SeniorCare Waiver Report
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EVALUATION REPORT FOR THE WISCONSIN SENIORCARE SECTION 1115 PHARMACEUTICAL BENEFIT DEMONSTRATION

Wisconsin Department of Health Services
Office of Policy Initiatives and Budget
Policy and Research Section
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Executive Summary

The Wisconsin SeniorCare waiver program was first implemented in September 2002 as a demonstration project approved by the Centers for Medicare and Medicaid Services (CMS). The program was designed to provide assistance with the cost of prescription drugs for low-income seniors in Wisconsin. Access to prescription medication is recognized as an important primary health care benefit. Use of prescription drugs is cost-effective compared to the cost of hospitalization or long term care, but inadequate insurance coverage for prescription drugs leads many low-income individuals to restrict their use of essential medications, which has the potential to increase other, non-pharmacy health care costs.

Since 2002, the SeniorCare waiver program has continued to operate under waiver extensions and renewals. As required by CMS, an evaluation of the program was conducted for the waiver period that ended on December 31, 2015. The evaluation included a survey of a random sample of 1,000 recent SeniorCare enrollees examining their experiences with the program and the program's impact on their ability to afford their medicines.

More than one-quarter of respondents reported that before enrolling in SeniorCare they sometimes failed to fill or delayed filling a prescription or skipped or reduced doses because they could not afford to pay for their medicines and other necessary expenses, thus, highlighting the need for prescription assistance. After enrolling in SeniorCare, fewer individuals reported ever taking these actions, and fewer individuals reported having less to spend on essential expenses in order to pay for their prescriptions.

About 90 percent of respondents reported that they were spending about the same or less for their medicines after enrolling in SeniorCare. A small number, about 16 percent, of survey respondents reported that it was still a little difficult to pay for their medicines since joining SeniorCare, but that was half the number who found it difficult before enrollment.

The survey respondents reported favorable experiences with the SeniorCare program despite their limited enrollment period. Ninety-five percent of respondents said that it was easy to enroll and 94 percent said that it was easy to buy prescriptions through the program. Three-quarters of the respondents said that all of the medicines they take are covered by SeniorCare.

The evaluation also assessed the Medication Therapy Management (MTM) benefit which became available to SeniorCare members in 2012. Under MTM, pharmacists are reimbursed for providing in-depth analysis of all medications and support for members considered at high risk due to chronic conditions or multiple prescriptions. Research has shown that this support, which is intended to help members manage their medications and improve adherence, helps to improve health outcomes in a cost-effective way. At the time of data collection for this evaluation, relatively few SeniorCare members, less than 15 percent, had received any MTM services. The services that were provided appeared to be appropriately targeted to members who meet specified eligibility criteria.

In addition, the evaluation examined the effect of the program on the receipt of Medicaid and Medicaid-funded nursing home care by Wisconsin seniors as well as on the rate of hospital admissions among seniors for medical conditions such as heart disease and diabetes. Findings from this component of the

evaluation are inconclusive as to whether the SeniorCare waiver program led to reduced use of Medicaid or Medicaid-funded nursing home care by Wisconsin seniors, or reduced use of non-prescription medical services such as hospitalizations.

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Information about the Demonstration

This Evaluation Report is for project number 11-W-00149/5, the Wisconsin SeniorCare Section 1115 Demonstration. The Centers for Medicare and Medicaid Services (CMS) approved this Demonstration for the period January 1, 2013 through December 31, 2015. This was a renewal of the existing demonstration.

Brief History and Description of the SeniorCare Program

As health care costs continue to rise, access to prescription medication is increasingly important as a primary health care benefit. Studies estimate that use of prescription drugs is cost-effective compared to the cost of hospitalization or long term care. Yet inadequate insurance coverage for prescription drugs leads many low-income individuals to reduce their use of clinically essential medications, potentially increasing health care costs in the aggregate through increased office visits and hospital and nursing home admissions. The Wisconsin SeniorCare program was designed to address this issue by providing assistance to low-income seniors with the costs of prescription drugs.

The SeniorCare Program was approved by CMS as a Section 1115 demonstration for a period of five years beginning in 2002. After the initial approval period, Congress enacted legislation to allow Wisconsin to continue the program through December 31, 2009. The state subsequently requested an extension and CMS extended the waiver to December 31, 2012. On September 26, 2012 the State of Wisconsin submitted a new request, which CMS approved, to extend its SeniorCare demonstration for the period January 1, 2013 through December 31, 2015.

The SeniorCare Program offers a comprehensive prescription drug benefit to Wisconsin residents age 65 and older who are U.S. citizens or have proof of immigration status, have an income at or below 200 percent of the federal poverty level (FPL), are not receiving full Medicaid benefits, and who pay the applicable annual program enrollment fee of $30 per person.[1]

SeniorCare is a voluntary program and individuals may apply for SeniorCare benefits upon turning age 65. While Medicare Part D is also a voluntary program, it imposes a penalty for delayed enrollment without creditable coverage, which SeniorCare does not. SeniorCare members may have other insurance that includes prescription coverage, including Medicare Part D, as well as employer-sponsored coverage or other coverage purchased by the member. SeniorCare coordinates benefits with other insurance coverage.

The SeniorCare program includes several innovative features, including: 1) a simple application and enrollment process, 2) an open formulary and broad network of providers, and 3) affordable cost-sharing for participants. Since 2002, SeniorCare has provided drug coverage to more than 260,000 seniors in

[1] Although Wisconsin offers identical pharmacy benefits to seniors between 200 percent and 240 percent of the FPL, benefits provided to these individuals are funded entirely through state money and are not part of the waiver demonstration. This evaluation design focuses solely on the SeniorCare waiver program.

Wisconsin. Prior to the implementation of the Medicare Drug Benefit (Part D) in CY2006, SeniorCare was the only pharmacy coverage available to low-income seniors in Wisconsin, and since CY2006 it has served as creditable alternative coverage and a wrap-around program for Medicare Part D. Individuals with prescription drug coverage under other health insurance plans may enroll in SeniorCare, which coordinates benefit coverage with all other health insurance coverage, including Medicare Part D.

The primary purposes of the demonstration project are to keep Wisconsin seniors healthy by continuing to provide a necessary primary health care benefit; reduce the rate of increase in the use of non-pharmacy related services provided to this population, including hospital, nursing facility and other non-pharmacy related medical services; and help control overall costs for the aged Medicaid population by preventing seniors from becoming eligible for Medicaid due to deteriorating health and spending down to Medicaid eligibility levels.

A 2007 evaluation of the program[2] found that SeniorCare was implemented in 2002 successfully with relatively few problems. SeniorCare was associated with important successes in the use of prescription medications. There was a reduction in self-reported instances where members would go without the daily necessities and skipping doses of their prescribed medications for financial reasons. SeniorCare led to a reduced entry into Medicaid for enrollees compared to a matched group of control group members from Ohio, which at that time did not have a pharmacy assistance program for seniors, as well as lower rates of nursing home entry and Medicaid nursing home expenditures for former SeniorCare members. Between CYs2002-2005, the rate of seniors without drug coverage (prior to Medicare Part D) decreased by 37 percent for members below 100 percent of the FPL and 25 percent for members between 100 and 200 percent of the FPL.

Brandeis University also conducted the evaluation for the CYs2009-2012 waiver period.[3] The evaluation found that SeniorCare remained a popular program with stable enrollment. Seventy-five percent of the members re-enroll each year. Compared to Medicare Part D, SeniorCare has better options in terms of out-of-pocket spending. SeniorCare provides considerable savings in out-of-pocket spending for members below 100 percent of the FPL, since it does not have an asset requirement. SeniorCare lowered out-of-pocket costs up to 68 percent over Medicare Part D for members with high drug needs.

For further descriptive information about the program, including recent data on enrollment, member characteristics, and utilization and costs, see Appendix A. The appendix builds on information about program enrollment, utilization, and costs as reported in the evaluation of the initial waiver period as well as a more recent evaluation report completed in 2012.

Organization Conducting the Evaluation

The current evaluation has been conducted by the Policy and Research Section of the Office of Policy Initiatives and Budget (OPIB). OPIB is an executive-level office attached to the Office of the Secretary of the Wisconsin Department of Health Services (DHS). OPIB oversees agency-level budget development, policy development and research. OPIB provides policy and research services, including evaluation

[2] See "Evaluation of State Pharmacy Assistance Programs in Illinois and Wisconsin" (August 31, 2007), prepared for the CMS by researchers at Brandeis University under contract number CMS 500-00-0031/T.O. #2.
[3] See "Evaluation of Wisconsin SeniorCare" (August 30, 2012) by Cindy Parks Thomas and Donald S. Shepard.

services, for the DHS. The unit does not have any administrative or program responsibilities for the SeniorCare Demonstration.

This evaluation was managed by Linda McCart, Policy Chief. The lead analyst for this evaluation was Susan Cochran, Evaluation Analyst.

Evaluation Objectives and Hypotheses

The SeniorCare program benefits seniors by providing access to medications that help to prevent and control adverse health conditions, thus helping to keep seniors healthy and avoid or delay Medicaid eligibility and spending on non-drug health services such as emergency department visits, hospitalizations, and nursing home care. The overall demonstration hypothesis is that extending pharmacy benefits to the aged population will result in a reduction in the rate at which the aged population spends down to full Medicaid benefit eligibility levels, thereby controlling overall costs for this population.

The specific evaluation hypotheses are as follows:

1. Recent enrollees in the SeniorCare waiver program will report lower levels of financial hardship and prescription non-adherence after enrolling in SeniorCare than for a comparable period prior to program enrollment.

2. SeniorCare waiver program members who receive Comprehensive Medication Review and Assessment (CMR/A) services will have improved medication adherence, compared to members who do not receive CMR/A.

3. The rate of Medicaid entry among Wisconsin seniors age 65 and older will be lower after SeniorCare implementation than before SeniorCare.

