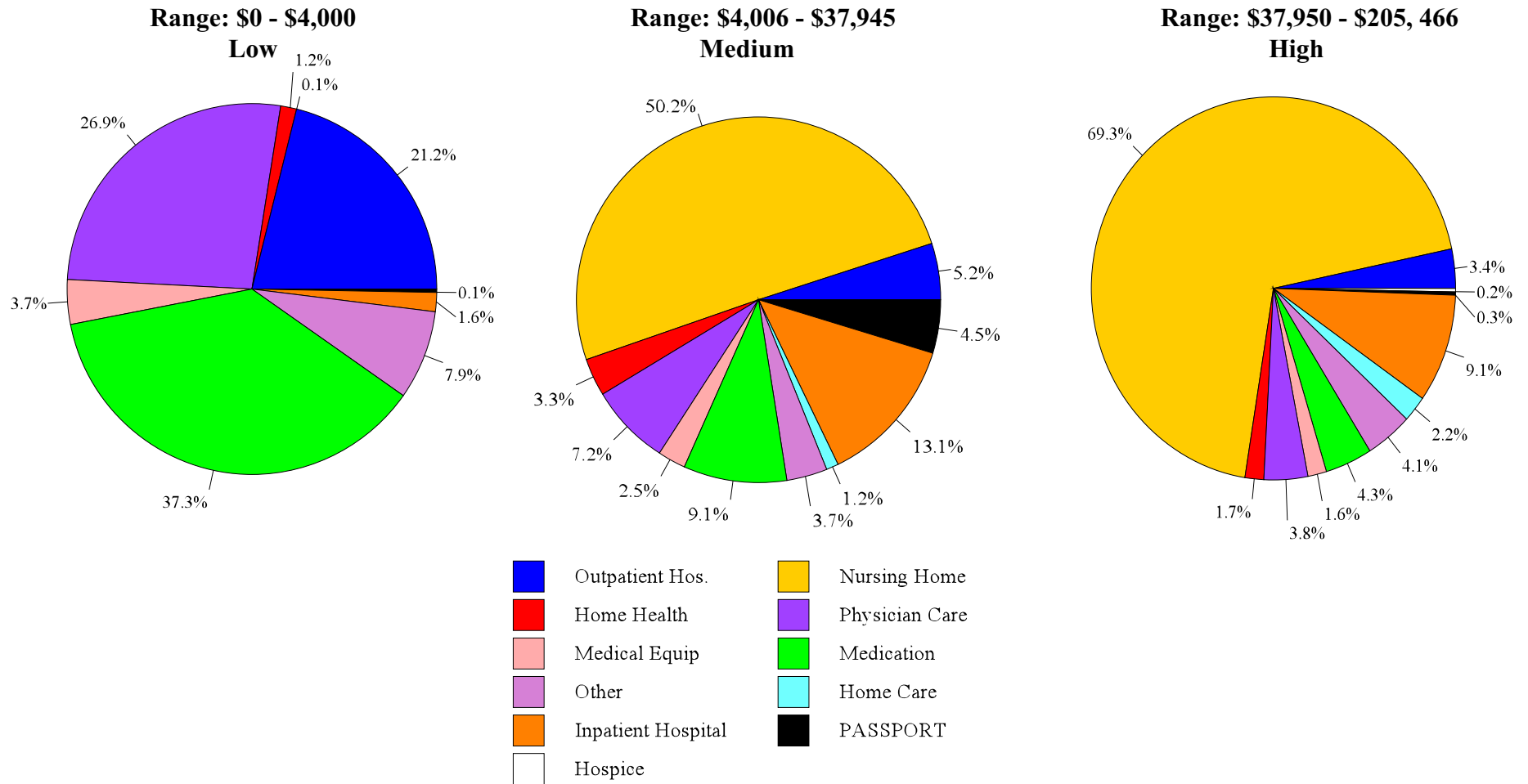
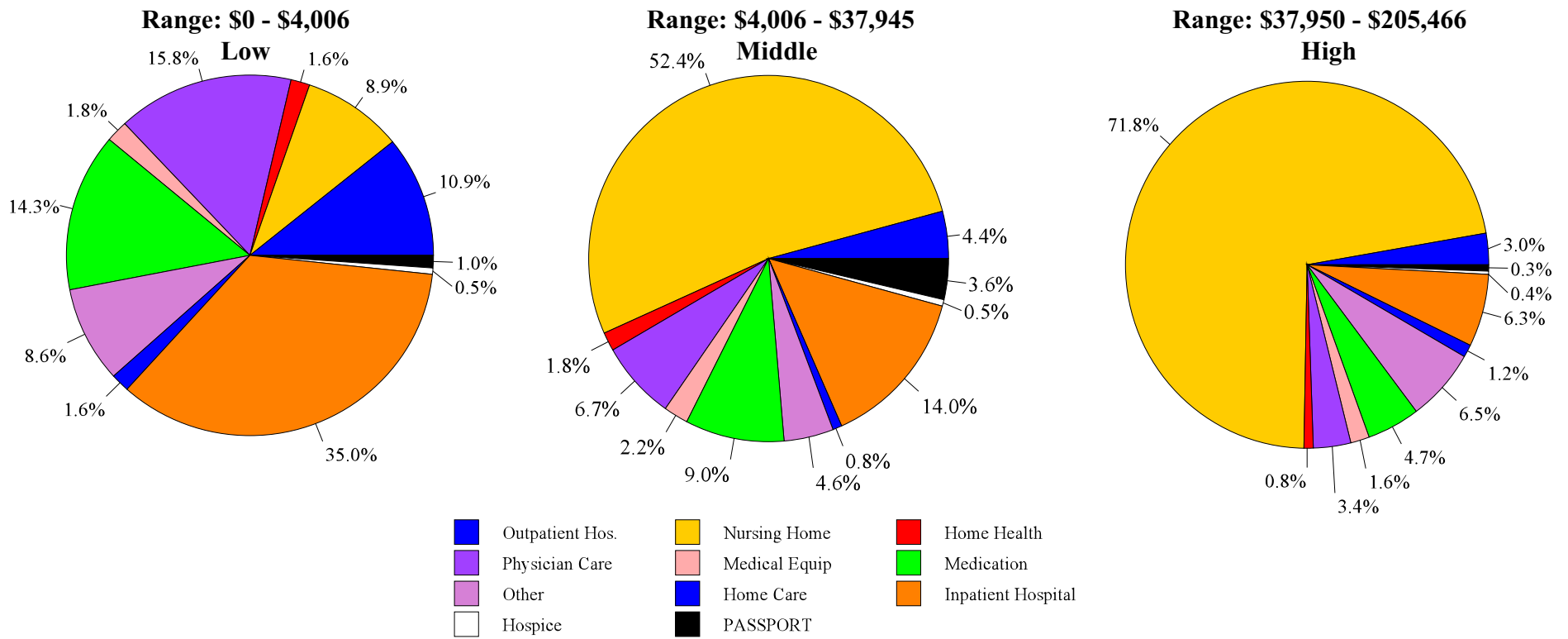


Figure 6

Health and Long-Term Care Expenditures by Type of Services

Total Annual Expenditures

1998



was spent on long-term care. Long-term care expenditures comprised about 70 percent of all expenditures for the high expenditure sub-population (Figures 5 and 6).

Use Patterns and Characteristics by Age

In this section demographic characteristics, health conditions, health and long-term care utilization, and expenditure patterns of dual eligible persons by age group will be presented. Our aim is to highlight the differences in health care needs among dual eligible persons.

