New England Journal of Public Policy

Volume 15 | Issue 2 Article 7

3-21-2000

Nursing Homes to Medicare Waiver Programs in Vermont

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This research examines the differences between nursing home residents and those who were able to leave nursing homes with the help of the Medicaid Waiver Program in Vermont. Ninety individuals who reentered the community with the aid of such waivers were compared with a random sample of nursing home residents through the use of the Nursing Home Minimum Data Set. The researchers found divergence in four key areas: cognition, continence, treatment categories, and desire to return to the community. Typically, those who left nursing homes for the community were cognitively intact, had moderate continence, received rehabilitative or clinically complex treatments, and expressed a desire to return to the community. Contrary to the prevailing theory, no differences were found between groups in the ability to perform activities of daily living, except for toilet use. This report also found that community-based treatment under the Medicaid waiver was a cost-effective alternative to traditional nursing home care.

Goals

This report has three main goals: (1) to examine information about those who entered the Medicaid Waiver Programs (MWP), which include both the Home and Community-Based System and the Enhanced Residential Care Medicaid Waiver Programs, directly from a nursing home;[1] (2) to determine if it was possible to combine and link information about these people from various data sources; and (3) to ascertain whether expenditures for waiver services had an effect on nursing home use and expenditures.

Data Sources

Data for this study were gathered from three primary databases: the nursing home Minimum Data Set 2.0 (MDS), Medicaid claims, and the Service Accounting and Management System (SAMS). Each holds different types of information, is maintained by a different source, and has a different purpose. The MDS, a survey mandated by the Health Care Financing Administration, which contains more than 400 variables, is filled out by nursing home staff. This data set contains information on demographics, levels of care, cognition, physical impairment, activities of daily living, medications, discharge likelihood, and rehabilitative services. The Medicaid claims database provides information on all Medicaid payments, including dates of service, facility information, and types of service for nursing homes and MWP services. The SAMS database contains assessment and service data on all clients served by the Division of Advocacy and Independent Living. SAMS includes information from the Independent Living Assessment, which covers many of the same topics as the MDS. SAMS has, in addition, extensive information on

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informal supports, home environment, instrumental activities of daily living, and nutrition.

Sample Selection

In state fiscal year (SFY) 1998, the Division of Advocacy and Independent Living, which oversees the Medicaid Waiver Programs, authorized 469 priority admissions.[2] Of these, 132 were for individuals who were seeking to move from nursing homes to the community. To qualify for MWP services, they had to meet both the clinical and the financial eligibility requirements for Medicaid-covered nursing home care.
These people made up the pool from which the study group was selected. Some were excluded from the pool although they were granted priority admission because they did not use the waiver attributable to such factors as lack of interest; improvements in physical condition; rapid physical decline; death; and lack of family support. While some services, usually case management, were delivered to about 113 individuals, substantial MWP services were offered to 90 persons, who made up the primary study group.[3]

A second group of 385 nursing home residents was randomly selected from the MDS database over a two-year period from July 1966 to July 1998 (N = 385) to act as a control group. The two-year span was selected so that the control group could be representative of as wide a time frame as practical.

Consumers

Typical Profile

The typical person who moved from a nursing home to a Medicaid Waiver Program in 1998 was a seventy-eight-year-old woman. Entering the nursing home from a hospital, she resided there for fewer than ninety days before entering the waiver program. There was an almost 50 percent chance that she had received waiver services at some time in the past. Her ability to understand, communicate, and make decisions was good. While in the nursing home, she probably received special rehabilitation services or care for a clinically complex condition. She needed extensive assistance with 2.5 activities of daily living (ADLs): bathing, dressing, transferring, toileting, and eating. She had a 50 percent likelihood of continence in bladder and bowel functions.

This woman resembled the typical nursing home resident in some ways but differed from her counterparts there in a few important practices. She was younger, had fewer extensive ADL needs (2.5 versus 3.0), and unlike many of her fellow residents, she could eat without help. She received more rehabilitation therapy, a larger number of medications, was more likely to be continent and more often able to make independent decisions than the others. She had a strong preference for care in the community. Additionally, nursing home personnel predicted that she would be discharged within ninety days 30 percent of the time, a much higher percentage than the ninety-day-discharge prediction of 10 percent for the average resident.

Consumer Profile

The study group was overwhelmingly comprised of women (79 percent) who ranged in age from 35 to 97, with an average age of 78 and a median age of 82. This was somewhat younger than the median age of the control group of nursing home residents, which was 86.

Length of stay information in the nursing home could not be determined for the control group, but it could be determined for about half the study group by calculating the time between the last nursing home admission and the waiver application date. With this date as a criterion, 76.7 percent of the study group were in a nursing home less than 90 days. The median stay was 71 days, and the average length of stay was 85 days. Lengths of stay were between 12 and 239 days, which means that most members of the study group were not long-term users of nursing homes.

Reason for Admission to Nursing Home

Finding 1. A change in functional status accounted for more than 80 percent of nursing home admissions for the study group.

