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Background

Ohio, along with the nation as a whole, has experienced a demographic revolution unprecedented prior to the 20th century. As a result of major public health, environmental, and medical advances, life expectancy has increased dramatically. With about one and one-half million people 65 and over in 1995, Ohio ranks eighth nationally in the size of the aged population. The population of older people age 85 and over has grown to approximately 150,000, including over 50,000 Ohioans who are age 90 or above. Although such increases are positive, one negative side effect is increased numbers of older people experiencing a disability requiring chronic care. Such a population shift places great pressure on the resources of the state and its citizens.

In both Ohio and the nation, chronic care has become a major component of the budget, with national public expenditures on long-term care totaling $58 billion in 1996. Medicaid long-term care expenditures have increased from $14 billion in 1982 to $49 billion in 1995. Ohio's cost increases mirror national trends, with Medicaid expenditures on nursing facilities rising from $651 million in 1985 to $1.8 billion in 1995 (Applebaum, 1996; Burwell, 1996).

Ohio's increasing commitment to provide long-term care is made in the context of competing demands. All states make difficult policy decisions about how to spend tax revenues. Schools, highways, parks, health, and long-term care all compete for limited funds. Because long-term care has become a key component of the budget, expenditures in this area have been the topic of intense public debate. With continued increases in the very oldest population, state policy makers in Ohio have to balance provision of public long-term care support with other state needs.

These two major concerns--increasing public institutional long-term care expenditures and an increasing older population--resulted in legislative efforts designed to alter the delivery and financing of long-term care in the state. Through an expansion of Ohio's participation in the Medicaid home and community-based care waiver and the implementation of a nursing home pre-admission review system, efforts were made to shift some of the long-term care provided from an institutional to an in-home care setting. For example, expenditures on Ohio's home and community-based care Medicaid waiver program (PASSPORT) have increased from $5 million in 1987 to $103 million in 1995 (Applebaum et al., 1995; Burwell, 1996). Ohio's PASSPORT program served approximately 15,000 older people with disabilities in 1995 and is projected to serve about 22,000 older people in 1997.

Accompanying the home care expansion were state efforts to control public expenditures on nursing homes. In 1993 the state enacted a Medicaid moratorium that prevents the construction of a new nursing home bed if it increases the total bed supply within the state. The state also passed a requirement that beginning in 1993 all applicants to Ohio nursing homes receive a pre-admission review before entry, and Medicaid recipients that do not meet the eligibility criteria are not admitted (Applebaum et al., 1995). To help control expenditures, the state also altered its method of nursing home reimbursement, shifting to a prospective system of payment. In combination, these efforts were designed to both control and shift Medicaid long-term care expenditures in the state.

How have these changes affected the provision of long-term care in Ohio? Has, for example, the expansion of in-home care affected nursing home occupancy rates? Have the types of residents in nursing facilities changed? To address these key policy questions we have

examined long-term care utilization patterns in Ohio. Through an examination of such key areas as: nursing home occupancy, admission and discharge rates, the characteristics of nursing home and home care clients, and population rates of long-term care utilization, this work will examine the provision of long-term care in Ohio.

Long-Term Care Use in Ohio

In 1995, Ohio had over 450,000 older people that experienced a chronic disability, with 160,000 of these individuals classified as severely disabled and meeting the criteria for nursing home eligibility (Mehdizadeh et al., 1996). Although the provision of long-term care has traditionally been thought of as care in the nursing home, there are a number of settings in which long-term care is now provided. Older people with chronic disability receive care in their own homes or the homes of friends or relatives, in congregate care housing, in continuing care retirement communities, in assisted living and other residential care facilities, and in adult care homes. The vast majority of long-term care continues to be provided by family, friends, and neighbors. A recent study estimated that 170,000 older people in Ohio received informal care (Mehdizadeh & Atchley, 1992).