Although age-based Medicare eligibility starts at age 65 the PASSPORT⁴ program eligibility age is 60 years or older, therefore, we will use the same age break as PASSPORT for our age based analysis (under 60 years old age group; and 60 years and older age group).

A little under a quarter of the fee-for-service population (4,837) was under 60 years old, and more than one half of the under 60 age group were male compared to only 19 percent of the over 60 years old age group, as Table 10 shows. The proportion of minorities in the over 60 age group was 44 percent higher than among the under 60 sub-population (28%). The place of residence for one third of the under 60 age group members was a nursing home in the beginning of this study (January 1997) compared to 43% of the over 60 age group. The younger disabled population was almost evenly distributed between Hamilton and Franklin Counties. In the older age group the proportion of females and minorities were much higher. More than four out of five persons in the older age group were female, and more than four of ten belonged to a minority race or ethnicity group. About 60 percent of the older age group members lived in Hamilton County.

⁴ Ohio's Medicaid reimbursed home-and-community-based care services program cared for about one-fourth of those eligible to receive Medicaid reimbursed long-term care in Ohio (Applebaum, Mehdizadeh, Straker, 2000).

Table 10
Demographic Characteristics of the Continuously Enrolled Dual-Eligible Persons
in the Fee for Service Population by Age Group

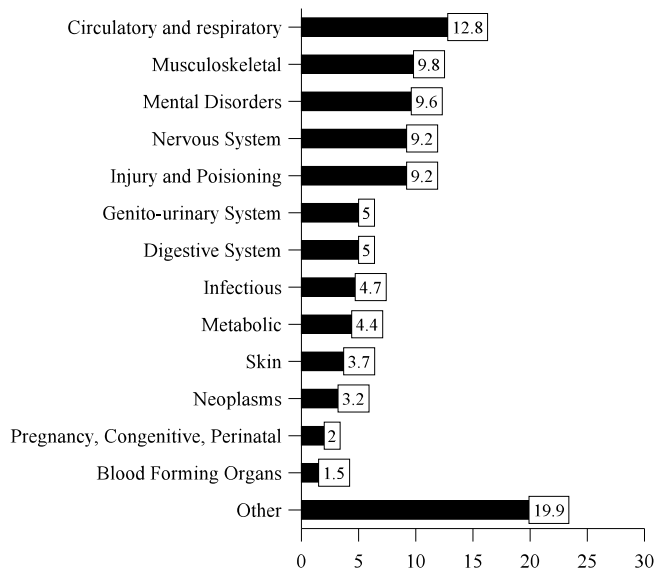
	Under 60 years old	60 years or older
	(Percent)	(Percent)
Age		
0 - 44	46.2	0.0
45 - 54	35.2	0.0
55 - 60	18.6	0.0
60 - 65	0.0	6.6
65+	0.0	93.4
Sex		
Female	48.7	80.6
Male	51.3	19.4
Race		
White	72.0	55.8
Black	27.4	41.2
Others	0.6	3.0
Living Arrangements		
Non-Institution	68.3	56.9
Nursing Home	31.7	43.1
County		
Franklin	51.2	42.5
Hamilton	48.8	57.5
Population	1,188	3,584

Source: Medicaid recipient file, Ohio Department of Job and Family Services.

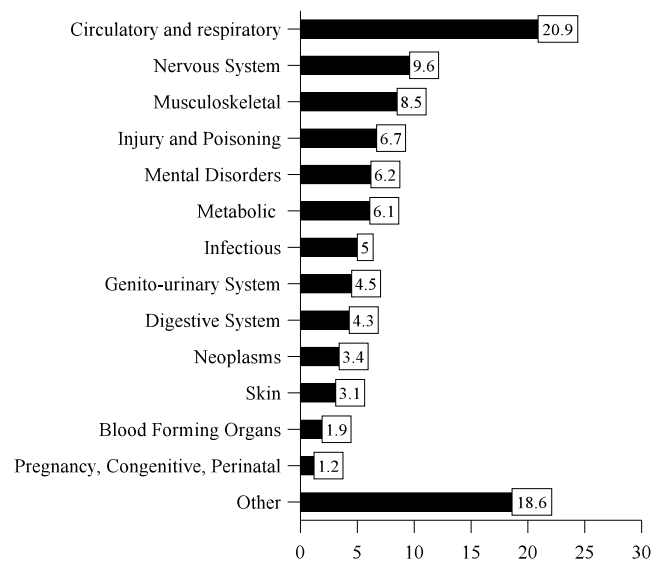
Figure 7

**Percentage of Dual Eligible Persons With Health Care Needs In Each
Major Group of Chronic or Disabling Diagnosis
by Age Group**

Under 60 years old



60 years or older



The health conditions of the study participants extracted from their physician records are summarized in Figure 7. The most common diagnosis among the younger age group members was circulatory and respiratory diseases (12.8%), and an equal proportion of the younger age group members were diagnosed with musculoskeletal diseases (9.8%), mental disorders (9.6%), nervous system disease (9.2%), and injury and poisoning (9.2%). About one-fifth of all diagnoses were stated symptoms and complaints that did not point to a specific disease. Although we only presented the primary diagnosis here, most had multiple conditions. Persons with mental disorders often had physical health diagnoses as well.

The most common diagnoses among the older age group population members were circulatory and respiratory diseases (20.9%) as well, followed by nervous system diseases (9.6%), musculoskeletal diseases (8.5%), injury (6.7%), mental disorders (6.2%), and metabolic diseases (6.1%).

Many dual eligible persons require different types of services concurrently. Table 11 presents the proportion of population members in the two age groups that used health and long-term care services. As may be expected, the utilization of health and long-term care services by both age groups was high, and the type of services utilized represented the health and impairment status of that age group. A higher proportion of those 60 years and older in our population used the service categories shown in Table 11. For example, in 1997 and 1998, one in four in the older group were hospitalized. Yet a relatively small proportion (7%) were admitted or re-admitted to a nursing home⁵ and very few used Medicare home health services. Four out of five

⁵ There was a number of individuals in this study who were in nursing homes in the beginning of the study period and remained there for the duration of the study. Here we are only discussing nursing home stays following hospitalization, which is paid by Medicare.

Table 11
Health and Long-Term Care Utilization Patterns by Age Group

	Under 60 years old		60 years or older	
	1997	1998	1997	1998
	(Percent)	(Percent)	(Percent)	(Percent)
Hospitalized	17.6	19.1	24.7	24.5
Had outpatient treatment	74.0	72.5	80.2	81.7
Admitted to a nursing home^a	1.6	2.0	6.9	6.9
Visited a physician	93.3	91.6	94.3	94.6
Used home health services	4.3	3.0	9.1	8.5
Used home care (Medicaid Waiver) services	6.7	8.7	0.7	0.3
Used PASSPORT services^b	0.0	0.0	7.3	8.2
Had a prescription filled	73.7	75.1	82.6	83.1

^a New admission or readmission to a nursing home after hospitalization.

^b PASSPORT is Ohio's Medicaid waiver home and community-based care services for 60 and older population.

Source: Medicare and Medicaid claims data: 1997-1998

had at least one outpatient visit in each year, and more than 90 percent had visited a physician in each of the two years. Very few, only seven percent, used PASSPORT services. The proportion utilizing each type of service remained very stable during the two years, pointing to the continuous health care needs of the entire dual eligible population and the pattern of health care utilization; whether they were low or high users remained relatively stable.