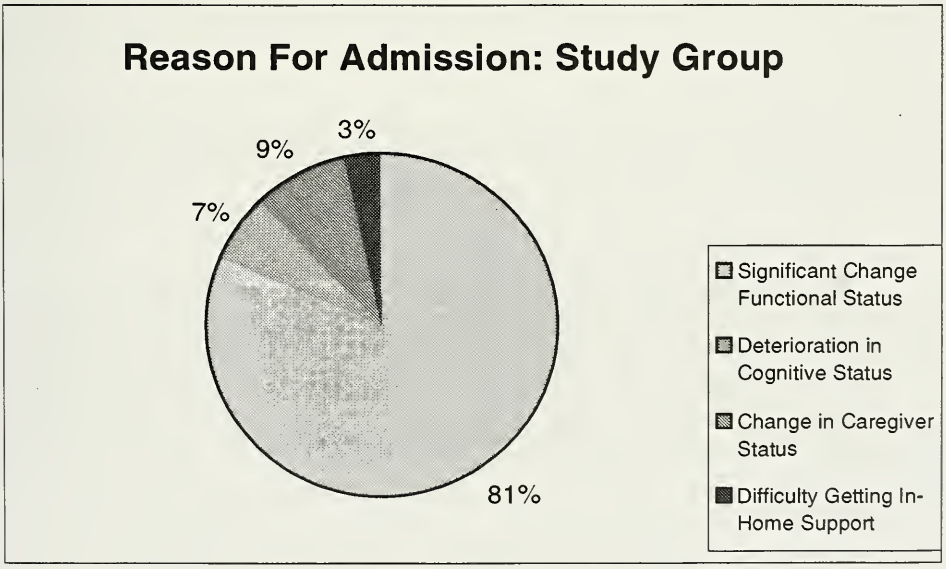
Significant change in functional status is the overwhelming reason for admission to a nursing home. Change in status is cited for more than 81 percent of admissions for the study group when multiple answers to this question were analyzed on a proportional basis.

In those cases where only a single reason for admission to the nursing home was cited, functional status accounted for 66.3 percent of admissions, followed by change in caregiver status at 4.7 percent. Cognitive deterioration and difficulty arranging or paying for in-home support were never cited as the total Medicaid savings sole cause for admission.

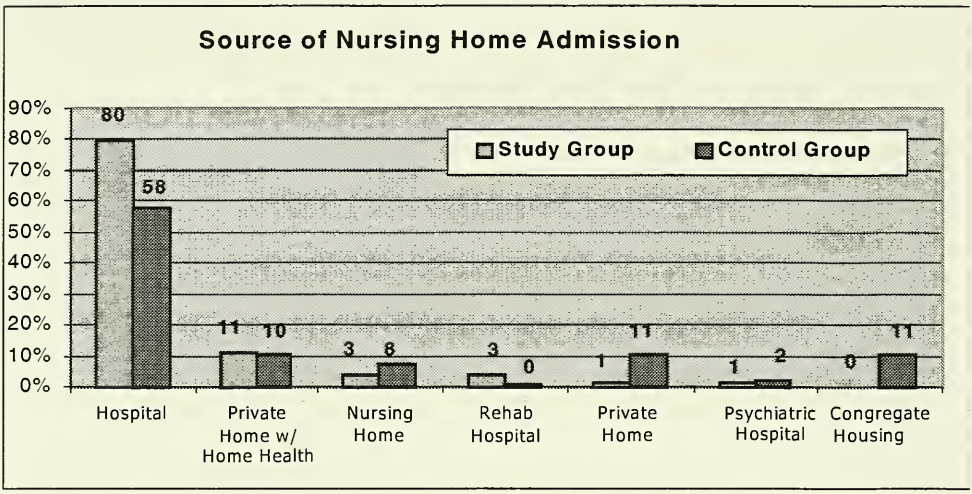
Admission Source

Finding 2. The vast majority of the study group entered the nursing home from a hospital. It is likely that a representative of a home health agency saw nine out of ten members of the study group before they entered the nursing home.

The vast majority of the study group (91 percent) was admitted to the nursing home from a hospital (80 percent) or a private home with home health services (11 percent). This is different from the random nursing home sample in which hospitals and households with home health services accounted for a total of only 68 percent of nursing home admissions. Compared with a similar report produced in 1998, admissions from hospitals



are up by 11 percent, while admissions from private homes with home health services are 12 percent lower than they were in 1999.



Activities of Daily Living

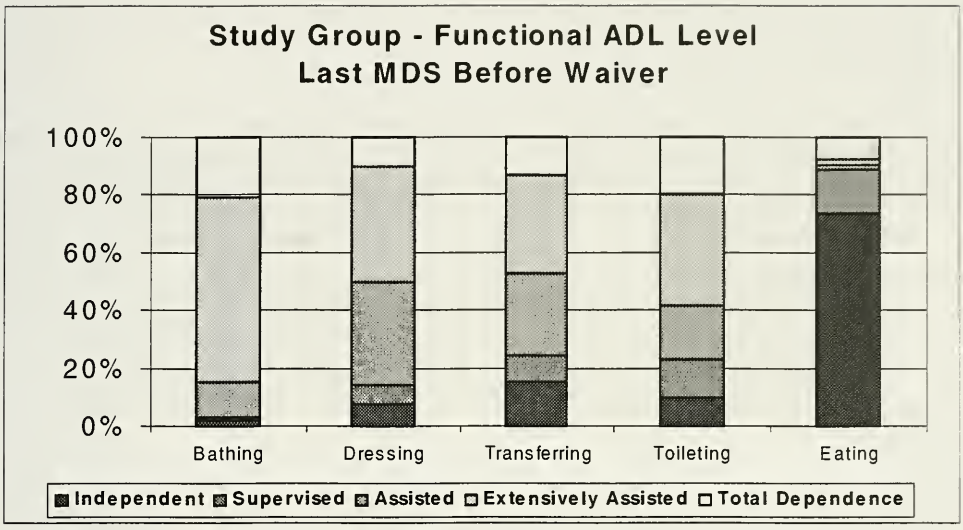
Finding 3. Activities of daily living, as measured by the Minimum Data Set 2.0, is not a reliable predictor of candidates for Home and Community-based Medicaid waivers.

Activities of daily living is a widely accepted standard for assessing functional abilities. The MDS, required for all nursing home residents, supplies a clear picture of the level of assistance needed by both the study group and the control group. The functional challenges faced by the study group were extensive, their deficits appearing to be less than the random nursing home sample. However, the variations are not statistically significant as a whole. In spite of this finding, two differences are present: (1) the control group had a higher percentage of people who were totally dependent in all ADLs, and (2) the study group had a much higher percentage of people who were independent or needed supervision only for eating.