In addition to formal and informal in-home services, Ohio has a range of facilities that deliver long-term care to the many different types of people that have chronic disabilities. This group includes people across the age spectrum that experience physical limitations, dementia or cognitive impairment, mental illness, and developmental disabilities. Although we recognize that long-term care is a critical problem across the life span, this paper focuses on services directed toward individuals age 60 and above, as this group accounts for the largest proportion of long-term care expenditures. Table 1 presents the key long-term care facility providers,

Table 1

Licensed Long-Term Care Providers In Ohio, 1995

Providers	Number of Beds	Percent
Facilities with Nursing Home Beds (1,004)		
Nursing Homes	85,904	90.2
Homes for the Aging[1]	4,588	4.8
Hospital Based Long-term Care Units	1,902	2.0
County Homes	2,861	3.0
TOTAL Nursing Home Beds	95,255	
Nursing Home Beds by Funding Source		
Medicaid only	51,380	53.9
Medicare only	2,096	2.2
Medicaid/Medicare	34,188	35.9
Private	7,591	8.0
Facilities with Rest Home Beds (265)		
Rest Homes	4,463	41.7
Homes for the Aging[1]	2,140	20.0
Nursing Homes	3,257	30.4
County Homes	851	7.9
TOTAL Rest Home Beds	10,711	

[1] Home for the Aging denotes a special category of facility that includes both nursing home beds and rest home beds.

Source: Annual Survey of Long-Term Care Facilities, Ohio Department of Health, 1995.
Ohio Department of Health, Office of Health Policy.

including nursing homes, homes for the aging, residential care facilities (including rest homes and assisted living facilities), and adult care facilities.

In 1995 there were 1,004 long-term care facilities in the state, containing almost 95,000 licensed nursing home beds. The vast majority of beds (90%) are located in 874 facilities licensed as nursing homes. An additional 5% of the beds are located in 45 licensed Homes for the Aging. A small (2%), but increasing proportion of beds are located in 49 hospitals around the state. The remaining 3% of nursing home beds are located in 36 county operated facilities.

As of 1995, Ohio licensed rest homes that provided personal care, (but not skilled nursing services). Due to legislative changes, beginning in 1996 such facilities will be referred to as residential care facilities, and the category will include both rest homes and assisted living facilities. In 1995, there were 265 licensed rest homes containing 10,711 beds. Rest homes are typically either free-standing facilities (41%), or connected to nursing homes (30%) or Homes for the Aging (20%). About eight percent of rest homes are operated by counties. The change in residential care licensure, combined with the growth in assisted living will result in an increase in the number of residential care facilities in the state. The Ohio Association of Assisted Living Facilities estimates that there are over 80 new such facilities currently being built around the state.

Ohio also licenses group facilities that provide personal care to three or more unrelated individuals. Adult care homes are classified into two categories, those serving less than six, and those serving between six and sixteen individuals. Beginning in 1991 the legislature required these homes to be licensed and in 1995 there were 645 homes with 5,179 beds. A survey of

homes completed in 1990 found that about three-quarters of the homes had seven or fewer residents (Applebaum& Ritchey, 1992).

The state also licenses beds for mentally retarded individuals, most of whom are under the age of 60. In the vast majority of instances (92%) these beds are located in Homes for the Mentally Retarded (190 homes). Just less than 8% of these beds are located in traditional nursing homes and a few are located in hospitals.

Nursing Homes in Ohio

Because the major focus of this paper is to examine changes in nursing home utilization, we begin with a profile of the nursing home industry in Ohio in 1995. As noted earlier there are four major types of facilities that house licensed nursing home beds; nursing homes, homes for the aging, county homes, and hospital based long-term care units. The key characteristics of these facilities are presented in Table 2. The typical nursing facility in Ohio averages about 100 beds. Homes for the aging are most often the largest in size, averaging about 150 beds, while hospital long-term care units are the smallest, averaging 32 beds. About 8 out of 10 nursing facilities are proprietary, while homes for the aging and hospital-based units are primarily not-for profit (about three-quarters).

Nursing facility charges vary by payment source and type of facility. The average Medicaid payment is about $95 per day, with a low of $92 for county homes and a high of $132 for hospital based facilities. Medicare, used for skilled care following a hospitalization, pays on average about $187 per day, ranging from $143 for county homes to $295 for hospital based facilities. Private-pay residents are charged $111 per day, slightly higher than the Medicaid rates.

Table 2

Nursing Homes in Ohio 1995

	Nursing Homes	Homes for the Aging	County Homes	Hosp. Based Long-Term Care Units
Number of Facilities	874	45	36	49
Beds	85,904	4,588	2,861	1,902
Beds Capacity (percent)				
0-49	14.6	6.7	11.1	83.7
50-99	28.5	15.6	41.7	12.2
100 plus	56.9	77.8	47.2	4.1
Mean Number	102	150	103	39
Location				
Urban	71.0	82.2	44.4	81.6
Rural	29.0	17.8	55.6	18.4
Ownership				
For Profit	82.0	17.8	0.0	10.2
Not for Profit	17.4	82.2	2.8	77.6
Government	0.6	0.0	97.2	12.2
Average Daily Charge (dollars)				
Medicaid	93	102	92	132
Medicare	179	179	143	295
Private Pay	105	112	92	260
Resident Payment Source (percent)				
Medicaid	63.1	38.6	56.7	41.3
Medicare	6.0	3.4	2.8	45.4
Private	27.4	51.6	30.9	12.9
Other	13.5	6.4	9.6	0.4

Source: Annual Survey of Long-Term Care Facilities, Ohio Department of Health, 1995.