The intensity and frequency of health care utilization is in terms of the average annual health care services utilization per 100 persons are presented in Table 12. Every 100 persons in the younger age group, on average, had 218 days of hospital stay in 1997, and 197 days for 1998, about two days per person per year. Medicare reimbursed nursing home stay was much less intense with 70 and 77 days per 100 persons, per year respectively. The Medicare home health utilization among the younger age group was negligible while physician and outpatient visits were considerable. Members of the older age group, on average, had about 19 physician visits per person per year. The increased use of nursing home stay, Medicare home health utilization, physician and outpatient visits were indicative of higher care needs of the older population members.

A breakdown of expenditures by type of services reflects the contribution of both Medicare and Medicaid to their care. Table 13 and 14 present the average annual health and long-term care expenditures of the population members in each age group. The annual overall expenditures for the younger age group ranged between \$30,000 and \$32,000. About one-half of all Medicare expenditures was spent on inpatient hospital stays, one-fifth on physician visits, and the rest on outpatient hospital care, durable medical equipment, home health care services, and very little on nursing home care. Medicaid was co-payer for hospital stays, outpatient visits,

Table 12
Average Annual Health Care Services Utilization Per 100 Persons-Year by Age Group

	Under 60 years old		60 Years old or older	
	1997	1998	1997	1998
	(Number)	(Number)	(Number)	(Number)
Hospital days	218	197	234	249
Nursing home days^a	70	77	259	263
Physician visits	1,961	1,985	2,450	2,555
Home health visits	17	12	47	33
Outpatient visits	474	514	551	612

^a Medicare nursing home days only. It is not possible to estimate number of Medicaid nursing home days from Medicaid institutional claims in Ohio of the way the reimbursement system is set up.

Note: The data averages the utilization of infrequent users and high users, except for physician and outpatient services which are used by almost everyone.

Source: Medicare claims data: 1997-1998

Table 13
Average Annual Health and Long-Term Care Expenditures
Under 60 Years Old

Outcome Variables (Average Annual Expenditures)	1997			1998		
	Medicare	Medicaid	Total	Medicare	Medicaid	Total
Inpatient Hospital	\$2,109.1	\$188.6	\$2,297.7	\$2,207.7	\$151.5	\$2,359.2
Outpatient Hospital Care	746.2	301.7	1,047.9	698.1	255.0	953.1
Nursing Home Care	156.3	18,515.9	18,672.2	167.5	19,120.6	19,288.1
Home Health Care	211.3	386.0	597.3	140.4	196.0	336.4
Physician Care	934.4	131.6	1,066.0	953.2	130.6	1,083.8
Medical Equipment	338.1	124.6	462.7	270.5	117.4	387.9
Hospice	3.0	13.4	16.4	15.1	21.6	36.7
Medicaid Waiver Services (PASSPORT)	---	0.0	0.0	---	0.0	0.0
Medicaid Waiver Services (Home Care)	---	1,472.7	1,472.7	---	967.4	967.4
Prescription Medication	---	1,795.2	1,795.2	---	2,104.8	2,104.8
Other^a	---	3,011.3	3,011.3	---	4,880.9	4,880.9
Overall Health and Long-term Care	4,498.4	25,941.0	30,439.4	4,452.5	27,945.8	32,398.3

^a Includes mental health services.

Source: Medicare beneficiary inpatient claims filed 1997-1998.
Medicaid claims filed 1996-1999.

Table 14
Average Annual Health and Long-Term Care Expenditures
60 Years or Older

Outcome Variables (Average Annual Expenditures)	1997			1998		
	Medicare	Medicaid	Total	Medicare	Medicaid	Total
Inpatient Hospital	2,540.0	208.9	2,748.9	2,804.3	185.4	2,989.7
Outpatient Hospital Care	850.3	258.9	1,109.2	852.2	277.7	1,129.9
Nursing Home Care	538.8	15,658.1	16,196.9	566.6	17,514.5	18,081.1
Home Health Care	440.6	92.7	533.3	274.6	52.3	326.9
Physician Care	1,277.0	160.4	1,437.4	1,379.7	163.5	1,543.2
Medical Equipment	356.8	150.8	507.6	396.7	161.3	558.0
Hospice	27.0	33.4	60.4	78.3	69.9	148.2
Medicaid Waiver Services (PASSPORT)	---	493.3	493.3	---	466.4	466.4
Medicaid Waiver Services (Home Care)	---	184.9	184.9	---	113.3	113.3
Prescription Medication	---	1,527.2	1,527.2	---	1,743.0	1,743.0
Other^a	---	422.2	422.2	---	715.7	715.7
Overall Health and Long-term Care	6,030.5	19,190.8	25,221.3	6,352.4	21,463.0	27,815.4

^a Includes mental health services.

Source: Medicare beneficiary inpatient claims file 1997-1998.
Medicaid claims file 1996-1999.

physician services, and durable medical equipment. Medicaid was the primary payer for extended stay nursing home for both age groups, and the sole payer for Medicaid waiver home and community-based services for the older group. As it is clear from Tables 13 and 14, the Medicaid program in addition to long-term care services paid for most of home health care, mental health care services, all of prescription medication, and ancillary services such as eyeglasses, and hearing aids, and medical transportation. The burden of care of dual eligible persons was principally on Medicaid, which carried over 85 percent of the total expenditures in the younger age group and over 76 percent of total expenditures in the older age group (see Figures 8 and 9).

One of the major expenditure categories for the younger population is mental health treatment (listed under other). For those who required these types of services, the care was most often provided in an ICF/MR and other mental health settings. Figures 10 and 11 present the breakdown of total expenditures by category of services. After nursing home, ICF/MR and mental health expenditures, inpatient hospital care and medication comprised the highest proportion of the expenditures for the younger age group and nursing home, inpatient hospital, medication and physician visits were among the highest categories of expenditures for the older age group.

Discussion

We examined the demographic characteristics, diagnoses, utilization patterns, frequency of health care use, and health care expenditures for dual eligible persons utilizing Medicare fee-for-service providers in two different age categories and three expenditure levels.

The annual total expenditures ranged from very little to over \$200,000 annually. Those with the lowest expenditures were relatively younger, more likely to belong to a minority race or