The study group presented many functional challenges that required extensive assistance while they were in nursing facilities. With the single exception of eating, supervision and assistance were typically required to complete all ADLs.

Study Group: Most Assistance Needed with Any One ADL

Extensive Assistance	Assistance	Supervision	Independent
82	6	2	0



ADLs in Detail

MDS Activities of Daily Living: Study Group[4]

	Bathing	Dressing	Transferring	Toileting	Eating
Independent	2.2%	7.7%	15.4%	9.9%	73.6%
Supervised	1.1%	6.8%	8.8%	13.2%	15.4%
Assisted	12.1%	35.2%	28.6%	18.7%	1.1%
Extensively Assisted	63.7%	39.6%	34.1%	38.5%	2.2%
Total Dependence	20.9%	9.9%	13.2%	19.8%	7.7%
Did Not Occur	0.0%	1.1%	0.0%	0.0%	0.0%

Source: Minimum Data Set 2.0.

MDS Activities of Daily Living: Control Group

	Bathing	Dressing	Transferring	Toileting	Eating
Independent	0.3%	4.4%	20.3%	14.3%	41.8%
Supervised	2.9%	7.8%	6.2%	5.7%	20.5%
Assisted	4.9%	21.0%	22.3%	15.8%	12.5%
Extensively Assisted	50.6%	39.7%	29.6%	33.5%	10.6%
Total Dependence	41.3%	26.2%	21.3%	30.1%	14.3%
Did Not Occur	0.0%	0.8%	0.3%	0.5%	0.3%

Source: Minimum Data Set 2.0.

The variations between the study group and the control group are best characterized as differences of degree. In general, the control group has only slightly more severe functional challenges on all ADL measures except eating.

ADLs in the Community

After moving into the community, the study group percentage of individuals who can function independently, as measured by the Independent Living Assessment, seems to increase substantially in all areas except eating.

Independent Living Assessment
Activities of Daily Living: Study Group in the Community

	Bathing	Dressing	Transferring	Toileting	Eating
Independent	15.3%	38.7%	51.4%	55.0%	69.4%
Supervised	9.0%	8.1%	6.3%	9.0%	4.5%
Assisted	18.9%	18.9%	22.5%	13.5%	19.8%
Extensively Assisted	22.5%	18.0%	4.5%	1.8%	0.9%
Total Dependence	34.2%	16.2%	15.3%	20.7%	5.4%
Did Not Occur	0.0%	0.0%	0.0%	0.0%	0.0%

Source: Independent Living Assessment, from Service Accountant and Management System.

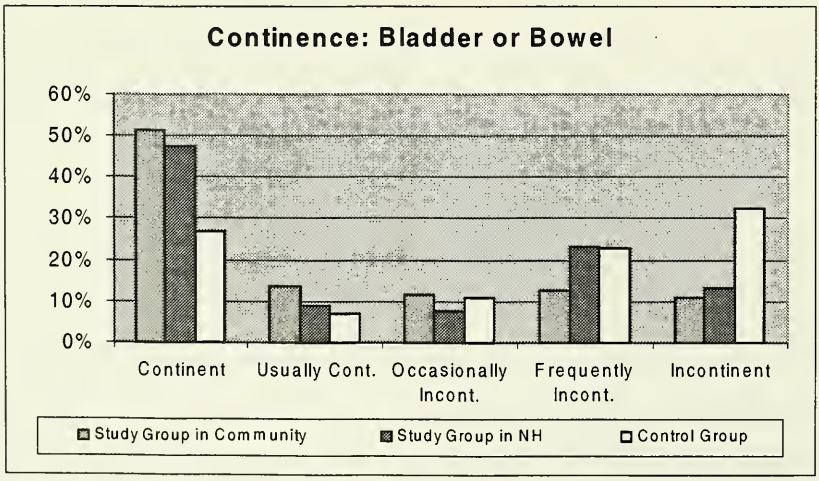
Continence

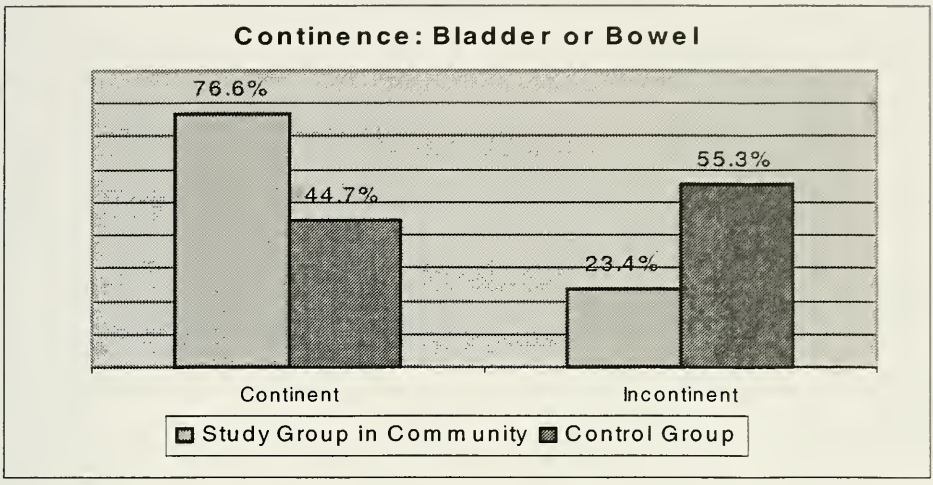
Finding 4. The study group is significantly more continent than the control group, and continence seems to improve in the community.

The study group has greater continence than the control group. Bladder and bowel continence are combined for this analysis to allow comparisons between the study group in the nursing home and after the nursing home. There is a large difference between the study group and the control group, the study group being the more continent.