4. The rate of hospital admissions among Wisconsin seniors age 65 and older for selected medical conditions such as diabetes and heart disease will be lower after SeniorCare implementation than before SeniorCare.

5. The rate of Medicaid-funded nursing home admissions among Wisconsin seniors age 65 and older will be lower after SeniorCare implementation than before SeniorCare.

The evaluation hypotheses, methods and data sources are discussed next. A similar analytical approach is used to address Hypotheses 3-5; therefore the methods and data sources for these hypotheses are discussed in a single section.

In addition, this evaluation revisits and builds on earlier evaluations of the SeniorCare program conducted by Brandeis University.

The subsequent sections discuss the methods, findings, and limitations of the evaluative efforts undertaken for each of the above hypotheses.

Effects of SeniorCare on Cost-Related Non-Adherence and Financial Burden

Hypothesis 1: Recent enrollees in the SeniorCare waiver program will report lower levels of financial hardship and prescription non-adherence after enrolling in SeniorCare than for a comparable period prior to program enrollment.

Background

Previous research has demonstrated widespread problems among low-income and elderly individuals in paying for prescription drugs, often because they lack prescription drug insurance. An earlier evaluation of the state pharmacy programs in Illinois and Wisconsin conducted by Brandeis University in 2007 included a survey of participants in those programs, which documented that publicly-funded drug programs such as SeniorCare could alleviate this problem. The current evaluation sought to re-visit this issue to determine whether the program still serves to alleviate drug-related financial hardship and provide a critical health benefit as intended.

Methods and Data Sources

A sample of recent SeniorCare waiver enrollees was surveyed about changes in their access to needed medications and their ability to pay for those drugs. The one-time survey addressed two time periods: before and after SeniorCare enrollment.

Questions addressed by the survey included:

- Use of prescription medications
- Insurance coverage (other than SeniorCare) for medications
- Experience of cost-related non-adherence (e.g., skipping or delaying prescriptions, reducing dosages) or financial hardship (e.g., going without necessities in order to fill prescriptions)
- Enrollee health status and recent hospital admissions, emergency department visits, or nursing home admissions
- The adequacy of SeniorCare for meeting enrollees' medication-related needs
- Enrollee demographic characteristics

The survey utilized questions developed by the evaluation team as well as questions adapted from the original SeniorCare survey conducted by Brandeis University,[4] from the Medicare Current Beneficiary Survey[5] and from the CAHPS (Consumer Assessment of Healthcare Providers and Systems) Health Plan Survey.[6]

Following review and pre-testing of the survey, a universe of members who enrolled in the SeniorCare waiver program from January 1, 2015 through June 30, 2015 was identified and a simple random sample of 1,000 members was selected from that group. The self-administered survey, along with a postage-paid, addressed return envelope, was mailed to these members on July 28, 2015. A reminder postcard and a second reminder with an additional copy of the survey were subsequently mailed to sampled members

[4] "Evaluation of State Pharmacy Assistance Programs", 2007
[5] Medicare Current Beneficiary Survey; Centers for Medicare & Medicaid Services, Baltimore, MD.
[6] CAHPS Health Plan Survey, Adult Medicaid Survey 4.0; Agency for Healthcare Research and Quality, Rockville, MD.

who had not yet returned a completed survey. There were 702 surveys returned; 689 of these provided valid and useable responses, for a response rate of 69 percent. A copy of the survey can be found in Appendix B.

Results from a Member Survey

The demographic characteristics and health status of respondents were summarized, and respondents' answers regarding non-adherence and drug-related financial hardship during a pre-SeniorCare period were compared to their responses for the post-enrollment period.

Description of Survey Respondents

Sixty-three percent of the survey respondents were female and 42 percent were married. Respondents ranged in age from 65 to 99 years of age with a mean age of 74.1 years. Thirty-eight percent of respondents were 65-69 years old, 36 percent were in their seventies, 22 percent were in their eighties, and 5 percent were ninety years old or older. Sixteen percent of respondents reported receiving some assistance from a spouse, relative, guardian or some other person to complete the survey.

	Percent
Female	62.6%
Married	41.9%
Age	
65-69 years	38.2%
70-79 years	35.8%
80-89 years	21.5%
90-99 years	4.6%
Received help with the survey	15.8%

A high percentage of the survey respondents, 81 percent, reported having some type of health insurance prior to enrolling in SeniorCare. Fifty-eight percent of these survey respondents reported that their health insurance included coverage for prescription drugs. This means that nearly half, 47 percent, of all the survey respondents had some insurance coverage for prescription drugs before enrollment in the SeniorCare waiver program.

Respondent Health Status

The survey respondents were asked to rate their overall health status, whether or not they had a number of specific health conditions, and whether or not they were taking prescription medicine for the conditions they reported. The survey also included several questions about how frequently the respondent had utilized several critical healthcare services, visiting an emergency department, staying overnight or longer in a hospital, and staying in a long-term care facility such as a nursing home, in the past two years.

Overall Health Status

Thirty-one percent of the survey respondents reported that their overall health was 'Excellent' or 'Very Good', while another 41 percent said their health was 'Good'. Twenty-seven percent of respondents indicated that their health was 'Fair' or 'Poor'.

Self-Reported Health Status	Count	Percent
Excellent	37	5.4%
Very Good	176	25.8%
Good	283	41.5%
Fair	158	23.2%
Poor	28	4.1%
Total Responses	682	100.0%

Specific Health Conditions and Medications

In addition to their overall health status, respondents were asked to identify any specific health conditions they had and whether or not they were taking prescription medicine for each condition they reported. The table below shows the distribution of these responses. Twenty-one percent of the respondents said they had no specific health conditions, 36 percent reported one or two health conditions, and the remaining 44 percent reported having from three to nine health conditions. In all, respondents reported having a mean of 2.6 different health conditions. If respondents who reported having no health conditions are -removed from the calculation, then the remaining respondents had an average of 3.2 conditions.

Self-Reported Health Conditions			Self-Reported Prescription Medicines		
	Count	Percent		Count	Percent
None	145	20.7%	None	153	22.2%
One or two	251	35.8%	One or two	253	36.7%
Three or four	195	27.8%	Three or four	189	27.4%
Five or six	93	13.2%	Five or six	75	10.9%
Seven or more	18	2.6%	Seven or more	19	2.8%
Total	702	100.0%	Total	689	100.0%

Similarly, respondents reported taking zero to nine different prescription medicines for the health conditions they reported at the time of the survey. Twenty-two percent of respondents reported taking no medicines, 38 percent reported taking one or two medicines, 27 percent were taking three or four medications, and the remaining 14 percent were taking five or more medications. In all, survey respondents reported taking an average of 2.3 prescription medicines at the time of the survey. If respondents who reported no prescriptions are excluded, then the remaining respondents were taking an average of 3.0 medicines per person.

The health conditions most often reported by the survey respondents were hypertension, high cholesterol and arthritis (reported by 51 percent, 37 percent, and 32 percent of respondents, respectively) followed by heart disease, stomach ulcers, heartburn or reflux, and diabetes.

Self-Reported Health Conditions	Reported having condition		Reported taking medicine	
	Count	Percent of total	Count	Percent of those with condition
Hypertension or high blood pressure	354	51.4%	336	94.9%
High cholesterol	253	36.7%	238	94.1%

Arthritis	224	32.5%	151	67.4%
Heart disease or any heart condition	182	26.4%	167	91.8%
Stomach ulcers, heartburn or reflux	144	20.9%	130	90.3%
Diabetes or high blood sugar	141	20.5%	133	94.3%
Depression	88	12.8%	84	95.5%
Asthma, emphysema or COPD	84	12.2%	74	88.1%
Osteoporosis or high blood pressure	75	10.9%	60	80.0%
Cancer or other malignancy	48	7.0%	32	66.7%
Stroke	39	5.7%	30	76.9%
Alzheimer's disease or dementia	19	2.8%	14	73.7%

The table above also shows the extent to which prescription medicines are used by SeniorCare members to treat and manage their health conditions. Overall, a high percentage of members who reported having specific health conditions also reported taking prescription medicine for the conditions reported. For example, more than 90 percent of respondents who reported having diabetes, depression, heart disease, high cholesterol, hypertension or stomach ulcers/heartburn/reflux were taking medication for those conditions. Respondents with arthritis and cancer were least likely to take medication for those conditions.

Use of Critical Healthcare Services

Most respondents reported no use of critical healthcare services in the previous two years. Fifty-eight percent of respondents reported making no trips to the emergency department in the previous two years, more than two-thirds had no overnight hospital stays during that time, and more than 90 percent had no stay in a nursing home or other long-term care facility.

	Count	Percent
Emergency Department Visits (n = 665)		
(0) None	386	58.0%
(1) 1 time	140	21.1%
(2) 2 times	83	12.5%
(3) 3 times	26	3.9%
(4) 4 times	15	2.3%
(5) 5-9 times	14	2.1%
(6) 10 or more times	1	0.1%
Inpatient Hospital Stays (n = 671)		
(0) None	461	68.7%
(1) 1 time	116	17.3%
(2) 2 times	61	9.1%
(3) 3 times	15	2.2%
(4) 4 times	14	2.1%
(5) 5-9 times	4	0.6%
(6) 10 or more times	0	0.0%
Long Term Care Stays (n = 689)		
(0) No	627	91.0%
(1) Yes	62	9.0%

A simple scale was created from the responses to the questions about visits to the emergency department and inpatient and long-term care stays. Responses to the questions about emergency department visits and inpatient hospital stays were assigned a value of 0 (none) through six (10 or more times). Responses to the question about long-term care stays were assigned a value of zero (No) or 1 (Yes). The values of all three questions were then summed to create a single value representing use of critical healthcare services in the past two years by the respondent. The resulting ordinal scale ranges from zero to thirteen, indicating lesser or greater use of emergency department/inpatient/long-term care services. The values of the scale themselves have no inherent meaning, except that a scale value of zero indicates that the respondent reported no use of any emergency department/inpatient/long-term care services, while a score of 13 signifies the most intensive utilization of these services by a respondent.