Medicaid remains a large source of funds for nursing facilities. Almost two-thirds of nursing home residents are funded by the Medicaid program. About one-third of the residents in homes for the aging and over half the residents of county homes are also funded by Medicaid. Medicare has been increasing as a source of funds for nursing facilities. Six percent of nursing home residents now use Medicare as a payment source, and Medicare nursing facility reimbursement has doubled from 1994 to 1996. As expected Medicare is particularly important for the hospital based facilities, accounting for over 40% of residents' funding.

Evidence of Changes in Nursing Home Utilization

The expansion of in-home care has been accompanied by an expectation that it would result in declines in nursing home utilization. To assess possible changes in this area, we examine a series of questions concerning nursing home and home care utilization and costs. A range of state data sources and our own primary data collection provide information to address utilization and costs, including the Ohio Department of Health Long-Term Care Facility Survey (1992-1995); the Ohio Department of Human Services Nursing Facility Minimum Data Set-Plus (1993-1996); the Ohio Department of Aging Pre-Admission Review and PASSPORT Management Information System (1994-1996); the Ohio Department of Health Mortality Records(1994-1996); Scripps Survey of Ohio Nursing Home Industry Trends; and Case Western Reserve Survey of Hospitals in Ohio.

Nursing Facility Admissions, Discharges, and Occupancy Changes

This section addresses the question: What effect has the expansion of home and community based services and the implementation of nursing home pre-admission review had on nursing facility use? To examine this question we rely initially on the Department of Health

survey completed annually by licensed nursing facilities. Data examined include total admissions and discharges from 1992-1995. This time period provides information about nursing homes before and after the 1993 expansion of home care under PASSPORT and the implementation of pre-admission review.

To calculate nursing facility occupancy rates we identified the number of nursing home beds and resident bed days, admissions, and discharges. Table 3 shows that the total number of adjusted nursing facility beds increased by 3,700 during the four year time period studied, rising from 91,531 to 95,255. After adjusting the number of beds for temporary changes, such a short-term closing of a facility for re-modeling, we identified the number of potential resident bed days in each of the survey years. We examined the residence days used and then calculated the occupancy rate for Ohio nursing facilities. Data show that the occupancy rate of long-term care facilities in Ohio has consistently declined over the four year period. In 1992, nursing facilities in Ohio had a 91.9% occupancy rate; 90.7% in 1993, 90.3% in 1994, and 88.1% in 1995. Medicaid occupancy rates also show a reduction, going from 67.4% in 1992, to 64.7% in 1995. This reduction is noteworthy because it occurred during a period in which the disabled older population increased by 8,000. The Medicare occupancy rates actually increased, from 9.9% in 1992 to over 16.3% in 1995.

Data in Table 3 also highlight some of the admission and discharge trends now occurring in the industry. The number of admissions increased from just under 71,000 in 1992, to 102,000 in 1995. Almost all of this increase was attributable to Medicare, which recorded about 30,000 admissions in 1992 and almost 61,000 in 1995. Discharge rates showed comparable increases.

Table 3

Ohio Nursing Facility Admissions, Discharges, and Occupancy Rates: 1992-1995

	1992	1993	1994	1995
Adjusted Nursing Facility Beds				
Total beds	91,531	93,204	94,471	95,255
Medicaid certified	80,211	82,207	84,893	85,568
Medicare certified	37,389	36,140	38,318	36,284
Number of Admissions				
Total	70,879	82,800	87,909	102,006
Medicaid certified	17,968	17,542	17,307	18,321
Medicare certified	30,359	41,733	49,038	60,704
Number of Discharges				
Total	68,195	79,977	84,980	99,383
Medicaid certified	23,568	25,466	25,219	26,334
Medicare certified	20,443	28,810	35,540	47,318
Occupancy Rate (Percent)				
Total	91.9	90.7	90.3	88.1
Medicaid certified	67.4	67.0	66.2	64.7
Medicare certified	9.9	12.4	13.6	16.3

Total beds include private, Medicaid and Medicare certified beds. Because 34,251 beds are dually certified for Medicaid and Medicare, the individual categories cannot be summed.