The difference between the groups is dramatic when participants are placed in two classes, continent and incontinent.[5]

More than three out of four study group members were continent, compared with fewer than half of the control group of nursing home consumers.

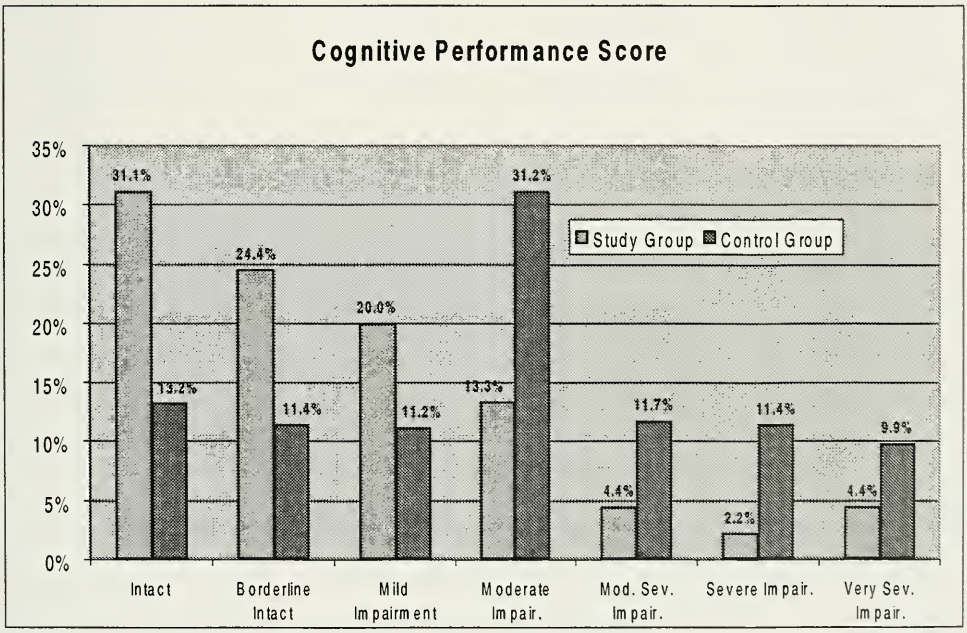




Cognition

Finding 5. The study and control groups have clear and striking differences in cognitive performance. As individuals' cognitive performance scores increase, it becomes more likely that they will move from a nursing home to waiver.

The most clearly defined dissimilarity between the study sample and the control group was in the area of cognition as measured by the Cognitive Performance Scale.[6] The difference between the two groups is dramatic. In the study group, 75.5 percent scored as intact, borderline intact, or mild impairment. Only 38.8 percent of the control group was in the same categories.



CPS Category Definitions

Intact	Independent in decision making, short-term memory, and making self understood
Borderline Intact	Independent in two of the following measures: decision making, short-term memory, and making self understood
Mild Impairment	Understood/usually understood by others, and independent/modified in daily decision making
Moderate Impairment	Usually understood by other or modified independence in daily decision making
Moderately Severe Impairment	Moderate impairment in decision making and sometimes/never understood
Severe Impairment	Severely impaired decision making and not totally dependent for eating
Very Severe Impairment	Severely impaired decision making and totally dependent for eating or comatose

RUGS-44

Finding 6. Study group members are much more likely to be recipients of rehabilitation or clinically complex care while in the nursing home than those in the control group. These RUGS-44 classifications clearly define the study group as one in which the majority were recovering from an illness, accident, or hospital stay.

RUGS-44 classifies consumers of nursing home care in 44 separate categories that describe the amount and types of care each consumer requires. The study group dominates three of the RUGS classes: special rehabilitation high, special rehabilitation medium, and clinically complex. When the rehabilitative classes and the clinically complex classes are combined, they represent 73.3 percent of the study group and less than 30 percent of the control group.

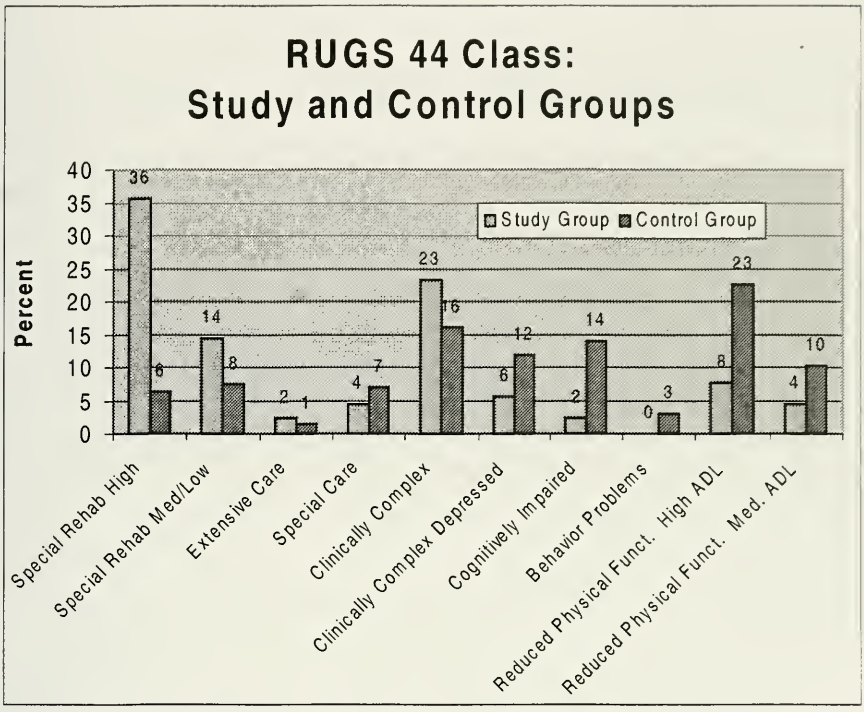
The special rehabilitation categories include persons who are receiving physical, occupational, or speech therapy in addition to rehabilitative care. The therapies must be at least 45 minutes per week for low intensity, 150 minutes for medium intensity, and more than 300 minutes per week for high intensity.