Respondents' scores on this scale ranged from zero to ten. Fifty percent of respondents had a scale value of zero, reporting no use of any critical healthcare services in the previous two years. Another 31 percent reported only limited use of such services, with a scale value of one or two.

Scale Value – Use of Critical Healthcare Services	Count of respondents	Percent
Zero	325	49.5%
One	114	17.4%
Two	88	13.4%
Three	44	6.7%
Four	29	4.4%
Five	22	3.3%
Six	12	1.8%
Seven	9	1.4%
Eight	4	0.6%
Nine	6	0.9%
Ten	4	0.6%
Total	657	100.0

Respondents' Experience Filling Prescriptions

Nearly three-quarters of the 689 survey respondents, or 505 members, reported filling prescriptions both before and after enrolling in SeniorCare. A small percentage, less than 10 percent of the total in each case, reported filling prescriptions during only one of the time periods in question. Almost 15 percent of all respondents reported filling no prescriptions during either time period.

	Count	Percent
Filled prescriptions before and after SC enrollment	505	73.3%
Filled prescriptions before SC enrollment only	30	4.4%
Filled prescriptions after SC enrollment only	54	7.8%
No prescriptions filled before or after SC enrollment	100	14.5%
Total Respondents	689	100%

The finding that some recent SeniorCare enrollees had prescriptions filled both before and after enrolling in SeniorCare while others did not fill any prescriptions during either time period raises the question of how the groups of respondents might differ. The table below summarizes relevant findings related to the differences between these groups of survey respondents. Survey respondents who reported filling prescriptions before **and** after SeniorCare enrollment were the oldest, on average (although not significantly older than respondents who filled prescriptions during only one of the time periods), and those who did not report filling prescriptions before or after SeniorCare enrollment were the youngest. Respondents who reported filling prescription before **and** after SeniorCare enrollment reported poorer overall health status, a greater number of specific health conditions, and also reported taking more prescriptions for those conditions. Respondents who reported not filling prescriptions before or after joining SeniorCare reported better overall health status, fewer specific health conditions, and fewer prescriptions being taken than other respondents. Respondents who reported filling prescriptions during only one of the time periods were intermediate to the other two groups in terms of reported health and prescriptions taken.

	Prescriptions before and after SC enrollment	Before SC enrollment only	After SC enrollment only	No prescriptions before or after SC enrollment
Age (mean)	74.7 years	74.2 years	74.6 years	70.9 years
Self-reported Health (lower score is better)	3.12	2.69	2.77	2.27
Health conditions (mean number)	3.2	1.4	1.7	0.6
Reported Prescriptions (mean number)	2.84	1.27	1.48	0.36

Cost-Related Non-adherence and Financial Burden

To address prescription non-adherence, respondents were asked to select a response of ‘Never’, ‘Sometimes’ or ‘Often’ to the following questions for the before-SeniorCare and after-SeniorCare time periods:

- How often did you decide not to fill or refill a prescription because you did not have enough money to pay for the medicine?
- How often did you delay getting a prescription filled or refilled because you did not have enough money to pay for the medicine?
- How often did you skip doses or take smaller doses because you did not have enough money to pay for the medicine?

To address prescription-related financial burden, respondents were asked to respond ‘Yes’ or ‘No’ to the following questions for both time periods:

- Did you ever have less to spend on food, heat or other things you needed in order to pay for prescription medicines?
- Did you ever give up going out or doing things you enjoyed in order to pay for prescription medicines?
- Did you ever put off or decide not to buy something you wanted in order to pay for prescription medicines?

A total of 505 individuals reported filling a prescription both before and after enrolling in SeniorCare. Twenty-five to thirty percent of these respondents reported that in the six months before enrolling in SeniorCare they 'Often' or 'Sometimes' failed to fill or refill or delayed filling or refilling a prescription, or skipped or reduced doses, because they could not afford to pay for their medicines. After enrolling in SeniorCare, fewer members reported taking these actions.

Likewise, fewer members reported having less to spend on essential expenses, having to give up things they enjoyed, or put off buying things in order to pay for their prescriptions after enrolling in SeniorCare.

How often did you…because you did not have enough money to pay for the medicine?	Before SeniorCare		Since SeniorCare	
	Count	Percent	Count	Percent
Decide not to fill or refill a prescription	(n = 387)		(n = 411)	
Never	286	73.9 %	388	82.2 %
Sometimes	87	22.5 %	64	15.6 %
Often	14	3.6 %	9	2.2 %
Delay getting a prescription filled or refilled	(n = 388)		(n = 417)	
Never	262	67.5 %	336	80.6 %
Sometimes	107	27.6 %	73	17.5 %
Often	19	4.9 %	8	1.9 %
Skip doses or take smaller doses to make the medicine last longer	(n = 387)		(n = 419)	
Never	277	71.6 %	353	84.2 %
Sometimes	88	22.7 %	56	13.4 %
Often	22	5.7 %	10	2.4 %
Did you ever…in order to pay for prescription medicines?	Before SeniorCare		Since SeniorCare	
	Count	Percent	Count	Percent
Have less to spend on food, heat or other things you needed	(n = 397)		(n = 419)	
No	245	61.7 %	336	80.2 %
Yes	152	38.3 %	83	19.8 %
Give up going out or doing things you enjoyed	(n = 398)		(n = 421)	
No	195	49.0 %	299	71.0 %
Yes	203	51.9 %	122	29.0 %
Put off or decide not to buy something you wanted	(n = 394)		(n = 418)	
No	182	46.2 %	281	67.2 %
Yes	212	53.8 %	137	32.8 %

When asked how difficult it was to pay for their prescription medicines before and after enrolling in SeniorCare, 30 percent more respondents reported that it was 'Not at All Difficult' after they enrolled in SeniorCare and began using their SeniorCare card. After enrolling in SeniorCare, about 16 percent of members reported finding it 'A Little Difficult' or 'Very Difficult' to pay for their prescription medicines, although that was less than half the number who reported that level of difficulty paying for their medicines before enrollment.

	Before SeniorCare		Since SeniorCare	
	Count	Percent	Count	Percent
Not at all Difficult	97	24.3%	231	55.3%
Somewhat Difficult	150	37.6%	120	28.7%
A Little Difficult	113	28.3%	58	13.9%
Very Difficult	39	9.8%	9	2.2%
Total Responses	399	100.0%	418	100.0%

When asked if the amount of money spent on medicines after enrolling in SeniorCare was 'More', 'About the Same' or 'Less' than was spent before getting the SeniorCare card, nearly 60 percent of members reported that they were spending less after getting their SeniorCare card than they had before, and another 29 percent said they were spending 'About the Same'.

	Count	Percent
More	44	11.5%
About the Same	111	29.0%
Less	228	59.5%
Total Responses	383	100.0%

These results were examined further according to whether members had prescription coverage prior to enrolling in SeniorCare. Members without prescription coverage before SeniorCare were more likely to report not filling prescriptions because they did not have enough money than were members who previously had prescription coverage ($\chi^2 = 14.539$, $p = .001$).

Members without prescription coverage before SeniorCare enrollment did not report more specific types of financial hardship (that is, having less to spend on basics, giving up going out or doing things they enjoyed, or putting off or deciding not to buy something) due to the need to pay for prescriptions than did members who previously had prescription insurance coverage. However, members without prescription coverage before SeniorCare were significantly more likely than members who did have such coverage to report that they had some difficulty paying for their prescriptions before enrolling in SeniorCare ($\chi^2 = 8.847$, $p = .031$).

Finally, there was no relationship between pre-enrollment prescription coverage and whether members reported paying more, less or the same after enrolling in SeniorCare.

Using the measures of adherence and financial hardship employed in this member survey, there is limited evidence that having insurance coverage for prescriptions prior to enrolling in SeniorCare was related to either prior adherence or financial hardship. But, the data does indicate that members without prescription coverage before SeniorCare enrollment were more likely to feel that it was difficult to pay for their prescription medicines.

Respondents' Experiences with the SeniorCare Program

The survey respondents reported favorable experiences with the SeniorCare program. Ninety-five percent of respondents said that it was 'Very Easy' or 'Somewhat Easy' to enroll in the SeniorCare program. Ninety-four percent of the respondents who reported filling prescriptions since enrolling in SeniorCare said that it was 'Very Easy' or 'Somewhat Easy' to buy those prescriptions using the SeniorCare card. When asked if there are any prescription medicines that they need that are not covered by SeniorCare, 76 percent of the 315 respondents who answered the question indicated that all of the medicines they take are covered by SeniorCare; just over one-third of respondents either did not respond or selected 'Don't Know.'

The member survey included several questions about conversations members might have had with their pharmacist about their prescription medicines. These questions were intended to identify members who had a Comprehensive Medication Review and Assessment (CMR/A), which is a benefit under the Medication Therapy Management (MTM) program that was added in CY2012. (See the section related to Hypothesis 2 for more information on MTM and CMR/As.)

Almost two-thirds (65.7 percent) of the survey respondents who filled one or more prescriptions since enrolling in SeniorCare reported having a conversation with their pharmacist about all of their prescription medicines. Most of these individuals reported that the pharmacist did help them to understand why they needed to take their medicines (93.1 percent) or explained how to take their medicines safely and correctly (97.9 percent).

However, as explained in the next section, relatively few SeniorCare members have had a CMR/A. It is likely that many survey respondents who reported having a conversation with their pharmacist were referring to routine counseling by the pharmacist as required under Wisconsin state law.

Limitations of the Member Survey

While it was important and informative to obtain member feedback via the mail survey, there are some limitations to this approach. The desire to minimize the burden on members, some of whom are advanced in age and did not receive assistance with the survey, meant that the length of the survey needed to be limited. Some issues could not be addressed; for example, questions about members' health status, specific health conditions, and prescriptions taken for those conditions, were asked only once, after SeniorCare enrollment, so that any changes in those factors from before to after SeniorCare enrollment could not be assessed or taken into account.