Source: Annual Survey of Long-Term Care Facilities. Ohio Department of Health 1992-1995.

The reduction in both overall and Medicaid occupancy rates appears to be consistent with the expansion of long-term care alternatives, and growth in short-term or sub-acute nursing home care. For example, three-quarters (76.7%) of the sub-acute providers in a Scripps survey added those services in the last five years. The increase in Medicare occupancy reflects a national trend in long-term facility efforts to increase Medicare funding. The hospital prospective payment system has reduced the average hospital length of stay and has increased demand for Medicare-funded nursing facility care.

Medicaid Nursing Facility and PASSPORT Utilization Rates

A review of Medicaid nursing facility and PASSPORT program utilization data provides additional information about changing long-term care use patterns. Table 4 presents the ratio of Medicaid nursing facility and PASSPORT users, as a proportion of the overall older population in Ohio. In 1993 individuals age 85 and above used Medicaid nursing home beds at a rate of 168 per 1,000. In 1994 that rate had dropped to 162/1000, and in 1995 to a rate of 153/1000. This rate of change indicates that a lower proportion of those age 85 and above relied on Medicaid nursing home beds in 1995, as compared to 1993. PASSPORT utilization rates increased during that same period for the 85 and older group, increasing from 7.3/1000 in 1993, to 17.6/1000 in 1995. The two younger age categories showed a small increase in both nursing facility and PASSPORT program utilization rates. For example, those between the ages of 75-84 had a 29.5/1000 rate of nursing facility use in 1993 and a 32.5/1000 rate in 1995. We believe that the small increase in utilization rates for the younger age groups reflect the increased use of short-term stays discussed earlier. Overall these data support the finding that for some older people home care does indeed provide an alternative to nursing facility care.

Table 4

Medicaid Nursing Facility and PASSPORT Utilization Rates: 1993, 1994, and 1995 (per Thousand)

	1993			1994			1995		
		Utilization Rate			Utilization Rate			Utilization Rate	
Age	Total Population	Nursing Facility[a]	PASSPORT	Total Population	Nursing Facility[a]	PASSPORT	Total Population	Nursing Facility[a]	PASSPORT
65-74	833,340	7.86	1.66	835,120	9.05	2.29	836,560	8.49	4.28
75-84	464,700	29.47	3.84	472,900	32.18	5.36	480,840	32.53	9.20
85+	143,700	168.14	7.29	145,600	161.70	10.42	147,724	152.65	17.6
Overall	1,441,940	30.81	2.93	1,453,620	31.91	4.10	1,465,124	34.89	8.03

[a] Medicaid nursing facility population includes all residents who had Medicaid as their payment source.

Sources: MDS+ database, PASSPORT MIS, and Ohio's population projections by Ohio Data Users Center.

Pre-Admission Review: Volume and Effects

Beginning in October of 1993, Ohio required that all Medicaid applicants for long-term care services receive a pre-admission review. In 1995 private pay applicants were also required to complete the process. About 95,000 pre-admission reviews are completed annually (see Table 5). During 1996 we found that over half the applicants came from a hospital, a little over one-quarter came from the community, and the remainder (about one-fifth) already lived in nursing facilities. The referral setting varies by payment status. The vast majority of private pay applicants (82%) come from the hospital, in comparison to about 17% of the Medicaid referrals. Over one-third of the Medicaid applicants were in the community, compared to 16% of the non-Medicaid applicants. Finally, 45% of the Medicaid applicants were nursing facility residents requesting a change in payment status.

The effects of pre-admission review can be assessed by examining the rate of applications to nursing facilities. Data in Table 6 are presented for the second quarters of 1994, 1995, and 1996, to provide a breakdown of applicants by source of referral. An indicator of change in long-term care use is the reduction in Medicaid applications to nursing facilities from the community. In 1994 12.9% of nursing home applicants came from the community. By 1996 that number was 6.8%. Such a reduction indicates that community residents with a disability are less likely to complete the nursing facility application process, most likely due to their increased utilization of PASSPORT.