The clinically complex category covers persons who are receiving special care for specific illnesses. The majority of the study group who were in the clinically complex category were recovering from strokes and/or heart failure.

RUGS-44: A Retrospective Look

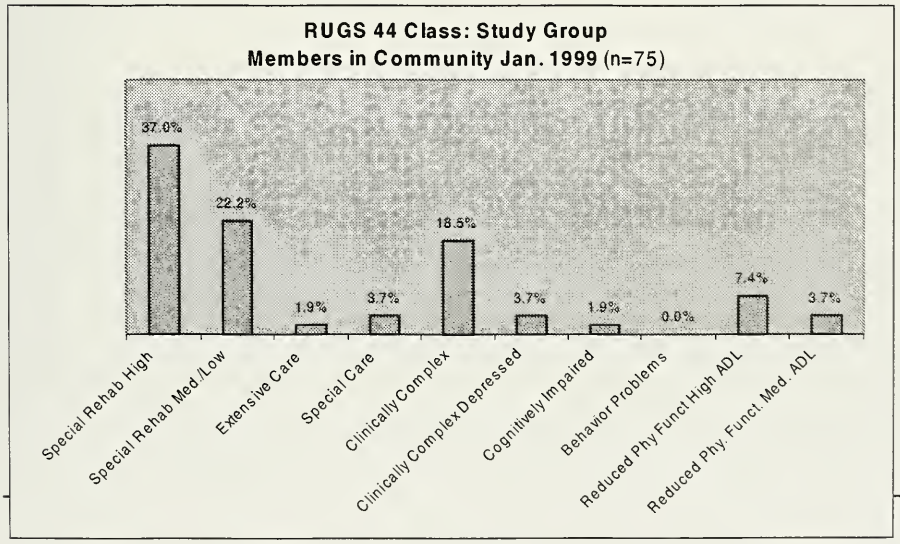
Finding 7. Those in RUGS special rehabilitation categories are more likely to become long-term users of the waiver.

A survey of Medicaid claims data from January 1999 gives an indication of the individuals in the study group who can maintain themselves in the community for a period of



time. A review of Medicaid waiver claims indicates that seventy-five people, about three-fourths of the study group members, are still generating Medicaid waiver claims between six and eighteen months after entering the program.

The RUGS-44 Class figure represents the RUGS classes assigned in the nursing home to those with active claims in January 1999. Those who received special rehabilitation and clinically complex care account for nearly 78 percent of individuals who had active Medicaid Waiver Program claims in January. This means that the same RUGS classes which differentiate the study and control groups also identify long-term MWP waivers.



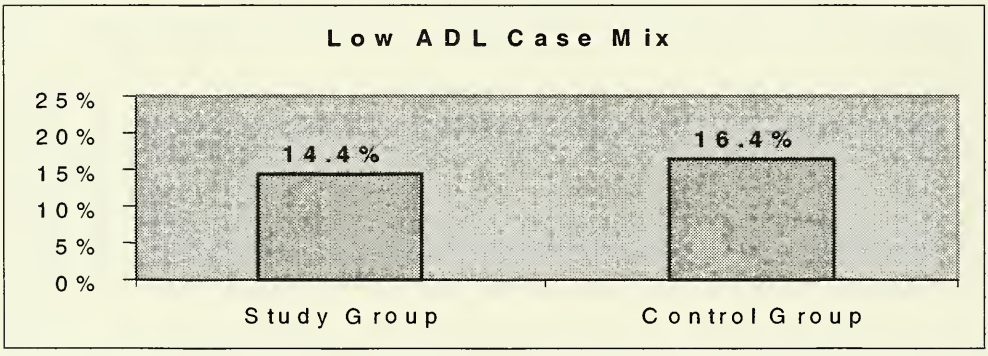
RUGS-44: Relative Differences:
Study Group and Study Group with Claims in January 1999

	Study Group	Study Group with Claims, January 1999
Special Rehabilitation (high)	35.6 percent	37.0 percent
Special Rehabilitation (medium/low)	14.4 percent	22.2 percent
Clinically Complex	23.3 percent	18.5 percent
N =	90	75

Case Mix

The Low ADL Case Mix is a combination of RUGS categories, which contain individuals who are most accurately described as having low ADL deficits.[7] The percentage of low ADL patients in the control group is nearly identical to the control group, 14.4 percent to 16.4 percent, respectively. This directly contradicts research that links lower ADL scores with success in community-based placement.[8]

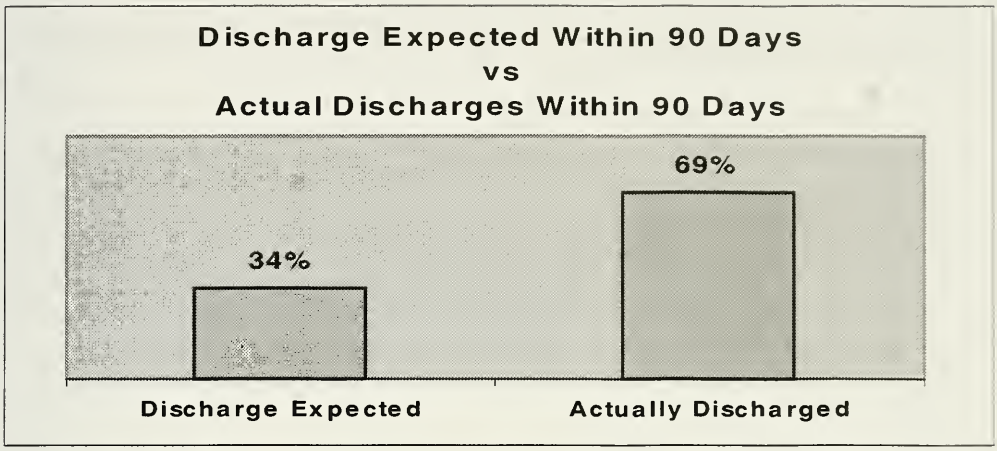
The small differences in the Low ADL Case Mix score indicate that low ADLs as measured by the Minimum Data Set 2.0 are not a primary determinate of whether an individual moved to the community under an MWP waiver.