The survey provides first-hand and primarily qualitative information about members' use of prescriptions, adherence, financial burden, and health status. Members' survey responses were not verified by linking to objective measures such as medical records or pharmacy claims. For example, members were not asked about their actual out-of-pocket spending on prescriptions either before or after enrolling in SeniorCare. Therefore while members were asked if they were spending 'More', 'Less' or 'About the Same' on their prescriptions since joining SeniorCare, it was not possible to actually determine the extent to which members' costs might have increased or decreased. Likewise, whether or to what extent members might have delayed filling prescriptions, for example, or have gone without necessities in order to pay for their medicines was not objectively verified.

Survey responses were dependent upon members' recall and their ability to successfully navigate and respond to the survey questions, and therefore are subject to some error. In particular, there was some indication that the skip patterns in the survey may have been confusing to some respondents. It might have been preferable to administer the survey by telephone or in person.

In addition, survey data on members' other insurance coverage for prescription drugs was limited. There was a high level of missing responses and inconsistent responses to questions about other insurance, which suggests that the questions were unclear or that some members are uncertain or uninformed about the nature of their insurance coverage. It is also possible that because members were asked about two separate time periods, before and after enrolling in SeniorCare, in a single survey, they may have been confused about which time period was being referred to in particular questions.

Finally, it is also possible that the timing of survey administration biased member responses. Survey planning and development took place at the same time that a budget proposal submitted by the governor was being considered. The proposal included a requirement that SeniorCare members, as a condition of program eligibility, apply for and enroll in Medicare Part D, so that SeniorCare would serve primarily to fill gaps in Medicare Part D coverage for SeniorCare members. The budget proposal did not pass but did receive a great deal of statewide media coverage. The survey was administered a short time after the proposal failed. Member concern about the budget proposal may have contributed to the robust response rate and may have led some members to provide responses more favorable to the program. With the existing data, there is not an empirical way to assess the potential impacts of survey timing, such that its implications remain speculative.

Despite these study limitations, member feedback provided in the survey is overwhelmingly favorable to the program, indicating that SeniorCare members find enrollment into the program to be simple and consider the program both easy to use and helpful in managing the costs of their prescription medicines.

The Medication Therapy Management (MTM) Benefit

Hypothesis 2: SeniorCare waiver program members who receive CMR/A services will have improved medication adherence, compared to members who do not receive CMR/A services.

Background

The Medication Therapy Management (MTM) benefit was implemented for SeniorCare members in September 2012.[7] The benefit includes two levels of service, intervention-based services (IBS) and Comprehensive Medication Review and Assessment (CMR/A). The goal is to help members manage their medications and improve adherence,[8] which research has shown helps to improve health outcomes in a cost-effective way.

The MTM benefit expands upon the former Pharmaceutical Care services model used during the previous waiver period; most services previously billed under Pharmaceutical Care are now classified as IBS, which include generic substitutions, transitioning from one-month to three-month supplies, dosage changes, consultations about a lack of adherence, adding or eliminating medications based on clinical concerns, education about medication administration devices, and in-home medication management for those who are not able to pick up their medication. These services generally involve a pharmacist providing a brief consultation to a patient on an unscheduled, as-needed basis.

The second set of services offered through the MTM benefit is the CMR/A. A CMR/A includes a private consultation between a pharmacist and a member to review the member's drug regimen and to provide more extensive support to the member.

MTM services may be initiated by either the prescriber or the pharmacist. Prescribers may request that a member receive MTM services, and may also receive communications from pharmacies when MTM services have been provided. In order to receive reimbursements for MTM services rendered, pharmacies must be Medicaid-enrolled as a pharmacy provider.

Pharmacies offering CMR/A services are located statewide and include chains, large health systems, and independent pharmacies. Pharmacists and pharmacies are not required to participate; however, they can no longer bill for Pharmaceutical Care services as they could before MTM implementation in September 2012.

The CMR/A service is intended for members who are considered at high risk of medical complications due to the nature of the drug regimen prescribed. While the service is optional and members may decline the service, members must meet one of the following criteria in order to be offered a CRM/A:

- Member takes four or more prescription medications to treat two or more chronic conditions, one of which must be hypertension, asthma, chronic kidney disease, congestive heart failure, dyslipidemia, Chronic Obstructive Pulmonary Disease (COPD), or depression.
- Member has diabetes.

[7] The MTM benefit is also covered for members in the state's BadgerCare Plus and Medicaid programs.
[8] Adherence refers to the extent to which a patient follows the recommendations made by a healthcare provider with respect to the timing, dosage and frequency of medication-taking.

- Member requires coordination of care due to multiple prescribers.
- Member has been discharged from the hospital or long-term care setting within the past 14 days.
- Member has health literacy issues as determined by the pharmacist.
- Member has been referred for MTM services by the prescriber.

Lists of high-risk members who qualify for CMR/A services are sent to pharmacies to ensure better utilization of the service. Members who reside in a nursing home are not eligible for CMR/As.

Methods and Data Sources

This component of the evaluation used two primary sources of data. Pharmacist service data (i.e., number and type of CMR/A or an IBS) was reported to DHS by participating Wisconsin pharmacies. Wisconsin pharmacies providing MTM services are required to document information about the type and outcomes of MTM services they provide. In addition, SeniorCare prescription claims data was used to provide information about members and prescription histories, including, the number, type and cost of drugs for which claims were filed, dates of refills, etc.

Although MTM benefits are often expected to lead to lower drug utilization and lower drug-related costs, some recent research suggests that prescription costs do not always decrease after implementing a MTM program.[9] This evaluation compares prescription utilization, prescription load, and prescription costs for SeniorCare members who received MTM services to the same measures for members not receiving MTM; however, no specific hypothesis was made regarding the effect of the MTM benefit on these measures.

Independent of changes to drug utilization and costs, the pharmacist's analysis of the safety and appropriateness of a member's drug regimen, combined with the individual education and support provided to SeniorCare members who receive CMR/A, is expected to lead to improved medication adherence and ultimately to improved health outcomes. MTM allows patients to take an active role in medication and healthcare self-management; it looks at all of the medications an individual is taking rather than looking at each prescription independently; and it creates a partnership between pharmacist, patient, and physician to better coordinate the delivery of medications. All of these features should serve to assist the patient in achieving better medication adherence and better treatment outcomes.

There are various ways of defining and measuring adherence to prescribed medication therapy; this evaluation planned to use a measure that uses administrative data such as pharmacy claims for that purpose. The evaluation also planned to compare prescription utilization, costs, and adherence for two time periods, (before and after receiving CMR/A services for members who received such services), or before and after a reference date for a group of comparable members who did not receive CMR/A services. However, few SeniorCare members actually received CMR/A services by the time data requests

[9] Shah, Nilay, PhD. "Medication Therapy Management Services: Does the Evidence Support Policy?" University of Wisconsin-Madison School of Medicine and Public Health Population Health Sciences Seminar Series, March 18, 2013. Lecture. Available at http://videos.med.wisc.edu/presenters/4986. (A study of a MTM pilot program at Mayo Clinic showed that while drug costs did not decrease for members who received MTM services, there was a decrease in medical costs.)

were made near the end of the waiver period; therefore, there were too few cases to make valid comparisons at this time.

As a result, this report primarily examines descriptive data related to the MTM benefit, including the number of SeniorCare waiver members who received MTM services, the demographic characteristics (e.g., age and gender) of waiver program members who received MTM services and the characteristics of members receiving MTM services. The effects of MTM services on outcomes for SeniorCare members will be evaluated in the future, when there are a greater number of members who have received MTM services.

Analysis and Findings

A CMR/A provides an opportunity for the pharmacist to provide in-depth analysis of the member's drug regimen and offer education and support. The CMR/A involves a scheduled, initial consultation and up to three follow-up consultations per year. This service is intended for members who are considered at high risk of medical complications due to the nature of the drug regimen prescribed.

The claims experience of SeniorCare members who were continuously enrolled from September 1, 2012, when MTM services were first implemented, until October 2015 was examined. Prescription histories (e.g., number, type and cost of drugs for which claims were filed, dates of refills, etc.), pharmacist service data, and demographic data were retrieved for each waiver member who had at least one prescription claim during the designated time period. These members were categorized as receiving either CMR/A or an IBS based on the information provided by pharmacists. Further refinements to the data yielded three groups of members whose characteristics were examined. First were those members who received one or more CMR/A services; these members may also have received an IBS in addition to the CMR/A. The second group included members who received only an IBS, without receiving a CMR/A. The third group included members who did not receive any MTM services: neither a CMR/A, nor an IBS.

There were 28,513 SeniorCare members who were continuously enrolled from September 1, 2012 through October 2015. One percent (413) of these members received a CMR/A at some time since September 1, 2012, and another 12 percent received only an IBS. Eighty-six percent of the SeniorCare members who were continuously enrolled since September 1, 2012 received no MTM services from their pharmacist.

Members Continuously Enrolled, 9/2012-10/2015	Count	Percent
Received a CMR/A (may also have received IBS)	413	1%
Received IBS only	3,440	12%
Received no MTM services	24,660	86%
Total	28,513	100%

Members who received any MTM services were slightly older than those who received no MTM services. Neither gender nor race/ethnicity appeared to be related to receipt of MTM services.

The table below shows the number of MTM services provided to members who received CMR/A services and to those who received only IBS. Note that the denominator for the percentages in this table is the total

number of services provided to members of each group, not the number of members in each group. Thus, for example, out of the total of 1,650 MTM services provided to members continuously enrolled from September 2012 to October 2015 who received a CMR/A, 21 percent of those MTM services involved transitioning from a one-month supply to a three-month supply. Except for the CMR/A, the three-month supply and focused adherence were the MTM services most often provided to SeniorCare members.