Characteristics of Nursing Home and PASSPORT Clients

Another approach to examine changing use patterns in long-term care is to study the characteristics of the individuals receiving care. Are the demographic, physical and social

Table 5
Pre-Admission Reviews, by Location of Applicant and Payment Status: 1994, 1995, 1996

	Medicaid			Non-Medicaid			Total		
	1994	1995	1996[1]	1994	1995	1996	1994	1995	1996
Community Referral Setting:									
Volume	23,168[2]	17,266	16,584	7,973	8,167	8,468	31,141	25,433	25,052
Percentage	42.0	38.6	38.2	17.6	17.2	16.3	31.0	27.5	26.2
Hospital Referral Setting:									
Volume	9,180	7,739	7,084	37,431	39,212	42,924	46,611	46,951	50,008
Percentage	16.6	17.3	16.3	82.4	82.5	82.3	46.3	50.9	52.3
Nursing Facility Referral Setting:									
Volume	22,859	19,740	19,778	0	163	736	22,859	19,903	20,514
Percentage	41.4	44.1	45.5	0.0	0.3	1.4	22.7	21.6	21.5
Total									
Volume	55,207	44,745	43,446	45,404	47,542	52,128	100,611	92,287	95,574

[1]Data for 1996 are estimated for the final two quarters.
[2]PASSPORT clients are required to complete a pre-admission review at reassessment. In 1994 reassessment was required every six months, subsequently it was changed to annually.

Source: PAR system, the Pre-admission Review Database.

Table 6

Applicants to Ohio Nursing Homes:
April through June 1994, 1995, 1996

	Medicaid			Non-Medicaid			Total		
Location of Applicant	**1994**	**1995**	**1996**	**1994**	**1995**	**1996**	**1994**	**1995**	**1996**
Community									
Number of Requests	1,184	710	492	1,505	1,745	1,919	2,689	2,455	2,411
Percentage	12.9	9.5	6.8	13.6	15.0	15.0	13.3	12.9	12.0
Hospital									
Number of Requests	2,187	1,962	1,807	9,525	9,890	10,712	11,712	11,852	12,323
Percentage	23.8	26.3	21.49	86.4	84.8	83.5	57.9	62.1	62.4
Nursing Facility									
Number of Requests	5,832	4,772	4,943	0	21	197	5,832	4,793	5,140
Percentage	63.3	64.2	68.2	0.0	0.2	1.5	28.8	25.0	25.6
Total	9,203	7,444	7,242	11,030	11,656	12,828	20,233	19,100	20,070

Source: PAR system, the Pre-admission Review database.

characteristics of nursing facility and home care clients changing? How do the characteristics compare across the two settings? In this section we will examine the characteristics of nursing facility residents and PASSPORT home care clients over time to assess any changes in these two groups.

Nursing Facility Resident Characteristics Data on Ohio nursing home residents come from the Nursing Facility Minimum Data Set-Plus, completed quarterly by Medicaid certified facilities. Residents are profiled at three points in time; June 1993, December 1994, June 1996. Comparisons across time indicate that while the characteristics of the nursing home population are relatively steady there are some changes (see Table 7). Demographic trends show that the nursing home population in 1996, in comparison to 1994 and 1993, has a slightly higher proportion of individuals under the age 65, a slightly higher proportion of minorities, and a slightly higher proportion of those living alone before entry into the nursing facility.

Impairment levels appear to have increased slightly as well. For example, in 1993, 7.1% of the Medicaid nursing home residents had no activity of daily living (ADL) impairment and in June 1996 that number had dropped to 5.4% (see Table 8). The average number of ADL impairments for Medicaid residents increased from 4.0 to 4.4. The proportion of residents with incontinence and cognitive impairments in both the Medicaid and Non-Medicaid sub-groups has also increased. In total these data suggest that the nursing home population is becoming increasingly disabled.

PASSPORT Client Characteristics To assess program changes in home care PASSPORT clients are described for the three time periods above. Information comes from the Ohio Department of Aging's PASSPORT management information system. A review of characteristics suggests that

Table 7

Demographic Characteristics of Ohio Nursing Facility Residents by Payment Status: 1993-1996