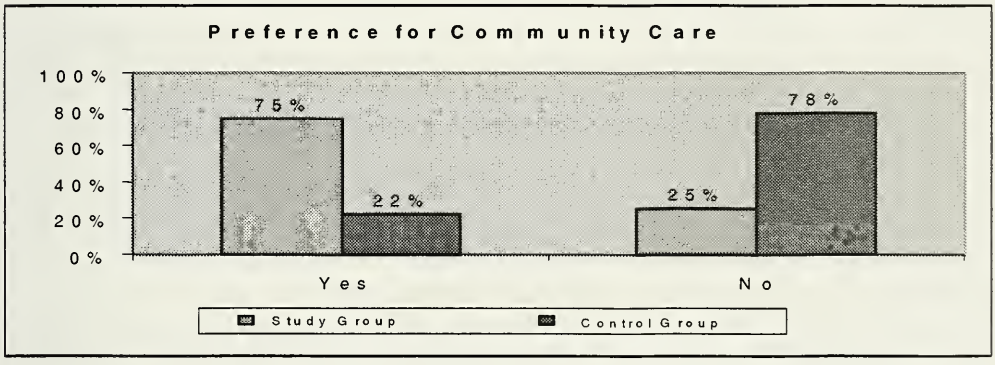


Prior Waiver Services

A majority of the study group members, 54 percent, had received some waiver services before securing a priority admission to the program in state fiscal year 1998.[9] To be admitted to the program more than once, an individual would have to terminate the program voluntarily, have a hospital/nursing home stay of more than thirty days, and become clinically or financially ineligible.

A significant number of the waiver users do move between nursing homes or hospitals and community-based services. This pattern is evidenced in the Medicaid claims which show that more than half the study group had Medicaid waiver claims prior to the nursing home stay. A similar pattern of movement can be seen in claims for SFY 1997.





Discharge Planning

Finding 8. Study group members are much more likely than control group members to prefer a community care setting. Study group individuals are regarded as more likely candidates for discharge from a nursing home within ninety days even though nursing home staff underestimated the likelihood of discharge within that period by at least 30 percent.[10]

Community Care Preference

As part of the MDS assessment, consumers were asked if they chose to return to the community. The study group consumers had a very strong preference for care in a community setting, nearly the exact opposite to that of the control group.[11]

Study group participants who made a successful transition to community-based care had their potential for discharge within ninety days rated quite low according to MDS data. There is a wide discrepancy between the percentage of residents the nursing home personnel thought could be discharged, 34 percent, and the percentage, 69 percent, who were actually discharged within ninety days of their MDS assessment.

Geographic Location and Type of Provider

Finding 9. Home health agencies enroll more consumers in MWP from nursing homes than area agencies on aging; there are also regional differences in the nursing home to MWP priority admission rates.

Home Health and Area Agencies on Aging

In Vermont, two types of agencies administer the MWP waiver. When the data for the study group are analyzed by type of agency, the utilization rate for home health agencies (HHAs) is more than twice that of the area agencies on aging (AAAs). It is difficult to explain why this disparity exists because both types of agencies use a team process with team members who represent similar community interest to determine who gets a waiver, and access to the waiver by region is set by the state through a slot allocation process. It should be noted that HHAs may be advantaged in this process through their presence in hospital discharge planning and the possibility that they have provided home health services to a particular client in the past.

Distribution by Provider Type per Thousand Sixty-Five-Plus Population

DAA Type	Priority Admissions, Nursing Home to Waiver	Study Group	Study Group with Claims, January 1999
AAA	7.81	4.15	3.77
HH	12.98	10.33	8.50

By Region

Differences by county exist in the population standardized rate: (1) for priority admissions to the MWP waiver; (2) by use of the priority admission; and (3) for claims six to eighteen months after a priority admission to the MWP was granted. Across all measures, Addison County shows the highest rates of utilization of nursing home to MWP waiver; Lamoille and Orange counties show the lowest.

Distribution per Thousand Sixty-Five-Plus Population

County	DAA Type	Priority Admissions, Nursing Home to to Waive	Received Services	Billing, January 1999
Addison	HH	4.12	3.30	3.30
Orleans	AAA	2.73	1.91	1.91
Franklin	HH	2.50	2.04	1.81
Washington	HH	2.06	1.78	1.10
Chittenden/G.I.	HH	1.44	1.29	0.84
Bennington	HH	1.12	0.93	0.74
Caledonia	AAA	1.00	0.50	0.50
Windsor	AAA	0.84	0.48	0.48
Rutland	HH	1.75	0.98	0.44
Windham	AAA	1.59	0.53	0.35
Lamoille	AAA	0.42	0.42	0.00
Orange	AAA	1.24	0.31	0.00
Average		1.73	1.21	0.96

Expenditures and Estimated Savings

Finding 10. The estimated savings for the study group from June 30, 1997, through October 31, 1998, was between $423,433 and $251,583, depending on the types of Medicaid cost included.

Background

Few people question the social benefits of community-based care, but many ask whether community-based care provides an overall cost saving. The answer to this question is open to interpretation; evidence, however, suggests that community care for nursing home Medicaid-eligible persons results in lower Medicaid costs.