MTM Services Provided to Members Continuously Enrolled 9/2012-10/2015	CMR/A and IBS		IBS Only	
Service	Count	Percent of Total Services	Count	Percent of Total Services
Total MTM Services Received	**1,650**	**100%**	**7,737**	**100%**
Cost Effectiveness	124	8%	945	12%
Three- Month Supply	353	21%	3,471	45%
Dose/Dosage form/ Duration Change	93	6%	360	5%
Focused Adherence	330	20%	2,579	33%
Medication Addition	80	5%	77	1%
Medication Deletion	85	5%	134	2%
Medication Device Instruction	34	2%	170	2%
In-home Medication Management	10	1%	1	0%
Initial CMR/A	438	27%	0	0%
Follow-up CMR/A	103	6%	0	0%

Likewise, when looking at the number of SeniorCare members who received various MTM services, more SeniorCare members received three-month supply and focused adherence than other services. The denominator for the percentages in this table is the total number of members in each group. Thus, of the 3,440 members continuously enrolled from September 2012 to October 2015 who received only intervention-based services, 41 percent received focused adherence.

SeniorCare Members Receiving MTM Services (Members Continuously Enrolled 9/2012-10/2015)	CMRA and IBS		IBS Only	
Service	Count	Percent of Total Members	Count	Percent of Total Members
Total Members Receiving MTM Services	**413**	**---**	**3,440**	**---**
Cost Effectiveness	85	21%	744	22%
Three-Month Supply	150	36%	1,608	47%
Dose/Dosage form/ Duration Change	73	18%	320	9%
Focused Adherence	126	31%	1,420	41%
Medication Addition	53	13%	70	2%
Medication Deletion	60	15%	121	4%
Medication Device Instruction	25	6%	146	4%
In-home Medication Management	4	1%	1	0%
Initial CMR/A	399	97%	0	0%
Follow-up CMR/A	75	18%	0	0%

The Department's MTM policies specify that members who take four or more prescription medications to treat two or more chronic conditions, one of which must be hypertension, asthma, chronic kidney disease, congestive heart failure, dyslipidemia, Chronic Obstructive Pulmonary Disease (COPD), or depression, and members who have diabetes are eligible to receive a CMR/A. Members must meet one of these qualifiers to receive MTM services.

Because the CMR/A is intended for a particular subset of SeniorCare members, it is important to determine whether the benefit is being targeted effectively to that group of individuals, that is, the extent to which they meet the above criteria for receiving the benefit. On average, members who received CMR/A services had the most health conditions, and members who received no MTM services had the fewest health conditions. Ninety-five percent of the members in the CMR/A group had two or more conditions, compared to 81 percent of members who received only IBS and 63 percent of members who received no MTM services. CMR/A members averaged 1.84 more conditions than members of the No MTM group.

Number of Conditions per Member* by MTM Receipt	CMR/A and IBS (n = 413)		IBS Only (n = 3,440)		No MTM (n = 24,660)	
	Count	Percent of Total Members	Count	Percent of Total Members	Count	Percent of Total Members
0 Conditions	1	< 1%	67	2%	3,118	13%
1 Condition	17	4%	597	17%	5,833	24%
2 Conditions	88	21%	1231	36%	6,312	26%
3 Conditions	173	42%	1043	30%	3,859	16%
4 Conditions	91	22%	411	12%	1,058	4%
5 Conditions	37	9%	80	2%	142	< 1%
6 or more conditions	6	2%	11	< 1%	17	< 1%
Mean Conditions	**3.14**	----	**2.40**	----	**1.30**	----

* Members continuously enrolled from September 2012 through October 2015.

The table below shows the percent of members with each chronic condition, by MTM receipt. The most common conditions among members in all three groups were hypertension and dyslipidemia. For each condition except chronic kidney disease, the percentage of members with each condition is greater in the CMR/A group than in the IBS Only and No MTM groups.

The greatest difference between the groups is found in the percent of members with diabetes, which is to be expected since having diabetes is sufficient to receive a CMR/A. Fifty-five percent of CMR/A recipients have diabetes, compared to 25 percent of IBS Only members and 19 percent of No MTM members.

Health Conditions by MTM Receipt, SeniorCare Members Continuously Enrolled 9/2012–10/2015	CMR/A and IBS (n = 413)		IBS Only (n = 3,440)		No MTM (n = 24,660)	
Condition	Count	Percent of Total Members	Count	Percent of Total Members	Count	Percent of Total Members

Asthma	47	11%	184	5%	66	0%
Congestive Heart Failure	44	11%	92	3%	118	0%
Chronic Kidney Disease	1	0%	20	1%	117	0%
COPD	87	21%	581	17%	2,698	11%
Depression	155	38%	1,060	31%	5,493	22%
Diabetes	227	55%	873	25%	4,772	19%
Hypertension	397	96%	3,174	92%	19,685	80%
Dyslipidemia	339	82%	2,320	67%	13,597	55%
Total Members	413		3,440	---	24,660	---

Based on the number and type of health conditions reported for members in the CMR/A, IBS Only and No MTM groups, CMR/A services are being appropriately targeted to those members most in need of those services.

The tables below show the number of pharmacy claims and amounts paid, per month and per member per month (PMPM), by receipt of MTM services. There were 30 times more paid pharmacy claims for members without MTM services than CMR/A members, which is a function of the number of members who did or did not get MTM services. CMR/A members had more claims PMPM, and averaged $125 more paid per month than the No MTM group.

	CMR/A and IBS	IBS Only	No MTM
Total Pharmacy Claims	63,130	383,690	1,931,643
Pharmacy Claims Per Month	1,608.53	9,776.32	49,217.78
Members	413	3,440	24,660
Pharmacy Claims PMPM	3.89	2.84	2.0

	CMR/A and IBS	IBS Only	No MTM
Total Paid	$ 3,975,635.33	$ 24,978,599.11	$ 116,378,606.46
Paid Per Month	$ 101,298.12	$ 636,447.82	$ 2,965,294.51
Members	413	3,440	24,660
Amount Paid PMPM	$ 245.27	$ 185.01	$ 120.25

Limitations of the MTM Evaluation

As noted earlier in the report, the evaluation plan included a comparison of prescription utilization, costs, and adherence for two time periods between members who did and those who did not receive CMR/A services. However, the small number of SeniorCare members who received CMR/A services during the 2013-2015 waiver period meant that it was not possible to carry out such analyses for this evaluation. Therefore, the effects of MTM services on outcomes for SeniorCare members will be evaluated in the future, when a greater number of SeniorCare members have received MTM services.

Effects of SeniorCare on Medicaid Receipt, Hospitalizations and Nursing Home Use

Hypothesis 3: The rate of Medicaid entry among Wisconsin seniors age 65 and older will be lower after SeniorCare implementation than before SeniorCare.

Hypothesis 4: The rate of hospital admissions among Wisconsin seniors age 65 and older for selected medical conditions such as diabetes and heart disease will be lower after SeniorCare implementation than before SeniorCare.

Hypothesis 5: The rate of Medicaid-funded nursing home admissions among Wisconsin seniors age 65 and older will be lower after SeniorCare implementation than before SeniorCare.

Background

These hypotheses aim to explore the utilization effects of SeniorCare, specifically on use of the Medicaid program due to healthcare-expenditure-related impoverishment and utilization of inpatient hospital and nursing home services. In general, seniors who obtain outpatient drug coverage are expected to require fewer non-pharmacy healthcare services. By extension, it is also expected that spending down to Medicaid eligibility will be reduced, as will inpatient hospital and nursing home admissions related to drug-sensitive healthcare conditions.

SeniorCare's effects on diversion from Medicaid eligibility are expected to be most prominent among seniors who would qualify under medically needy eligibility provisions. Medically needy rules allow individuals with income above the Medicaid limit to qualify if they have high healthcare or long-term care expenditures relative to their income.

SeniorCare income eligibility extends to up to 200 percent of the FPL, which is above income thresholds for Medicaid eligibility for seniors in Wisconsin. A member whose income and/or assets decrease to Medicaid eligibility levels must submit a Medicaid application and be determined eligible through existing Medicaid procedures in order to receive full Medicaid benefits.

It is hypothesized that SeniorCare benefits keep eligible seniors healthier, thereby reducing healthcare expenditures that would allow an individual to qualify for Medicaid under medically needy eligibility provisions (Hypothesis 3).

By assisting low-income seniors to obtain needed prescription medications at an affordable price, it is expected that SeniorCare will lead to better adherence to prescription regimens and thereby to improved health and reduced use of other, non-drug health services such as inpatient hospital services (Hypothesis 4). In particular, this evaluation focuses on changes in the rate of hospitalizations among Wisconsin seniors for chronic medical conditions such as diabetes and heart disease, which are prevalent among seniors, amenable to drug therapy, and thus should be responsive to a program such as SeniorCare which provides prescription drug coverage. It was hypothesized that there would be fewer hospitalizations for such conditions among seniors after SeniorCare implementation than before.

Finally, it is also expected that by leading to reduced cost-related non-adherence, better health, and reduced use of non-drug health services, SeniorCare implementation will result in delayed or avoided nursing home entry by Wisconsin seniors. Thus there should be lower Medicaid-funded use of nursing homes for low-income seniors after SeniorCare implementation than in the years before implementation (Hypothesis 5).

Methods and Data Sources

The availability of publicly-funded outpatient pharmacy benefits for seniors has changed considerably since SeniorCare began in 2002. Most notably, Medicare Part D began in 2006 and offers all individuals 65 years and older access to prescription drug coverage. For this reason it is no longer possible to easily identify or construct a comparison group of seniors who are similar to SeniorCare waiver members but who do not have access to a pharmacy benefit.