	June 1993		December 1994		June 1996	
	Non-Medicaid[a] (Percentage)[c]	Medicaid[b] (Percentage)	Non-Medicaid[a] (Percentage)	Medicaid[b] (Percentage)	Non-Medicaid[a] (Percentage)	Medicaid (Percentage)
Age						
45 and under	1.8	4.6	1.6	4.4	1.7	4.5
46-59	2.8	5.7	3.0	6.4	3.4	7.2
60-65	2.6	4.5	1.7	3.4	1.9	3.8
66-74	12.4	12.7	12.7	13.5	13.7	14.3
75-84	33.5	30.0	32.7	29.0	35.2	30.4
85-90	24.2	21.3	24.2	21.5	23.3	20.5
91+	22.7	21.2	24.1	21.8	20.8	19.3
Average Age	81.4	78.5	81.8	79.0	81.1	78.1
Gender						
Female	73.8	75.1	73.4	74.6	73.0	74.5
Race						
White	90.4	86.4	89.9	85.7	89.7	84.5
Marital Status						
Never married	12.3	16.5	13.1	16.6	12.2	16.9
Widowed/divorced/ separated	71.6	70.7	70.8	70.3	70.9	70.3
Married	16.1	12.8	16.1	13.1	16.9	12.8
Previous Living Arrangement						
Lived alone						
No	57.9	60.7	55.8	58.9	54.2	57.5
Yes	26.2	22.1	28.0	23.0	28.8	24.4
In another facility	15.9	17.2	16.1	18.1	17.0	18.1
Population	55,922	24,750	54,252	27,162	53,893	27,171

[a]Residents whose payment source for stay in nursing facility for part or all of the quarter ending in June 1993, December 1994, or June 1996 was Medicare, CHAMPUS, VA, self-pay/private insurance, or other.
[b]Residents whose entire payment source for the quarter ending in June 1993 or December 1994, or June 1996 was Medicaid. There are also about 24,000 individuals not included in this category that became Medicaid supported during the quarter.
[c]Percentages are adjusted to reflect only those clients for whom information was available on each variable.

Source: MDS+ database for June 1993, December 1994, and June 1996.

Table 8

Functional Characteristics of Ohio Nursing Facility Residents by Payment Status: 1993-1996

	June 1993		December 1994		June 1996	
	Non-Medicaid[a] (Percentage)[c]	Medicaid[b] (Percentage)	Non-Medicaid (Percentage)	Medicaid (Percentage)	Non-Medicaid (Percentage)	Medicaid (Percentage)
Percentage Needing Assistance in Activities of Daily Living (ADLs)[d]						
Bathing	93.2	92.0	94.2	93.7	94.7	93.5
Dressing	82.3	79.2	84.3	82.3	85.2	82.9
Transferring	68.2	64.3	69.8	66.7	71.4	66.9
Toileting	73.7	69.7	76.0	73.3	77.7	74.5
Eating	38.6	38.6	37.8	39.7	38.4	39.0
Grooming	81.8	80.7	83.5	83.0	84.1	93.5
Number of ADL Impairments						
0	5.8	7.1	4.9	5.4	4.4	5.4
1	7.9	8.7	7.0	7.9	6.6	7.5
2	5.0	5.9	4.7	5.1	4.5	5.1
3	9.2	9.4	7.6	8.0	7.1	7.8
4 or more	72.1	68.9	75.8	73.6	77.4	74.2
Average Number of ADL Impairments[e]	4.2	4.0	4.5	4.4	4.5	4.4
Incontinence	43.5	45.9	59.0	59.9	60.3	61.0
Cognitive Impairment						
Lacks cognitive skills for daily decision making[f]	58.7	59.3	61.3	62.1	63.0	63.9
Disoriented on name, date, or place	12.3	13.2	15.6	17.0	15.0	15.6
Wanders, is verbally or physically abusive	11.0	11.4	11.0	11.9	11.8	11.8
Population	55,922	24,750	54,252	27,162	53,893	27,171

[a]Residents whose payment source for stay in nursing facility for part or all of the quarter ending in June 1993, December 1994 and June 1996 was Medicare, CHAMPUS, self-pay/private insurance, or other.
[b]Residents whose entire payment source for the quarter ending in June 1993, December 1994, and June 1996 was Medicaid.
[c]Percentages are adjusted to reflect only those clients for whom information was available on each variable.
[d]"Needs assistance" includes limited assistance, extensive assistance, total dependence, and "activity did not occur."
[e]From the list above.
[f]"Moderately" or "severely" impaired in cognitive skills

Source: MDS+ database for June 1993, December 1994, and June 1996.

the population is relatively steady on key demographic indicators. Although there are some small differences there does not seem to be any consistent change in demographic characteristics overall (see Table 9). A review of functional changes however, indicates an increasingly disabled population. In June 1993, 10.8% of the PASSPORT population had no ADL impairment, compared to less than one-percent in 1996 (see Table 10). The proportion of those impaired in bathing increased from 85% in 1993 to over 97% in 1996. Only eating showed a differing disability trend, which we believe is attributable to a change in the client assessment instrument. These patterns coincide with Ohio's changes in the nursing home level of care definition, which increased the level of disability needed for nursing home eligibility. Thus, while the demographic characteristics of PASSPORT clients have remained steady, the caseload has become increasingly impaired, again suggesting changing patterns of long-term care utilization.