Figure 8

Health and Long-Term Care Annual Expenditures by Payer

1997

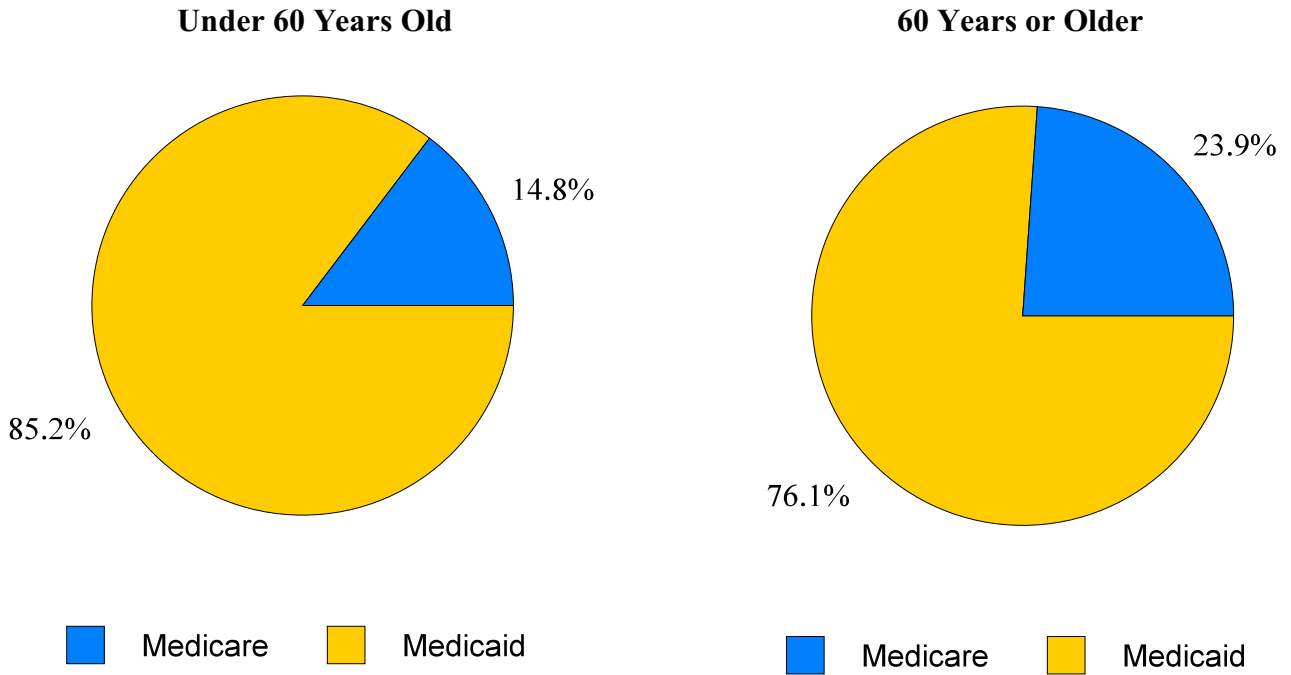


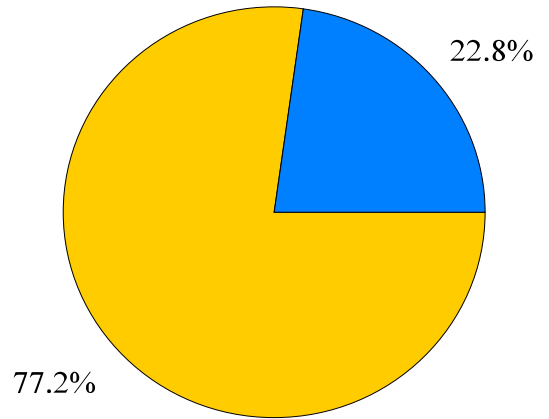
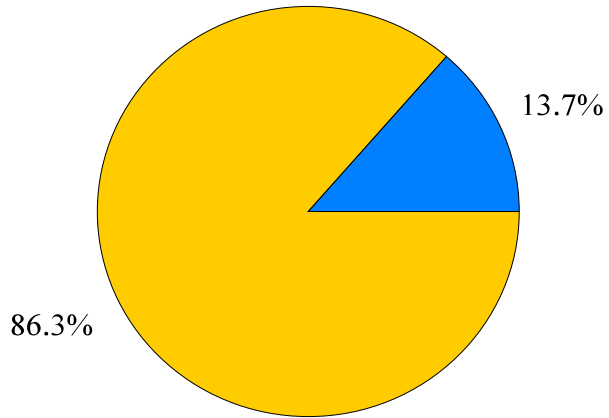
Figure 9


Health and Long-Term Care Annual Expenditures by Payer

1998

Under 60 Years Old

60 Years or Older



 Medicare  Medicaid

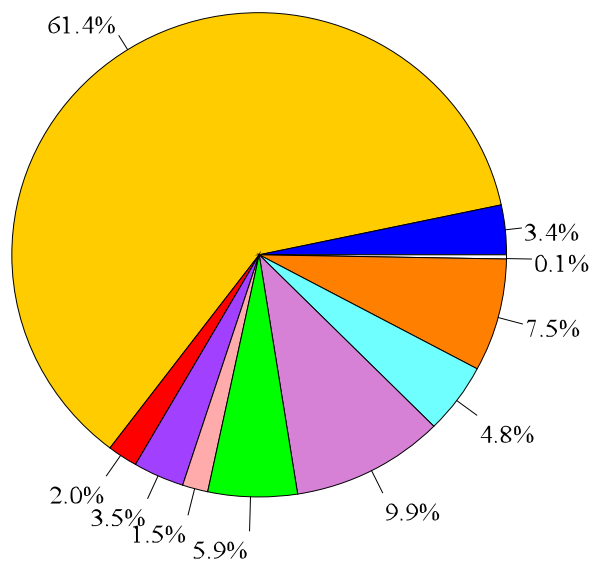
 Medicare  Medicaid

Figure 10

Health and Long-Term Care Expenditures by Type of Services

1997

Under 60 years old



60 years or older

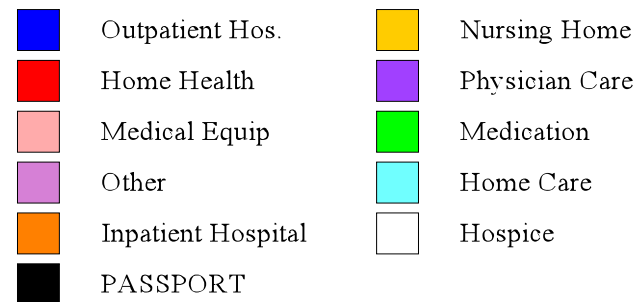
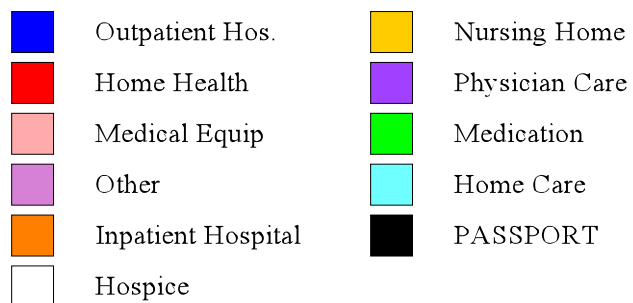
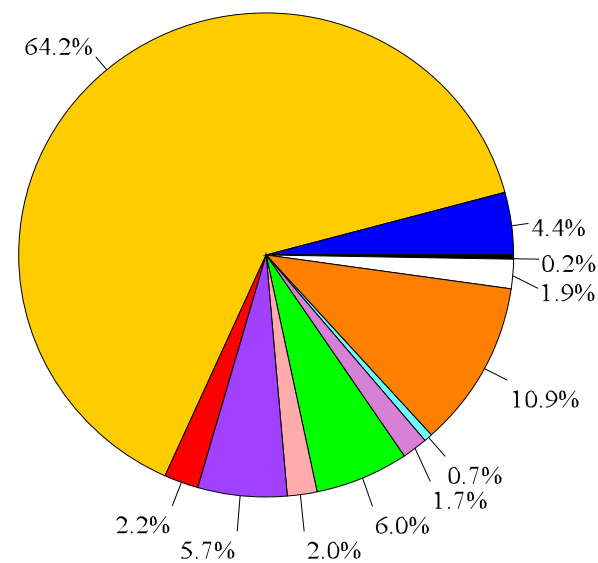