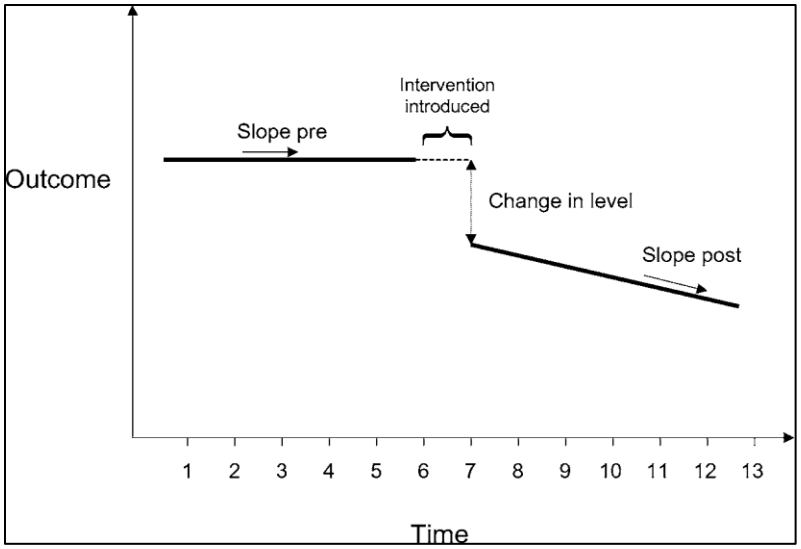
For this evaluation, DHS did not have access to individual level data on SeniorCare members prior to their enrollment in SeniorCare. The lack of individual-level, pre-enrollment data on SeniorCare members limited the possible research designs that could be considered. The evaluation for this waiver demonstration utilized a population-level analysis to address Hypotheses 3–5, comparing aggregate measures across a number of years before and after the implementation of SeniorCare.

This evaluation leveraged an interrupted time series evaluation design. Interrupted time series is a quasi-experimental design that can be used to assess the longitudinal effects of interventions. A time series is a sequence of values of a particular measure taken at regularly spaced intervals over time. An "interrupted" time series occurs when the sequence of measures is divided into two or more portions, by a real-world event, a policy change, a program implementation, or an experimental intervention, with multiple measures taken both before and after the 'interruption'. An example is shown below; 'O' represents an outcome measured at multiple points in time and 'X' represents an intervention:

O O O O X O O O O

Segmented regression analysis of interrupted time series data is one method that allows a researcher to assess, in statistical terms, how much the intervention changed an outcome of interest. Segmented regression analysis allows analysts to control for prior trends in the outcome measure and to study whether the outcome measure exhibits a change from the previously established pattern following the intervention. Thus if the values of the outcome measure are plotted over time, the pre-intervention pattern serves as a baseline against which the post-intervention pattern can be assessed. It is assumed that in the absence of any intervention effect, the pre-existing pattern would continue, and this would represent what would happen in the absence of the intervention. If, however, there is a significant change in the level and/or slope of the plotted outcome measure, this is considered evidence of the intervention's effect.

The following figure represents this graphically.



Source: Ramsay et al., 2003[10]

Even without a control group, segmented regression analysis addresses important threats to internal validity (such as history and maturation) by making multiple assessments of the outcome variable both before and after the intervention.

This evaluation uses segmented regression to address Hypotheses 3-5, employing aggregate data from several sources for the period CYs1999-2005, which encompasses nearly four years prior to the start of SeniorCare and three years afterwards. It does not include any time period which occurred after the start of Medicare Part D.

The number of Wisconsin seniors age 65 and older who were dually eligible for Medicare and Medicaid, hospitalizations for selected conditions, and the number of dual eligibles living in a nursing home during several years prior to SeniorCare implementation were compared to the same measures during the years after SeniorCare began. SeniorCare enrollment data and claims records were obtained from the SeniorCare program and Medicaid data was obtained from Wisconsin's Medicaid Management Information System (MMIS), known as ForwardHealth interChange. Wisconsin transitioned to interChange in 2008; the system supports a number of critical programs administered by DHS.

It is difficult to isolate individuals age 65 and over who qualify for full Medicaid benefits under the "medically needy" provisions, therefore, the analyses for Hypothesis 3 and Hypothesis 5 were conducted using data on "full-benefit dual eligibles" age 65 and over. These were individuals eligible for both Medicare and full Medicaid benefits, and so encompass the "medically needy" group.

Likewise, the analysis for Hypothesis 5 looks at the number of dual eligibles age 65 and over who are living in a nursing home (whose costs are paid by Medicaid), and examines the extent to which this

[10] Ramsay CR, Matowe L, Grilli R, Grimshaw JM, Thomas RE. Interrupted time series designs in health technology assessment: Lessons from two systematic reviews of behavior change strategies. *Int.J.Technol.Assess.Health Care* 2003;19:613-23

changes after SeniorCare implementation. Due to resource limitations, the evaluation focuses on Medicaid-funded nursing home care and does not address rehabilitation stays paid by Medicare.

Hospital discharge data and population data needed to assess Hypothesis 4 were obtained from the Office of Health Informatics, Division of Public Health, in DHS. Wisconsin's non-Veteran's Administration hospitals have been required by statute to report information from their billing systems on all inpatients since 1989. These data, which are compiled and edited by the Wisconsin Hospital Association and shared with DHS' Office of Health Informatics, were used to compare hospital admissions among seniors for selected health conditions, before and after SeniorCare implementation in 2002. Hospitalizations for heart disease were considered to be those with ICD-9 codes 414.0-414.9, 428.0-428.9, exclusive of Medicaid as payer and non-Wisconsin residents. Hospitalizations for diabetes were those with ICD-9 codes 250.0-250.93, exclusive of Medicaid as payer and non-Wisconsin residents. Data for CY1999, unlike later years, do not include Minnesota hospitals.

Ideally this evaluation would have examined the effects of SeniorCare on seniors' use of emergency department services as well as inpatient stays; however, hospitals in Wisconsin were not required to begin reporting emergency department data until 2002, the year in which SeniorCare was implemented. Therefore it would not have been possible to obtain data on emergency department usage prior to 2002 to serve as a baseline.

Analysis- Effects of SeniorCare on Medicaid Receipt, Hospital Admissions for Selected Health Conditions, and Nursing Home Use among Wisconsin Seniors.

This section provides an overview of the analyses and findings related to Hypotheses 3-5; these hypotheses are discussed together because a similar analytical approach was used to address each of these hypotheses. Further details can be found in Appendix B at the end of this report.

The table below summarizes the outcome variables for Hypotheses 3-5, how each outcome variable was defined, and the source of the data used for each analysis.

Hypothesis	Outcome Variable and Definition	Data Source
Hypothesis 3	Outcome Variable: The number of Wisconsin Medicare-Medicaid Dual Eligibles Age 65 and over per quarter for CYs1999–2005 Definition: Individuals eligible for Medicare Part A and/or Part B who had a claim for Medicaid services on at least one day of the quarter.	ForwardHealth interChange (Wisconsin's Medicaid Management Information System)
Hypothesis 4	Outcome Variable: The rate of hospital admissions among Wisconsin seniors age 65 and older for diabetes and heart disease Definitions: Hospitalizations for heart disease were defined as those with ICD-9 codes 414.0-414.9, 428.0-428.9 (exclusive of Medicaid as payer and non-WI residents). Hospitalizations for diabetes were defined as those with ICD-9 Codes 250.0-250.93 (exclusive of Medicaid as payer and non-WI residents).	Office of Health Informatics, Division of Public Health, DHS
Hypothesis 5	Outcome Variable: The number of Wisconsin Medicare-Medicaid Dual Eligibles Age 65 and over living in a nursing home per quarter for CYs1999-2005. Definition: The number of individuals eligible for Medicare Part A and/or Part B and having at least one claim for Medicaid-funded nursing home care during a quarter.	ForwardHealth interChange (Wisconsin's Medicaid Management Information System)

The hypotheses were tested by means of the following model[11]:

$$Y = \beta_o + \beta_1 * \text{Time} + \beta_2 * \text{SeniorCare} + \beta_3 * \text{Time After SeniorCare}$$

A series of linear regressions were run using each outcome variable described in the table above as the dependent variable. Each analysis included indicators for Time (number of quarters from the start of the series), SeniorCare (0 for time periods before SeniorCare and 1 for time periods after SeniorCare) and Time After SeniorCare (0 for periods before SeniorCare and taking sequential values of 1-12 for periods after SeniorCare) as the independent variables. Where appropriate, correction was made for auto-correlation. The table below summarizes the results of these analyses. More detailed information can be found in Appendix B.

Outcome Variable	Regression Terms	Coefficient	Probability
Dual Eligibles Age 65+	Constant β_0	57847.824	< .001
	β_1 (Time)	-75.527	< .05
	β_2 (SeniorCare)	1266.857	< .001
	β_3 (Time After SeniorCare)	15.703	n.s.
Dual Eligibles Age 65+ Living in a Nursing Home	Constant β_0	30133.786	< .001
	β_1 (Time)	-184.104	< .001
	β_2 (SeniorCare)	379.626	n.s
	β_3 (Time After SeniorCare)	36.632	n.s
Hospital Discharges (Heart Disease), Persons 65+	Constant β_0	5287.000	< .001
	β_1 (Time)	7.700	n.s
	β_2 (SeniorCare)	270.115	n.s
	β_3 (Time After SeniorCare)	-20.997	n.s
Hospital Discharges (Diabetes), Persons 65+	Constant β_0	546.638	< .001
	β_1 (Time)	.679	n.s
	β_2 (SeniorCare)	-37.855	n.s
	β_3 (Time After SeniorCare)	-1.080	n.s

When Dual Eligibles Age 65+ (Hypothesis 3) is used as the dependent variable in the regression model, the results indicate that at the beginning of the observation period in CY1999, there were on average about 57,848 dually-eligible Medicare-Medicaid members who were 65 years and older in Wisconsin. There was a significant decline over time of about 75 dual eligibles per quarter (β_1 is significant); this rate of decline did not change after SeniorCare was implemented (β_3 is not significant).

The number of dual eligibles increased somewhat, by about 1,267 on average, around the time that SeniorCare was implemented (the coefficient β_2 was significant). This is contrary to expectations, and will be discussed in the final sections of the report.