Comparing New Long-Term Care Clients

In this section new PASSPORT and nursing facility users are compared. All clients presented in Table 11 entered either PASSPORT or a nursing facility during the second quarter of 1996. A review of demographic characteristics indicates that over one-quarter of new Medicaid nursing facility entries are for individuals under age 60. Currently, less than 15% of the nursing facility resident population is under 60, and this shift may be yet another indicator of the trend to short, rehabilitation stays that are becoming more common in nursing facilities. PASSPORT restricts eligibility to those age 60 and above. Because nursing facilities are serving all ages, other demographic characteristics such as gender (PASSPORT serves more females) are

Table 9

Demographic Characteristics of PASSPORT Clients: 1993-1996

	Pre-June 1993 (Percentage)[a]	December 1994 (Percentage)[a]	June 1996 (Percentage)[a]
Age			
60-65	9.6	10.1	10.9
66-74	27.9	26.9	27.9
75-84	39.4	39.2	37.5
85-90	15.6	16.4	16.3
91+	7.5	7.4	7.4
Average Age	75.2	77.7	77.3
Gender			
Female	82.4	80.4	80.8
Race			
White	70.3	72.1	70.9
Marital Status			
Never married	5.0	5.0	5.5
Widowed/divorced/separated	74.4	74.0	76.2
Married	20.6	21.0	18.3
Current Living Arrangement			
Own home/apartment	77.1	79.5	74.3
Relative or friend	18.0	18.2	20.8
Congregate housing/elderly	4.9	1.1	0.8
Group home	0.1	0.0	0.1
Nursing facility	0.0	0.3	2.9
Other	0.0	0.9	1.1
Population	4,552	9,611	11,777

[a]Percentages are adjusted to reflect only those clients for whom information was available on each variable.

Source: PASSPORT MIS database.

Table 10

Functional Characteristics of PASSPORT Clients: 1993-1996

	Pre-June 1993 (Percentage)[a]	December 1994 (Percentage)[a]	June 1996 (Percentage)[c]
Percentage with Impairment/Needing Hands-On Assistance, Activities of Daily Living (ADLs)[b]			
Bathing	85.0	97.6	97.3
Dressing	58.6	71.1	70.1
Transferring	31.8	37.3	46.8
Toileting	27.3	34.0	30.7
Eating	25.9	10.7	9.8
Number of ADL Impairments			
0	10.8	0.7	0.9
1	10.2	2.9	2.6
2	18.9	33.2	31.5
3	22.7	29.7	32.7
4 or more	37.4	33.5	32.3
Average Number of ADL Impairments[c]	3.0	3.2	3.2
Percentage with Impairment in Instrumental Activities of Daily Living (IADLs)			
Phoning	27.5	31.9	29.4
Transportation	94.4	85.6	86.5
Shopping	97.2	98.0	97.8
Meal preparation	84.9	87.8	87.3
Housecleaning or laundry	97.8	98.6	98.4
Heavy chores	97.0	99.8	99.7
Legal and financial	78.3	76.3	74.5
Medication administration	52.8	37.2	44.5
Number of IADL Impairments			
0	0.4	0.0	0.0
1	0.0	0.0	0.0
2	0.6	0.5	0.2
3	2.2	2.6	2.5
4 or more	96.8	96.9	97.3
Average Number of IADL Impairments[c]	6.3	6.2	6.2
Sample	498	N.A.	N.A.
Population	N.A.	9,611	11,777

Note: ADL and IADL information for June 1993 was not available in PASSPORT MIS. This information was entered by Scripps from a sample of client records.

[a] Percentages are adjusted to reflect only those clients for whom information was available on each variable.
[b] Impairment includes all who could not perform by themselves or could perform with mechanical aid only.
[c] From list above.

Source: PASSPORT MIS database.