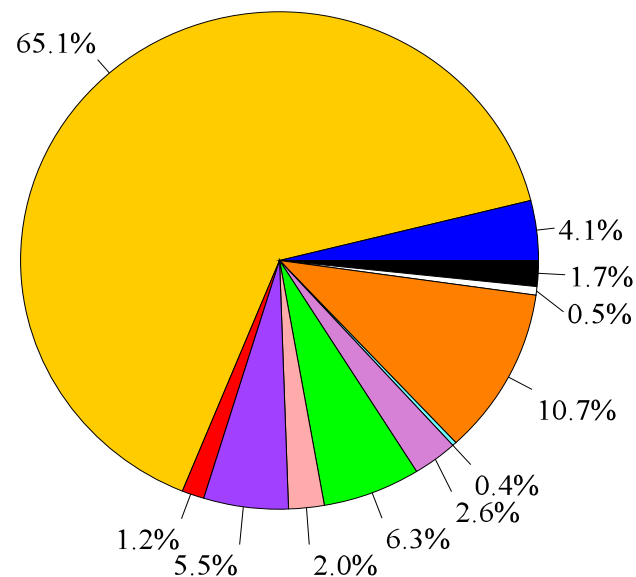
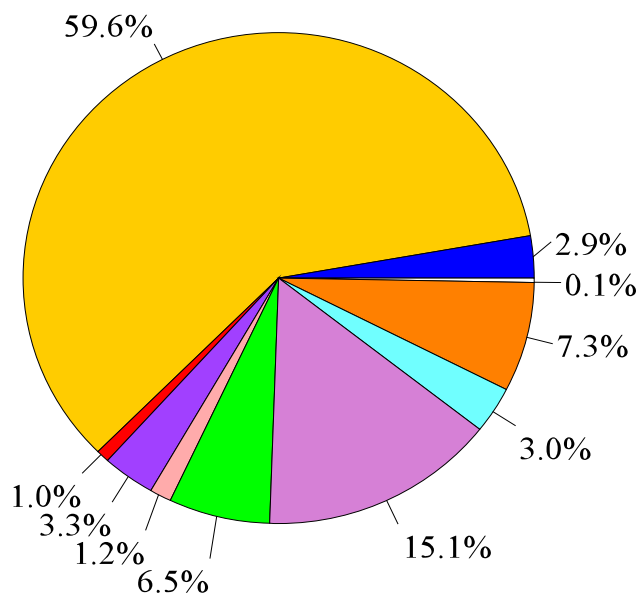
Figure 11























Health and Long-Term Care Expenditures by Type of Services

1998

Under 60 years old

60 years or older



- | | | | | | |
|---|---|--|---|---|--|
|  Outpatient Hos. |  Nursing Home |  Home Health |  Outpatient Hos. |  Nursing Home |  Home Health |
|  Physician Care |  Medical Equip |  Medication |  Physician Care |  Medical Equip |  Medication |
|  Other |  Home Care |  Inpatient Hospital |  Other |  Home Care |  Inpatient Hospital |
|  Hospice |  PASSPORT | |  Hospice |  PASSPORT | |

ethnicity, and almost all lived in the community. In contrast, about 90 percent of those with the highest expenditure level were living in a nursing home in the beginning of the study. Around one-fifth of the population members in each of the expenditure sub-groups had circulatory and respiratory conditions which appear to occur, from the expenditure levels, at a more advanced stage in the medium and high expenditure level. The proportion of total expenditures paid by the Medicare program went down as the total expenditures increased. The type of services received by each group was also very different. The low-expenditure sub-population had very little long-term care expenditures, while they used physician services and medications extensively. In the second year of the study, inpatient hospital care became a major component of total care expenses for low expenditure sub-population as well. For the medium and high expenditure sub-populations, nursing home care comprised more than half of the expenditures in the first year and proceeded to even a higher proportion in the second year.

We also observed that dual eligible persons in the younger age group were more likely to be men, white, and live in the community, while the older dual eligible persons were more likely to be female, minority, and reside in an institution or use PASSPORT long-term care services.

Mental disorders and use of services associated with this diagnosis were more prevalent in the younger age category, while circulatory and respiratory diseases were prominent in the older age group, and the prevalence of this diagnosis increased with age. The health care utilization was high in both age groups. In the older age group with inpatient hospital stays were higher and the proportion admitted or readmitted to a nursing home following a hospitalization remained relatively low for both groups. The percentage of the population members who had a

physician visit (between 90 to 95 percent) or an outpatient visit (between 72 and 81 percent) was very high in both age groups.

Total annual expenditures varied in two ways: 1) in the distribution of expenditures between different categories of services; and 2) in the dollar amounts and proportion paid by each program. In both age groups long-term care expenditures, nursing home plus home and community-based care accounted for more than half of all expenditures. Hospital, prescription medication, physician services, and mental health care services were the next major categories of service utilization. The total average per capita expenditures for the two age groups ranged from a low of \$25,000 per year to a high of \$32,000. The Medicaid portion of these expenditures was always higher, ranging from 76 to 86 percent of total expenditures. The proportion of total expenditures paid by Medicaid was lower for the older age group.

CHAPTER 3

MEDICAID UTILIZATION PATTERNS OF DUAL-ELIGIBLE PERSONS IN MEDICARE MANAGED CARE

Background

In the year 2000, almost two-thirds of Medicare beneficiaries, including dual-eligible persons, could receive their health care services from a provider participating in the original Medicare program or they could enroll in a Medicare managed-health plan by choosing from one or more Medicare managed-care providers operating in their county (Zarabozo, 2001). The Medicare managed-care operators are typically Health Maintenance Organizations (HMOs) that have assembled a network of providers to meet the health care needs of the Medicare enrollees. Medicare managed-care health plans must provide all originally covered Medicare services in addition to a supplementary package of services, such as preventive health care; eye, ear, and dental care; and often limited prescription medication, all with little or no premiums and co-pays. In return, the health plan received a capitated rate per enrollee based on the geographic location of the county, a national average Medicare rate, and the beneficiary's characteristics such as age, gender, Medicaid eligibility, and institutional or community residence of the enrollee. In January 2000, the Medicare payments to the managed-care plans became risk adjusted for prior hospitalization. Some health plans also began charging the enrollees premiums and establishing higher co-pay rates.

During 1997 and 1998, the time period for this study, 69 percent of all Medicare managed-care health plans nationally had no premiums. In addition to all Medicare-covered

services, 68 percent offered limited prescription medication, 97 percent offered a routine physical, and 89 percent offered immunization. Among the supplementary package of services most, about 90 percent, had eye exams (Rossiter, 2001). The Medicare managed-care plans are most attractive to Medicare beneficiaries with no supplementary policy for co-pays and prescription medication and those who are not satisfied with the original Medicare benefits.

Enrollment in managed Medicare increased nationally to a high of 6.35 million in 1999, and then it was reduced to 6.19 million in 2000. Ohio's Medicare beneficiary enrollment in managed Medicare has mirrored the nation. As Table 15 shows, Ohio's enrollment increased steadily until 1999 and has dropped since. In addition, fewer plans in Ohio now cover rural areas, and more of the urban Medicare beneficiaries are enrolled in managed Medicare than before. The Medicare managed-care enrollees nationally are disproportionately from the 65-74 age group, less likely to be in an institution, and rate their health better than the average Medicare beneficiary (Gold et al., 1997; Pearlman et al., 1997; Rossiter, 2001).

Table 15
Percentage of Medicare Beneficiaries Enrolled in Medicare Managed Care by Year

Year	U.S.	Ohio	Franklin	Hamilton
	(Percent)	(Percent)	(Percent)	(Percent)
1997	15.3	11.5	15.6	16.5
1998	17.4	12.5	20.6	23.4
1999	17.9	14.0	21.4	25.1
2000	16.0 ^a	17.4	20.9	24.6

^a Gold, M., Achman, L., 2001. *Trends in Premiums, Cost Sharing, and Benefits in Medicare+ Choice Health Plans, 1999-2001*. Retrieved 3/2002. [Http://www.cmwf.org](http://www.cmwf.org)

Source: Center for Medicare and Medicaid services, <http://www.hcfa.gov/stats/mmco1198.txt>

About four to five percent of Medicare managed-care enrollment came from dual-eligible persons, although they account for 16 percent of the total Medicare population (Gold et al., 1997; Rossiter, 2001). Medicare managed care, in theory, is an option for every Medicare beneficiary (at least for the two-thirds who live in a county where at least one Medicare managed-care health plan operates). However, lack of coordination between the Medicare plans and state Medicaid programs has made it difficult for many of the dual-eligible persons to enroll. On the other hand, individuals defined as QMB Plus, such as those in this study, presume that they will not gain much by joining a Medicare managed-care plan, while they might lose the providers that they have become accustomed to.