When Dual Eligibles Age 65+ Living in a Nursing Home (Hypothesis 5) is used as the dependent variable, the results showed that on average, 30,134 dual eligibles aged 65 and over lived in nursing homes at the start of the observation period. This number declined by about 184 persons per quarter (β_1 is significant), but this rate of decline did not change following SeniorCare implementation (β_3 is not

[11] See Wagner et al., "Segmented regression analysis of interrupted time series studies in medication use research" (2002.

significant). There is also no effect due to SeniorCare implementation on the level of the outcome variable (the coefficient β_2 was not significant).

Additional analyses were conducted in which these count variables were converted into a percentage of the Wisconsin population age 65 and over with income less than 200 percent of the FPL; similar results were obtained and are not shown here.

Subsequent analyses used hospital discharges for heart disease and hospital discharges for diabetes among Wisconsin residents ages 65 and over as the dependent variables (Hypothesis 4). Except for the constant, none of the terms of interest in the regression equation were statistically significant using these outcome variables. When these outcome variables were converted to the rate of hospital discharges per 1,000 rather than the number of discharges, similar results were obtained and are not shown here.

Overall, the results from this analysis do not allow us to state whether or not SeniorCare leads to reduced Medicaid receipt, reduced hospitalizations, or reduced use of Medicaid-funded nursing home care by seniors in Wisconsin. Limitations in the study design hinder the ability to draw useful conclusions from these data.

Limitations of Analyses Related to Hypotheses 3-5

The inconclusive results of the current evaluation with regard to Hypotheses 3-5 may be due to limitations in the analytic approach as well as the data used. The 2007 SeniorCare evaluation used an individual-level analysis comparing Medicaid entry and costs for SeniorCare members to individuals in a matched comparison group in Ohio, which at that time did not have a pharmacy assistance program. The population-level analysis used in this evaluation employed aggregate data which included individuals who were and were not eligible to enroll in SeniorCare, as well as eligibles that did and did not enroll. As shown in descriptive analyses included in Appendix A, less than 30 percent of the eligible low-income population has been enrolled in the SeniorCare waiver program over time, and SeniorCare waiver members have comprised ten percent or less of the statewide senior population. Therefore it would take substantial program effects to show significant results using the approach employed here.

Ideally the analyses for Hypotheses 3 and 5, which test the effects of SeniorCare on reducing medical spenddown, would have been limited to those individuals who qualify as "medically needy" by spending down their income or assets as a result of high medical or long term care expenses. Medically needy Medicaid eligibles best represent the group of Medicaid eligible seniors who would have had SeniorCare prior to Medicaid enrollment.

However, it is difficult to isolate individuals age 65 and over who qualify for full Medicaid benefits under the "medically needy" provisions within the state MMIS. Instead, the analyses for Hypothesis 3 and 5 were conducted using data on all "full-benefit dual eligibles" age 65 and over. These individuals, eligible for both Medicare and full Medicaid benefits, include the "medically needy" group, but also "full-benefit dual eligibles" who qualify for Medicaid for other reasons. Therefore, it is difficult to isolate the effects of SeniorCare on Medicaid enrollment among seniors, and the results are subject to factors affecting the non-medically needy dual eligibles.

In addition, overly inclusive data affects the analyses related to Hypothesis 4, which examined the effect of SeniorCare on hospitalizations for selected health conditions. The data extracted from the hospital discharge database included all statewide hospital discharges for heart disease and diabetes among Wisconsin seniors. This means that the data included hospitalizations for seniors of all income levels, whereas only low income seniors are eligible to enroll in SeniorCare. It would have been preferable to limit the data to hospitalizations of low-income seniors in order to more truly assess the effects of the SeniorCare program on the eligible population.

Hypotheses 3-5 utilized a population-level analysis to examine the overall effects of SeniorCare implementation. The overall effect of the program is the average effect on the entire population served. Any program effects found using a population-level analysis cannot be extrapolated to individuals. Thus even a significant program effect cannot be used to predict what effect SeniorCare enrollment might have on given individual members.

In addition, the population-level approach used here, which employed aggregate data, does not allow for taking into consideration the effects of individual-level factors that might affect the outcomes for particular groups. Some member characteristics that might be associated with different likelihoods of Medicaid entry, nursing home usage or hospitalization include factors such as age, chronic disease and health status, prior prescription coverage, and income level. A different analytic approach utilizing individual-level data might find that such factors play a significant role in post-enrollment outcomes for SeniorCare members with certain characteristics but not others. Effects related to such individual-level factors might not be apparent at the population level, when outcomes are averaged across all members.

One of the primary limitations of an interrupted time series analysis is the possibility that other factors not identified and accounted for, policy or programmatic changes, real-world events, or economic conditions, (for example, which occur at or around the same time as the intervention being studied, may contribute to any effects found). The approach assumes that the outcomes of interest would follow their pre-existing pattern in the absence of the policy, program or intervention of interest. It also assumes that there are no external factors that systematically affect the outcomes of interest (i.e. other "interventions").

One factor which may have influenced the results of this evaluation related to Medicaid receipt was the implementation of the Family Care program in five pilot counties, including the state's largest, Milwaukee County, in CY2000 and CY2001. Family Care is Wisconsin's comprehensive long-term care program which helps frail elders and adults with disabilities get the services they need to remain in their homes. Family Care has, over time, involved restructuring Wisconsin's long-term care system and replacing earlier waiver programs. Members served under the pre-existing waivers were converted to Family Care and people who were on service waiting lists under the previous waivers were added to the membership rolls. Thus the expansion of the Family Care program during the same general time period as the implementation of SeniorCare may make it difficult to isolate the effects of SeniorCare on Medicaid receipt using aggregate data.

It is worth noting that research on the impact of Medicare Part D has also yielded somewhat mixed results. SeniorCare was implemented in 2002 and Medicare Part D began in 2006. The basic logic of the programs is similar, assisting seniors with the cost of essential prescription medicines is expected to reduce financial hardship and thereby increase seniors' ability to take their medications as prescribed.

Improved adherence is in turn expected to lead to health benefits and ultimately to lower utilization and costs for non-pharmacy healthcare services. Due to the similar logic underlying the two programs it is not unreasonable to anticipate similar outcomes. Thus far the research examining the effects of Part D on health outcomes and utilization of non-pharmacy healthcare services is promising but not entirely consistent.[12]

It may be that pharmacy assistance programs such as SeniorCare have greater effects for some participants than for others. For example, people who had no prescription coverage prior to enrollment, or who are taking prescriptions that are considered critical rather than discretionary, might receive the greatest benefits from enrolling in a program such as SeniorCare. In addition, having prescription coverage through a program such as SeniorCare would have the greatest effect for individuals who are highly adherent to their prescription regimen. The analytic approach used in this evaluation employed aggregate data rather than the individual-level data about prior prescription coverage, nature of medications taken, adherence or other factors such as chronic conditions that would be needed in order to identify whether the program serves to primarily benefit certain groups of members.

[12] See: Y. Zhang et al., 2009; R. Kaestner and N. Khan, 2010; J.M. McWilliams et al., 2011; T.M. Dall et al., 2013; R. Kaestner et al., 2014; and B.A. Briesacher et al., 2015.

CONCLUSIONS

The results of the member survey suggest that the SeniorCare program continues to make seniors' prescription medicines more affordable and improves adherence by reducing the extent to which they skip doses or fail to fill prescriptions. New program enrollees report that it is easy to enroll in the program, easy to fill their prescriptions, and that the program covers all of the prescriptions they need.

The assessment of the MTM benefit which became available to SeniorCare members in 2012 and which is intended to help members manage their medications suggests that it is being appropriately targeted to those members at highest risk of complications due to the nature of their medication regimen. These results are preliminary, as relatively few members have receive MTM services thus far; the impact of MTM services will be further explored in the future as additional data become available.

Finally, this evaluation, which was hampered by several data limitations, did not produce conclusive findings regarding whether SeniorCare has led to reduced use of Medicaid or nursing homes by Wisconsin seniors, or reduced use of non-prescription medical services such as hospitalizations.

Collectively, these data indicate the SeniorCare program continues to be an important program for Wisconsin seniors.

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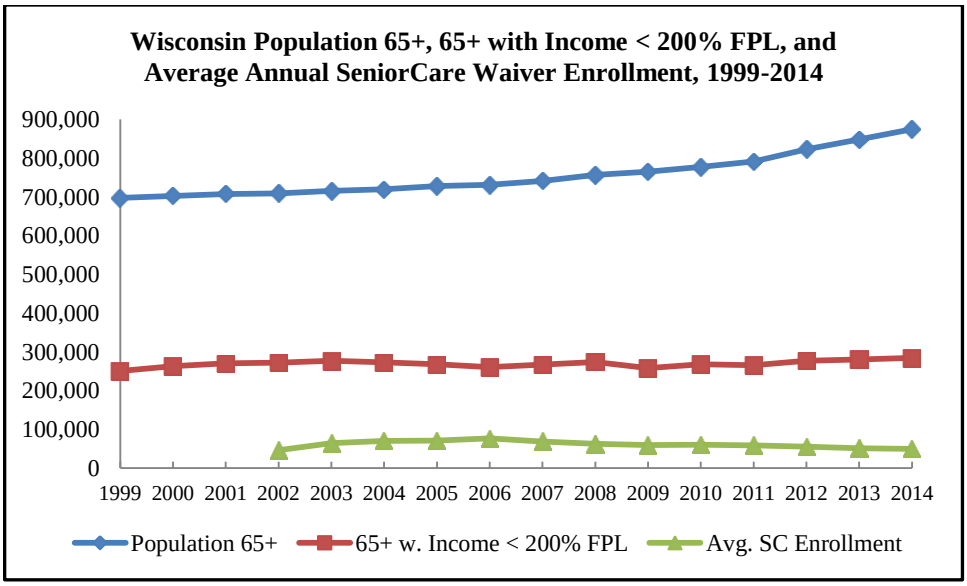
APPENDIX A
Program Description—Enrollment, Utilization and Costs

Data for these analyses were drawn from SeniorCare program enrollment and claims data, and from population data as relevant.