Table 11

Demographic Characteristics of New Medicaid Long-Term Care Recipients, April - June, 1996

	PASSPORT (Percentage)	Nursing Facility Medicaid Residents (Percentage)
Age		
Under 45		10.7
46-59		17.7
60-65	12.8	8.3
66-74	27.3	14.9
75-84	37.0	24.3
85-90	15.5	14.5
91+	7.4	9.5
Average Age	76.9	70.1
Gender		
Female	77.7	65.5
Race		
White	71.6	77.0
Marital Status		
Never married	5.2	19.7
Widowed/divorced/separated	75.0	62.0
Married	20.1	18.3
Population	1,868	1,477

Source: PASSPORT MIS Database, MDS+ Database.

also different for the two groups. PASSPORT serves a higher proportion of non-whites than nursing facilities.

A review of the functional characteristics of the two groups indicates that on average, nursing facility residents are more disabled. Interestingly, the PASSPORT clients have a lower proportion of individuals with no ADL impairments (1.5%) compared to nursing facilities (10.3%) and a comparable proportion have 3 or more ADL impairments (see Table 12). However, the nursing facility residents are much more likely to be severely disabled, with almost two-thirds of the group experiencing four or more ADL impairments, compared to less than one-third of the home care clients. Thus, while there is considerable overlap between the two populations, on average the nursing facility population is more disabled than the home care clientele. This suggests that while home care is able to provide alternative care for a proportion of nursing facility residents, it is not likely to serve as a substitution for all types of disabled individuals.

Survey of Nursing Homes and Hospitals

As a final data point in our study to examine changing patterns of long-term care utilization, we surveyed nursing home administrators and hospital discharge planners. The Scripps nursing home survey involved a random sample of 436 nursing facilities in the state, stratified by size of home. The hospital survey, completed by Case Western University researchers was sent to 185 acute care hospitals in the state. Both surveys were done via mail, the hospital survey had a return rate of 62% and the nursing home survey a 41% return rate. The surveys asked about the effects of the expansion of home care and pre-admission review on the use of nursing homes.

Table 12

Functional Characteristics of New Medicaid Long-Term Care Recipients, April - June, 1996

	PASSPORT (Percentage)[a]	Nursing Facilities Medicaid Residents (Percentage)[a]
Percentage with Impairment/Needing Hands-On Assistance, Activities of Daily Living (ADLs)		
Bathing	95.8	87.6
Dressing	30.1	74.3
Transferring	50.9	58.3
Toileting	28.4	65.6
Eating	8.0	27.9
Grooming	57.8	74.1
Number of ADL Impairments		
0	1.5	10.3
1	4.9	9.5
2	32.4	7.1
3	32.2	8.6
4 or more	29.0	64.5
Average Number of ADL Impairments[b]	3.0	3.9
Average Number of IADL Impairments[b]	6.2	
Population	1,868	1,477

[a]Percentages are adjusted to reflect only those clients for whom information was available on each variable.
[b]From list above.

Source: PASSPORT MIS Database, MDS+ Database.

Results from the two surveys were quite consistent. Both reported a modest change on use patterns, and reported that older people are using in-home care as an alternative to institutional care in an increasing number of cases. Nursing home administrators provided a range of responses about the effects of the expanded in-home care services. Some administrators reported a drop in occupancy rates as a result of an increase in community-based care, while others suggested the effect had been minimal. Hospital discharge staff reported a moderate effect, which also seemed to vary by region, and indicated that there was a need for further expansion of in-home services (Fortinsky, 1997; Straker & Crepeau, 1997).

Summary and Conclusion

The expansion of in-home care and the development of nursing home pre-admission review attempted to alter the way that long-term care was provided in the state. Evidence reported here indicates that Ohio has shifted long-term care utilization patterns. The occupancy rate of nursing facilities has dropped over the past four years, despite the fact that the size of the severely disabled older population has increased by 8,000 people over this time period. The Medicaid nursing home utilization rate for those age 85 and above has decreased. The proportion of Medicaid referrals to nursing homes from the community has declined. Nursing facility residents and PASSPORT home care clients have become increasingly more disabled over the four-year time period. Survey data from nursing home and hospital staff report a moderate shift from institutional to in-home care.

These data present a mixed picture for state policy makers. On one hand there is a consistent trend indicating that home care is being used as an alternative to institutional care for some categories of clients. Such a result has the potential to provide consumers with more

choice about care and will better prepare the state to respond to the projected increase in the size of the very old age group, those 85 and above. On the other hand, the increase in the under 60 population and the increase in short-term use of nursing homes suggests an attempt to shift acute care costs to the chronic care arena. Whether such a transfer exists, and what effect this may have on future state budgets, requires additional investigation. As state health policy evolves in the current environment, it will be essential for policy makers to examine health and long-term care reform in unison, rather than as two separate issues.

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