In this section, we examine the relationship of Medicare managed care and the Medicaid program as a co-payer for dual-eligible persons with full Medicaid benefits as well as the primary payer for prescription medication, long-term care, and supplemental services.

In a recent study, we surveyed administrators in several states' Medicaid offices and learned that except in one state, New Jersey, there was no communication between the Medicare managed-care health plans and the Medicaid programs' offices. Therefore, it was not possible for the Medicaid program administrators to identify who among their dual-eligible persons had enrolled in a managed Medicare health plan and, for those who had enrolled, what the benefit package encompassed (Mehdizadeh, 2000). Enrollment information is now available from the Center for Medicare and Medicaid Services with a few months delay. Most states now track their dual-eligible persons' enrollment in Medicare managed care.

Population

The population for this section of the study is the entire study population, i.e. all the continuously enrolled dual-eligible persons in Franklin and Hamilton Counties. The 5,172 members of this study were divided into three groups: (1) 4,837 population members who remained with the original fee-for-service Medicare program for the entire two years; (2) 284 persons who received their health care services from a managed Medicare health plan, for at least a month, hereafter part-year enrollees; and (3) a small number of beneficiaries [35] who stayed with the same health plan for more than 12 months, hereafter full-year enrollees. The administrator of the health plan with the full-year enrollees population agreed to share this group's utilization data with us for the 1997 and 1998 calendar year.

Statement of the Problem

A question that concerns most states' Medicaid administrators is: When the Medicare managed-care enrollee is also Medicaid eligible, is there any cost shifting taking place? To investigate this particular issue, we needed to examine three separate questions: (1) Is there any cost shifting in the services for which Medicaid is the co-payer, such as all the covered services under the original Medicare program? (2) Is there any cost shifting for services in which Medicaid is the primary payer, such as prescription medication and those covered under a supplementary benefits package offered by health plans? (3) Is there any service shifting taking place? For example, do the Medicare managed-care health plans actively extend nursing home care where Medicaid is the primary payer, instead of using hospital and home health care where Medicare is the primary payer?

As was discussed earlier, those Medicare beneficiaries who enroll in a Medicare managed care are typically healthier and younger. There is potential for self-selection bias. In our study design, we use a three-tier population: (1) the fee-for-service study members; (2) part-year enrollees, those who were enrolled in a Medicare managed-care plan at least for a month during 1998; and (3) all-year enrollees, the population who remained with a health plan for over a year. Although the number of individuals in the extended enrollment population is small, it nevertheless provides an opportunity for observation.

We use average annual Medicaid expenditures for inpatient, outpatient, physician, and prescription medication, as well as total annual Medicaid expenditures to examine any cost shifting for services for which Medicaid is the primary payer and the co-payer. To examine whether any service shifting occurred, we performed case reviews of all those who were enrolled in a single Medicare managed-care health plan during the study period.

Health Plan Specifications

During 1997 and 1998 there were at least four different Medicare managed-care health plans operating in the two counties in this study (Center for Medicare and Medicaid Services, 1999). Although we do not have each plan's benefits package specifics, certain features were common among all plans at that time nationally (Rossiter, 2001).

- There were no premiums.
- They all covered original Medicare services with a fixed dollar amount of co-pays.
- They had prescription benefits with a cap on total amount and sometimes there were co-pays.

- They offered a supplementary package of benefits such as dental, eye, and ear care comparable to the services covered by Medicaid for the population in this study.

The health benefit package for the full-year enrollees with more than a year enrollment in a Medicare managed-care health plan in 1998 was:

- A monthly premium of \$50.00
- No inpatient hospital or outpatient co-payment
- Unlimited medically necessary hospital days
- No nursing home co-pays
- Three days qualifying stay waived
- \$5 co-pay for physician, occupational therapies, and specialist
- \$25 emergency care co-pay, waived if admitted
- \$5 co-pay for preventive care
- \$1,000 annual limit for prescription medication

Findings

To understand how the Medicaid's share of health care expenditures as a co-payer may change when dual-eligible persons with full Medicaid benefits enroll in a Medicare managed-care program, we compared five outcome measures: (1) average annual total Medicaid expenditures; (2) average annual Medicaid inpatient expenditures; (3) average annual Medicaid outpatient expenditures; (4) average annual Medicaid physician expenditures; and (5) average annual prescription medication for the three groups in our study population. Table 16 presents the results. When expenditures of Medicare managed-care enrollees are compared to the fee-for-

Table 16
Comparison of Average Annual Medicaid Expenditures for Three
Components of the Study Population in 1998

Age Group	Category of Expenditures	Fee for Service	Part Year Enrollee	Full Year Enrollee
Under 60				
	Inpatient	\$ 151.5	\$ 33.2	\$ 0.0
	Outpatient	\$ 255.0	\$ 161.0	\$ 1.8
	Physician	\$ 130.6	\$ 55.9	\$ 1.0
	Prescription	\$ 2,104.8	\$ 821.9	\$93.1
Total		\$27,945.8	\$2,794.2	\$95.9
Population		1,188	46	5
60 years or older				
	Inpatient	\$ 185.4	\$ 61.4	\$ 25.5
	Outpatient	\$ 277.7	\$ 106.2	\$ 9.1
	Physician	\$ 163.5	\$ 58.5	\$ 4.0
	Prescription	\$ 1,743.0	\$ 589.9	\$ 133.2
Total		\$21,463.8	\$7,346.4	\$1,523.8
Population		4,837	284	35

Source: Ohio Medicaid claims files 1997 and 1998. A health plan utilization data 1997, 1998.

service Medicare population, there is always concern that there is self-selection bias. From other studies, we learned that Medicare managed-care enrollees are typically the youngest, and healthiest, and a higher proportion live in the community compared to the Medicare-only population. The group who elected to enroll in a Medicare managed-care program, albeit for a short period of time, at least allowed us to have a comparison group which was equally self-selective. However, their expenditure patterns reflect a mixture of the two Medicare

environments. In comparing the fee-for-service members with those who were enrolled in a managed Medicare plan for at least part of the year, considerable differences were shown. The expenditures for part-year enrollees were much lower in every outcome measure in the two age groups. We believe two factors contributed to these differences: (1) those who enrolled in a Medicare managed-care program were probably healthier, younger, and better informed; (2) the lower annual expenditures in every one of the outcome measures reflect the contribution that managed Medicare had made in terms of supplementary benefit package and no co-pay requirement,⁶ acknowledging the small population sizes in the younger age group.

Comparing all-year enrollees with part-year enrollees, we found that all-year enrollees had a much lower annual expenditure level in all outcome measures for both age groups. In addition, since we had the health plan specifications, we were able to track Medicaid billing by the health plan. The expenditure patterns showed that the benefit package was offered to enrollees at the health plan expense, and none of the supplementary benefits offered to the enrollees were subsequently charged to Medicaid. Again, we had a small number of enrollees which we could observe for an extended period of time; however, it does not seem plausible that the health plan would have behaved differently if there had been a larger number involved.

Nevertheless, there were some imperfections in the process arising from confusion and lack of adequate communication between all parties involved.