In nearly all published studies, the "gold standard" for calculating cost savings under the waiver program is: (amount of avoided nursing home cost) minus (cost of community care). An analysis following this basic methodology was developed to compare the actual cost of the Medicaid waiver services with the Medicaid cost for nursing home care that was potentially avoided by members of the study group during a sixteen-month period. Four months was added to the end of the fiscal year so that a portion of the potential savings from individuals who entered the program late in the fiscal year would be represented.

Calculating Days Avoided

The days avoided are days of Medicaid-covered nursing home care that were not needed because of waiver services.[12] They were calculated for the members of the study group by (1) including only individuals who had Medicaid nursing home billing; (2) including only individuals who received MWP services in a community-based setting; and (3) adding up the days after a nursing home discharge until waiver services were terminated or the study ended (October 31,1998).

Medicaid Nursing-Home-Days Avoided	Statewide Average Medicaid Expenditure per Nursing Home Bed Day	Avoided Expenditures
8,595	$85.88[13]	$738,139

This method for calculating days avoided is very conservative because (1) it ignores the possibility that waiver services in advance of a nursing home admission delayed the need for nursing home placement, and (2) it discounts the possibility that anyone with a source of nursing home payment other than Medicaid might have switched to Medicaid at a later date.

Calculating Cost

Determining the actual Medicaid cost of the waiver program is not entirely straightforward. The main question is one of scope and inclusion. For this reason the cost of the Medicaid waiver program for the study group is calculated three different ways. One method measures the cost efficiency of the waiver program during nursing- home-avoided days, another measures the overall cost efficiency of the waiver for the study population, and the last takes into account both direct and indirect Medicaid costs.

Cost Method 1

This method uses payments for waiver services only when nursing home bed days are avoided. It measures the basic cost efficiency when the waiver program directly replaced nursing home care. It yields the highest efficiency rate, but its scope is limited because it maximizes the savings by eliminating all cost not directly associated with days avoided. The method is too narrow to be useful except as an indicator of waiver cost versus nursing home cost on a day-to-day basis.

Nursing Home Cost Potentially Avoided	**Payments for MWP Waiver Services** Only during nursing home days avoided	**Savings in Medical Expenditures** During nursing home days avoided
$738,139	$157,562	$580,577

Cost Method 2

The second method of cost calculation includes all payments for waiver services for all members of the study group during the entire study period, July 1, 1997, to October 31, 1998. This method looks at all those who were priority nursing home admissions to the waiver program even if they generated no nursing-home-avoided days. By using the cost for all members of the study group, this method acknowledges that while all Medicaid Waiver Program participants generate waiver expenditures, some of them will not generate savings through avoided nursing home cost.

This method measures the cost efficiency in terms of direct payments for waiver services for the entire nursing home to waiver population and is most in line with established case studies of waiver versus nursing home cost.

Nursing Home Cost Potentially Avoided	**Payments for MWP Waiver Services** For the entire study group over the entire study period, July 1, 1997, to October 31, 1998	**Savings in Medicaid Expenditures**
$738,139	$314,706	$423,433

Cost Method 3

The third method includes all payments to waiver providers for the study group during the entire study period and a correction factor that estimates other Medicaid costs associated with the study group. These costs are claims paid by Medicaid for (1) items and services not normally included in the nursing home per diem or (2) items and services that are not typically included in the service package provided by the Medicaid waiver program.

Including other Medicaid costs is important because they are much higher for the typical waiver recipient than for the typical nursing home resident. This is because many of the other Medicaid-covered expenses used by waiver recipients in the community are included in the cost of nursing home care. An example of another Medicaid expense for a waiver client could be the routine monitoring of vital signs or administering an injectable medication by a home health agency. This same service in a nursing home would be included under the regular per diem charge.

For a waiver recipient, the other Medicaid costs can cover a variety of services and goods including drugs; doctors' visits; short-term nursing home care, emergency care, durable medical equipment, home health and hospital care; other Medicaid cost for nursing home residents would cover everything but home health and durable medical equipment.

The difference in other Medicaid expenditure between waiver recipients and nursing home residents is substantial. During SFY 1998, the average waiver recipient had other Medicaid billing of $5,088, while the average nursing home resident generated other Medicaid billing of $1,457. To reflect all Medicaid cost, both the waiver and the nursing-home-avoided expenditures must be adjusted to reflect the increased cost represented by other Medicaid expenses.

Statewide Average per Individual Served

	Medicaid Expenses	Other Medicaid Expenses
Waiver	$7,404	$5,088
Nursing Home	$24,218	$1,457

Corrected Cost for Other Medicaid

	Payments for Services	Estimated Other Medicaid Cost	Corrected Cost
Waiver	$314,706	$216,250	$530,956
Nursing Home	$738,139	$44,400	$782,539

Savings for Entire Study Group, Including All Medicaid Cost

Nursing Home Cost Potentially Avoided	Estimated Total Medicaid Cost for Study Group	Total Medicaid Savings
$782,539	$530,956	$251,583

Recommendations for Further Research

This report found that activities of daily living (ADLs), as measured by the Minimum Data Set 2.0 with its present rules for reassessing individuals, cannot differentiate between the nursing home population and the nursing home to waiver population. New rules requiring more frequent MDS reassessments for some individuals are being implemented, and such rule changes may enhance the ability of the MDS to identify individuals in the nursing home to waiver population by ADLs. Additional research is needed to determine whether ADLs become a significant measure under new rules.

It also found that cognition, continence, RUGS-44 class, and preference for community care were different for the nursing home to waiver population and the general nursing home population. Further research is necessary to determine whether these differences can be used to develop a statistical model that can reliably determine whether an individual is a likely candidate for a community-based Medicaid waiver.