- Some enrollees began utilizing payment for medications after joining a managed Medicare health plan, not having utilized medications prior to plan enrollment, perhaps paying out of pocket earlier. The data were not available to us.

⁶ The Medicaid program in Ohio did not pay any premiums and co-pay for Medicare managed-care enrollees.

- After managed-care enrollment, several clients continued to have their medications paid entirely by Medicaid, without evidence of billings shifting to the health plan. Pharmacies have difficulty keeping track of the proper payer source and are not set up to bill two payers.
- Medicare managed-care enrollees appeared to have some hospitalizations and physician visits paid by fee-for-service Medicare and the health plan. This “double payment” may have been corrected retrospectively. This emphasizes the difficulty providers have in maintaining timely information on the Medicare status of individuals switching from fee-for-service to Medicare managed-care status. Anecdotally, patients and their families do not communicate well about health plan enrollment status, and, frequently, primary caregivers are not aware of the beneficiary’s recent enrollment in a Medicare managed-care plan. It is common for Medicare beneficiaries to keep their fee-for-service Medicare card and not replace it with the new health plan identification, further confusing registration staff in health facilities.

The next issue of concern was service shifting. We were interested in learning whether health plans attempt to substitute a Medicare required service, such as hospitalization, with a Medicaid paid service, such as nursing home care. We could not seek a generalized answer for this question; rather we had to examine health-care patterns of each individual to determine whether any possible service shifting was occurring. To review individuals’ service utilization patterns first, we mapped all the services which were utilized by the 55 persons who were enrolled in a single health plan during part or all of 1998 for the two years, using Medicare, Medicaid claims data, and the health plan utilization data. The 24 month utilization map allowed us to observe a pre-post managed-care enrollment utilization pattern for some and all post utilization patterns for others. The case review did not reveal any apparent changes in care patterns (physician visits, institutionalization) within individual subject reviews or across the entire group.

Typical Case Review Findings

An example of a typical older person who spent the full 24 months enrolled in one Medicare managed-care plan follows.

Case one is a 87-year-old white woman who is receiving PASSPORT services and living at home in January 1997. She is hospitalized in March 1997 for four days with a transient ischemic attack and a urinary tract infection. She has a history of hypertension and Alzheimer's Disease. She utilizes considerable psychotropic medication, most of which is paid for by the managed care plan, with some charges going to Medicaid. In July 1997, she is admitted to a nursing home where she resides throughout the remainder of the study period.

Case two a typical example of a younger enrollee, a 37-year-old black man with cerebrovascular disease who receives considerable home health services from fee-for-service Medicare prior to July 1998. He has two hospitalizations, one in January 1997 and one in April 1997, each five days long and paid by fee-for-service Medicare. The January admission is for a stroke, and the April admission is to evaluate abdominal pain. The patient has 42 physician encounters during the first 18 months of the study period, with Medicaid paying co-payments. These payments end when the patient joins managed care. The patient uses several chronic medications charged to Medicaid prior to the enrollment in the Medicare managed-care plan, then these costs shift to the health plan. The patient is hospitalized in November 1998 for a cerebral aneurysm, requiring neurosurgical intervention. This five-day admission is billed to the managed Medicare health plan.

Discussion

As mentioned earlier, only about four percent of Medicare managed-care enrollment comes from dual-eligible persons, even though dual-eligible persons account for 16 percent of the total Medicare population. The low enrollment of dual-eligible persons in Medicare managed-care health plans became more evident to us from this study. Only 6.5 percent of the continuously enrolled dual-eligible persons in our study population had enrolled in a health plan, at least for a short period of time. A higher proportion of those enrolled in a Medicare managed-care health plan were female, black, young-old, and lived in the community. The Medicaid program administrators were generally left out of the loop when a dual-eligible person enrolled in

a Medicare managed-care health plan. On the question of cost shifting, we found no evidence of cost transfer to the Medicaid program. When we had the opportunity to compare the charges against the health plan benefit package, the managed-care plan administrators followed the benefit package strictly. A review of the care pattern showed no evidence of service shifting either. However, a client in a managed-care health plan has a primary care physician, which most often oversees all the care the individual receives. In some limited way, the primary care physician acts as a case manager attempting to attend, personally or via other providers, to all the health care needs of the enrollee. Because the primary care physician is aware and informed about all the health care needs of a plan enrollee, he or she might prescribe different treatment options than were practiced by the independent set of providers in the fee-for-service Medicare environment. The providers in fee-for-service might or might not have known about the individuals' health status or conditions in its entirety. This different treatment plan could be misinterpreted to be service shifting.

Summary and Policy Impact

Since 1998, a number of changes have occurred with Medicare managed-care plans.

These include:

- Withdrawal of plans from the marketplace, leaving patients with fewer choices.
- Withdrawal of plans from individual counties, leaving some patients without a plan to choose from.
- An increase in co-payments and premiums. These include increased co-payments for medications, hospitalizations, emergency room visits, and physician visits. All plans also charge a monthly premium and limit overall prescription benefits. The result of all this has been a leveling off of enrollment growth.

Looking towards the future, federal policy makers have not articulated a policy approach to control Medicare costs other than some model of managed care. Since the growth has slowed, assessing the impact on the state's Medicaid program may be less urgent; however, slow growth may not last. It may be that in the future more aggressive strategies will be enacted to encourage beneficiaries to join some form of managed care. When this occurs, cost shifting to Medicaid could again become a growing concern.

Limitations

In the original design of this study, there were two Medicare managed-care health plans that had agreed to share utilization data for the dual-eligible persons who had enrolled in their health plans. Unfortunately, we had to wait about a year before we had received health plan data from the Center for Medicare and Medicaid Services. During that waiting period one of the health plans withdrew from the study, leaving us with a small number of full-year enrollees to examine cost shifting.

CHAPTER 4

POLICY IMPLICATIONS

When we examined diagnoses, health and long-term care service utilization, and expenditure patterns of all dual-eligible persons, we learned that not all persons referred to as dual eligible persons have similar needs.

In the absence of information regarding functional status and disease progression of the population members, we divided the fee-for-service population by age and by level of expenditures. The expenditures ranged from very little to over \$200,000 annually. Those with the lowest expenditures were relatively younger, minorities comprised about one-half of this sub-population, and almost all lived in the community. In contrast, about 90 percent of those with the highest expenditure level lived in a nursing home. Around one-fifth of the population members in each of the expenditure categories had circulatory and respiratory conditions which appear to occur at a more advanced stage in the medium- and high-expenditure levels, based on their level of expenditures. The proportion of total expenditures paid by the Medicare program went down as the total expenditures increased. The types of services received by each group were also very different. The low-expenditure group had very little long-term care expenditures, while they used physician services and medications extensively. In the second year of the study, inpatient hospital care was a major component of total care expenses for this group. For the other two groups nursing home care comprised more than half of the expenditures in the first year and proceeded to an even a higher proportion in the second year.

The under-60-years-old population members, who had become Medicaid eligible because of prolonged disability, were different in terms of diagnosis and in terms of service utilization. A higher proportion of this group was identified as needing mental health care services. The over-60 group showed conditions more associated with age such as circulatory, respiratory, and musculoskeletal diseases. A program designed to serve older people, the Medicare program did not meet the needs of younger disabled individuals. Dual-eligible persons generally have been prevented, in most states, from enrolling in Medicaid managed care. With the exception of one or two of the states where they can enroll in Medicaid managed care, they must disenroll if and when they also enroll in Medicare managed care. Therefore, for the most part, the care of dual-eligible persons is left to fragmented Medicare and Medicaid providers in the fee-for-service environment, with no one coordinating the services received.

Judging by the differences in characteristics, diagnoses, and expenditure patterns of each expenditure sub-population and age group, it appears that a health and long-term care delivery system that is designed to meet the needs of each group with some coordination of services would be more fitting than the current system. Since disabled individuals often have concurrent needs, and because the two programs which now serve dual-eligible persons were designed for two different populations (the poor and the elderly), neither would individually meet all the care needs of disabled persons. As of now, no integration of services is permitted unless specifically asked and granted permission for a particular integration model. In the absence of any system-wide coordination it is left to the disabled and frail older persons (or their families) to manage or coordinate their care.

As we discussed in Chapter 2 the expenditure patterns were consistently similar within each sub-population in the two years of the study. Table 17 presents semblance of the members' allocations to the three expenditure groups based on the level of expenditures in 1997 and 1998. More than 80 percent of those classified as Low, Medium, or High expenditure in 1997 remained within the same expenditure level in 1998 or moved to a lower expenditure group. Therefore, the prior year expenditures could be used as a guide in determining the following years' expenditure status and the providers' compensation level.

Table 17
Fee for Service Population Members Classification by Expenditures in 1997 and 1998

Year	1998		
Expenditure Level	Low	Medium	High
	(Percent)	(Percent)	(Percent)
1997 Low	82.32	16.74	0.94
1997 Medium	17.47	67.13	15.40
1997 High	0.31	16.08	83.61

Given that the utilization and expenditure patterns for each group remained very stable and virtually unchanged over time, except for inflation in medical services, it would be feasible to establish a risk-adjusted, cased-managed, coordinated-care model with capitation rate based on the previous year's expenditures. The case manager's involvement is essential to assist the dual-eligible persons with coordinating the care they receive.

REFERENCES

- Applebaum, R., Mehdizadeh, S., Straker, J., 2000. *Ohio's Long-Term Care System: Trends and Issues*. Oxford, OH: Scripps Gerontology Center, Miami University
- Chen, T., Kunkel, S., Mehdizadeh, S., 1998. *Aging in Ohio*. Oxford, OH: Scripps Gerontology Center, Miami University.
- Center for Medicare and Medicaid Services, 1998. *Medicare Managed Care Contract Report* (Data as of November 1998). <http://www.hcfa.gov/stats/mmco1198.txt>
- Center for Medicare and Medicaid Services, 2000. *List and Definition of Dual Eligibles* (Date as of April 1999). <http://www.hcfa.gov/medicaid/bbadedef.htm>
- Center for Medicare and Medicaid Services, 2001. *Medicare Aged and Disabled Enrollees by Type of Coverage* (Data as of October 2001). <http://www.hcfa.gov>
- Gold, M., Achman, L., 2001. *Trends in Premiums, Cost Sharing, and Benefits in Medicare+ Choice Health Plans, 1999-2001*. (Data as of March 2002). <http://www.cmwf.org>
- Gold, M., Nelson, L., Brown, R., Ciemnecki, A., Aizer, A., and Docteur, E. 1997. "Disabled Medicare beneficiaries in HMOs." *Health Affairs* 16(5): 148-161.
- Korbin, L. , Long, S., and Aragon, C. 1998. "Does health status explain higher Medicare costs of Medicaid enrollees?" *Health Care Financing Review* 20(2): 39-54.
- Lyons, B. and Rowland, D. 1996. "Medicare, Medicaid, and the elderly poor." *Health Care Financing Review* 18(2): 61-85.
- Mehdizadeh, S., 2000. *State Practices in Providing Health and Long-term Care to Dually Eligible Persons*. Oxford, OH: Scripps Gerontology Center, Miami University.
- Murray, L., & Shatto, A. 1998. MCBS Highlights: Dually eligible Medicare beneficiaries. *Health Care Financing Review* 20(2): 71-90.
- Ohio Department of Job and Family Services, 1999. *Ohio Medicaid Recipient File*.
- Pearlman, D., Branch, L., Ozminkowski, R., Experton, B. and Li, Z. 1997. "Transitions in health care use and expenditures among frail older adults by payor/provider type." *Journal of American Geriatrics Society* 45(5): 550-557.

Ranbom, L. 1999. *Managing Dual Eligibles*. Presentation at the Managed Care and Long-Term Care Conference, June 1999.

Riley, T. 1998. "States' perspective on managed care for elderly." *Generations* 22 (2): 69-73.

Rossiter, L. 2001. *Understanding Medicare Managed Care: Meeting Economics, Strategic, and Policy Challenges*. Chicago, IL: Health Administration Press, a Division of the Foundation of the American College of Health Care Executives.

Rowland, D., Feder, J., and Keenan, S. 1998. "Managed care for low income elderly people." *Generations* 22(2): 43-50.

U. S. Census Bureau, 2001. *Estimated Number and Percent People of all Ages in Poverty by County: Ohio 1998*. (Data as of March 2002). http://www.census.gov/hhes/www/saife/stcty/a98_39.htm

U. S. Census Bureau, 2001. *Profile of General Demographic Characteristics: 2000*. (Data as of July 2001). <http://www.odod.state.oh.us/osr>.

Ware, J., Bayliss, M., Rogers, W., Kosinski, M., Tarlov, A. 1996. "Differences in 4-Year Health Outcomes for Elderly and Poor, Chronically Ill Patients Treated in HMO and Fee-For-Service Systems" *Journal of American Medical Association* 276(13): 1039-1047.

Zarabozo, C., 2000. "Milestones in Medicare managed care" *Health Care Financing Review*. 22(1): 61-68.

APPENDIX

There are several categories of dual-eligible persons:

(1) those who qualify for full Medicaid benefits by qualifying as eligible for Supplemental Security Income (SSI) or meeting the SSI assets test⁷ and having an income between SSI and 100% of poverty level, or those who have met state spend-down requirements. Members of this group are also called Qualified Medicare Beneficiaries with Full Medicaid benefits (QMBs Plus);

(2) those referred to as Qualified Medicaid Beneficiaries (QMBs); although they have incomes up to 100% of the federal poverty level, their assets may be as much as 200% of the allowable SSI resource limits;

(3) those designated as Specified Low-income Medicaid Beneficiaries (SLMBs), who have incomes between 100% and 120% of the federal poverty level and meet the same assets test as the QMBs;

(4) Those defined as Qualified Disabled and Working Individuals (QDWI), who were formerly eligible for Medicare Part A and lost that eligibility due to returning to work. Their income level is as much as 200% of the federal poverty level, and they meet the same assets test as the QMBs. These individuals can retain Medicare benefits by paying Part A premiums. Medicaid must pay this premium;

(5) Qualifying Individuals (QIs), who qualify for Medicare Part A, have an income between 120 and 135% of the federal poverty level, and meet the same assets test as the QMB

⁷ Assets are bank accounts and other liquid assets, as well as real estate, automobiles, and other personal property.

population. An annual cap is placed on the amount of money available for this buy-in program, which currently is scheduled to expire at the end of 2002 (Health Care Financing Administration, 2000).

The extent of benefits received from Medicaid by a dual-eligible person depends on his or her eligibility designation. The Medicaid program is responsible for all deductibles, coinsurance, Part B premiums, and Part A premiums if needed for QMBs, only Part B premiums for SLMBs, and Part A premiums for QDWHs. The Medicaid program will pay all or part of the Part B premiums, based on the individual's income level, for the QI population. The Medicaid program is most generous to QMBs Plus, those with full Medicaid eligibility. For these clients, the program is responsible for all deductibles, coinsurance, Part A (if necessary) and Part B premiums, prescription drugs, medical transportation, and long-term care services.