Appendix

Technical Supplement

Part A: Expenditure Methodology

It is widely suggested that Medicaid waivers allow states to avoid Medicaid nursing home cost. A number of studies and demonstration projects have shown savings. Some use broad-based trends while others use case studies of projects providing home and community-based services. There is, however, little concurrence on either models or results.[14] The largest stumbling block in the case study methodology is that the starting points for case studies were individuals in the community, which inevitably led to difficulties in predicting if anyone in the study would be admitted to a nursing home in the future. The difficulty with the broad-based approach is that it is grounded on large-scale historical trends and cannot account for recent changes in the overall health care system.

The methodology chosen for this report is most closely allied with the case study method, but it differs because

1. The sample contains only people who have had nursing home care, which eliminates persons who might receive home and community-based services but would never enter a nursing home.
2. The days-avoided calculation includes only those people who have at least one Medicaid-paid nursing home bill. This limits the cost calculations for Medicaid nursing home costs to only those with proven financial and clinical eligibility for Medicaid nursing home care.

Assumptions

The model rests on two main assumptions:

1. Medicaid nursing home recipients would have remained in the nursing home throughout their time on Medicaid community-based services. It is important to note that financial and clinical eligibility for Medicaid nursing home care and MWP services are exactly the same. It is also important to note that some individuals in the study group were terminated from MWP Medicaid services because their condition improved and they required less than a nursing home level of care.
2. Medicare recipients who move to Medicaid waivers are likely to be discharged from the nursing home to the community even if home and community-based waivers are not available. Therefore, Medicare recipients are not included in the nursing home bed-days-avoided calculations. This was done to limit the possibility of overcounting the number of nursing-home-avoided days, because of a high rate of discharges (67.6 percent) from nursing home to the community while still covered under Medicare.

Calculating Nursing-Home-Avoided Bed Days: Days-Avoided Calculation Criteria

1. To be a candidate for the days avoided calculation, an individual had to have a paid Medicaid nursing home claim.
2. Each individual had to have received substantive Medicaid Waiver Program services in a community setting. This eliminates everyone who received only case management while still in a nursing home.
3. Nursing home days avoided started on the day after a nursing home discharge and continued until waiver services were terminated, or October 31, 1998, whichever came sooner.
4. Some study group members had very short nursing home stays — usually less than ten days — while receiving waiver services. Any days spent in a nursing home during days avoided were subtracted from days avoided.[15]

Part B: Low ADL Case Mix

Low ADL case mix scores are based on RUGS-44 classification. The RUGS classes include:

1. Rehabilitation High Intensity A
2. Rehabilitation Medium Intensity A
3. Clinically Complex A without Depression
4. Clinically Complex A
5. Impaired Cognition A
6. Impaired Cognition A with NSG Rehabilitation
7. Reduced Physical Function A1

Part C: Minimum Data Set Cognitive Performance Scale

The Cognitive Performance Scale (CPS) was developed, under a Health Care Financing Administration contract, by John Morris et al., Department of Social Gerontological Research, Hebrew Rehabilitation Center for the Aged, Boston, Massachusetts, to assess a wide range of cognitive functioning using only the variables collected by the Minimum Data Set (MDS). The CPS was designed to replace two separate tests of cognitive functioning used in nursing homes, namely, the Mini Mental Status Exam and the Test for Severe Impairment.

The CPS is based on an interaction of five variables found on the MDS.

1. Is patient comatose? Yes/No
2. Short-term memory? OK/Not OK
3. Decision making — Range from independent to severely impaired

4. Making self understood — Range from understood to never understood
5. Eating — Range from independent to total dependence

Notes

1. For the purposes of this report, no distinction is made between users of the Enhanced Residential Care Medicaid Waiver and the Home and Community-Based Services Medicaid Waiver. Both are referred to as Medicaid Waiver Programs.
2. In 1997, a first-come, first-served system was replaced by a priority-based system that grants admission to the Medicaid Waiver Program to persons determined to have the highest risk of institutionalization.
3. The study group sample size occasionally goes below ninety because of restrictions on specific data elements. This is noted when the number falls significantly.
4. The source for the activities of daily living data for the study group and for the control group is the Minimum Data Set (MDS). The source for the ADL study group in the community is the Independent Living Assessment (ILA) contained in the Service Accounting and Management System (SAMS). Caution should be used when comparing SAMS and MDS information because (1) different instruments are used; (2) the instruments are used in different care settings; (3) different care settings may have different expectations; (4) there are issues of inter-rater reliability on the ILA; and (5) there is an extended time period between MDS and ILA assessment, which may account for different results owing to changes in health status.
5. The criteria for continence in this analysis are bladder incontinence less than daily and bowel incontinence once a week or less.
6. For more information see the Appendix, Technical Supplement, Part C.
7. Low ADL case mix categories are listed in the Appendix, Technical Supplement, Part B.
8. ADLs as measured by the MDS in Vermont.
9. It should be noted that it is possible for some individuals to be overcounted as receiving waiver services prior to their last nursing home admission when their nursing home claim is part of their care under the waiver. This is because the data do not differentiate between those who receive non-waiver-related nursing home care and those who receive nursing home care while on the waiver.
10. Based on Medicaid claims data and MDS question Q1b.
11. MDS question Q1a.
12. For a more detailed explanation of cost and expenditure calculations, see the Appendix, Technical Supplement, Part A.
13. The estimated average cost for a Medicaid nursing home bed day, $85.88 in SFY 1998, excludes any patient share and liability.
14. Susan C. Hedrick and T. S. Inui, "The Effectiveness and Cost of Home Care: An Information Synthesis," *Health Services Research* 20 (1986); the Lewin Group, "Estimated Cost Savings from the Use of Home and Community-Based Alternatives to Nursing Facility Care in Three States" (Washington, D.C.: AARP, Public Policy Institute, 1996).
15. The primary data source for these calculations was Medicaid claims records from July 1, 1997, to October 31, 1998. Four months were added to the state fiscal year to capture information on individuals who entered the Medicaid Waiver Program late in the fiscal year.