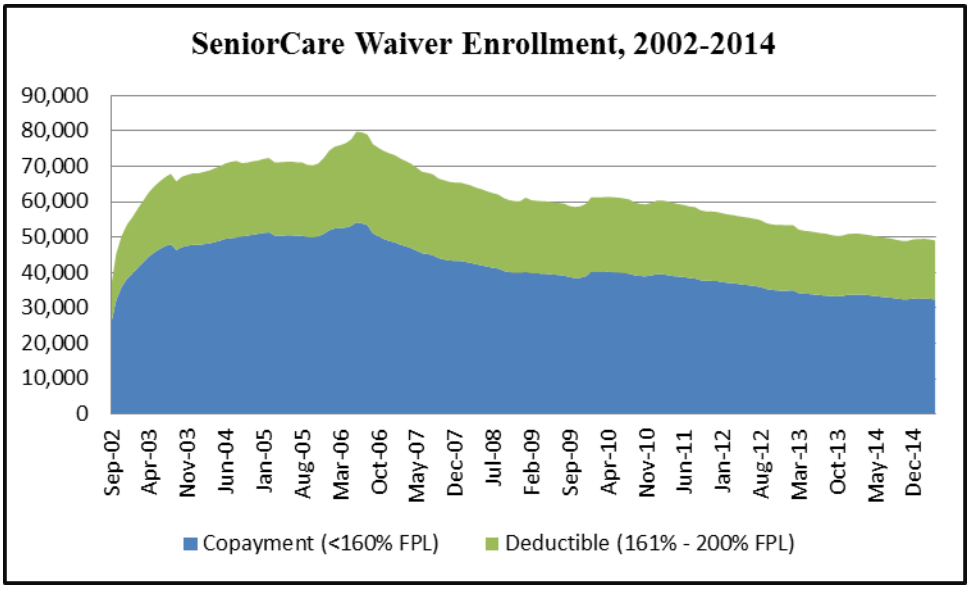
The table and figure below help to put the SeniorCare waiver program into context relative to the statewide population of persons aged 65 years and older. In the years leading up to the implementation of SeniorCare, there were about 700,000 persons in Wisconsin who were 65 years or older. Those with incomes up to 200 percent of the FPL, who would be eligible for the SeniorCare waiver program when it began in late 2002, represented about 35-38 percent of all seniors. Since CYs1999-2000, the population aged 65 and over has grown by 25 percent, to 875,000 in 2014, while the percentage of seniors with incomes up to 200 percent of the FPL has grown more slowly, by 13 percent. Thus the state's waiver-eligible population has been a gradually declining proportion of the overall senior population.

Year	Wisconsin Population 65 Years and Older	Percent of 65+ Population that is Waiver-Eligible (Income up to 200% FPL)	Estimated Number of Waiver-Eligible Persons (65+ with Income up to 200% FPL)	Average Monthly Waiver Enrollment	Average Monthly Waiver Enrollment as a Percent of the Estimated Waiver-Eligible Population	Average Monthly Waiver Enrollment as a Percent of the Total Population 65 Years and Older
1999	697,304	35.9%	250,332	n/a	n/a	n/a
2000	702,553	37.4%	262,755	n/a	n/a	n/a
2001	707,724	38.2%	270,351	n/a	n/a	n/a
2002	709,058	38.4%	272,278	46,305	17.0%	6.5%
2003	715,402	38.7%	276,861	64,255	23.2%	9.0%
2004	719,486	37.9%	272,685	70,330	25.8%	9.8%
2005	727,595	36.8%	267,755	71,347	26.6%	9.8%
2006	730,977	35.6%	260,228	76,557	29.4%	10.5%
2007	741,547	36.0%	266,957	68,838	25.8%	9.3%
2008	756,456	36.2%	273,837	62,684	22.9%	8.3%
2009	765,006	33.7%	257,807	59,764	23.2%	7.8%
2010	777,314	34.5%	268,173	60,655	22.6%	7.8%
2011	791,439	33.6%	265,924	58,815	22.1%	7.4%
2012	822,906	33.7%	277,319	55,118	19.9%	6.7%
2013	848,232	33.1%	280,765	51,540	18.4%	6.1%
2014	874,415	32.5%	284,185	49,999	17.6%	5.7%



Enrollment in the SeniorCare waiver program reached a high of more than 76,555 in 2006 and has declined gradually since that time.

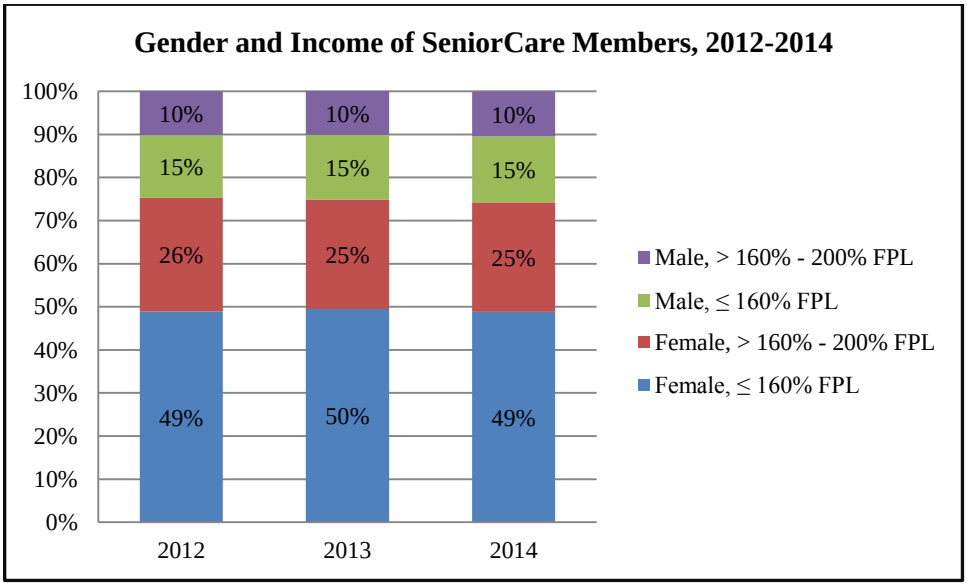
The figure below shows waiver enrollment from September 2002 through December 2014 broken out by income level. As noted, waiver enrollment reached a peak in mid-2006, after which enrollment began declining. Members who have income less than 160 percent of the FPL have consistently represented about two-thirds of the waiver population.



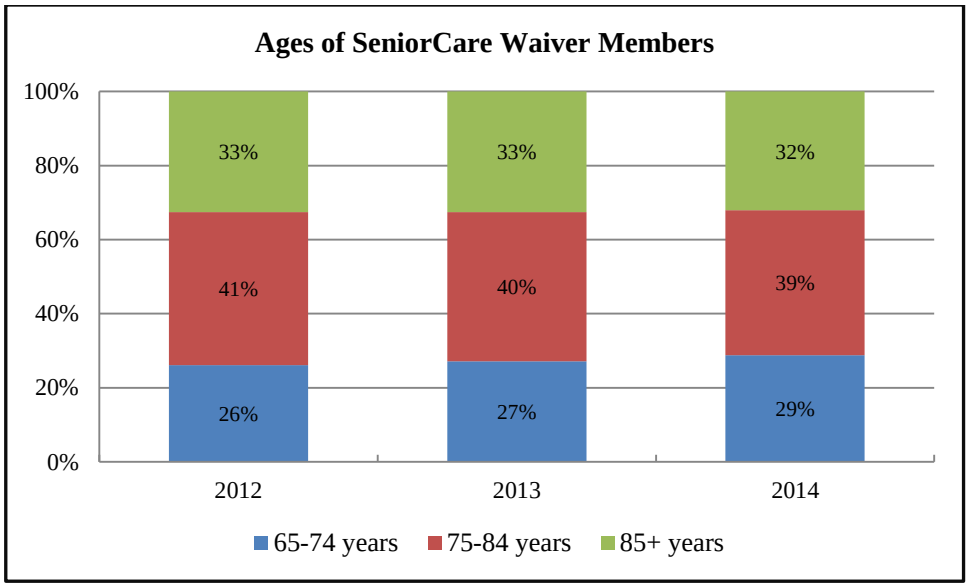
The evaluation of the CYs2010-2012 waiver period found that the waiver population had a fairly consistent composition. More recent data present a similar picture. The table and chart below show the

gender and income composition of the waiver population during three recent years, CYs2012- 2014. Consistent with the figure above, members with income less than 160 percent of the FPL represent not quite two-thirds (63 percent-64 percent of the waiver population. Approximately three-quarters of the waiver population are female. In fact, almost half of SeniorCare waiver members are women with income less than 160 percent of the FPL.

	2012		2013		2014	
	Members	Percent of Total	Members	Percent of Total	Members	Percent of Total
Female, ≤ 160% FPL	27,047	48.9%	26,423	49.5%	25,297	48.8%
Female, > 160% - 200% FPL	14,588	26.4%	13,537	25.4%	13,184	25.4%
Male, ≤ 160% FPL	8,035	14.5%	7,985	15.0%	7,938	15.3%
Male, > 160% - 200% FPL	5,653	10.2%	5,434	10.2%	5,411	10.4%
Totals	55,323	100%	53,379	100%	51,830	100%



Individuals who are 65-74 years old comprise just over one-quarter of the SeniorCare waiver population. Approximately 40 percent of the waiver population is 75-84 years old, and those who are 85 years and older represent one-third of the waiver population.



One-quarter of the individuals in the waiver program on December 31, 2014 had been enrolled for two years or less. Close to one-half of the members at that time had been enrolled for up to five years and three-quarters had been enrolled for up to ten years. Nearly 6,400 members, or 14 percent of those enrolled at the end of CY2014, had been enrolled for 12-13 years, or since the start of the waiver program. Thus while there is a steady influx of new members into the waiver program, some individuals have maintained their SeniorCare membership for an extended period of time.

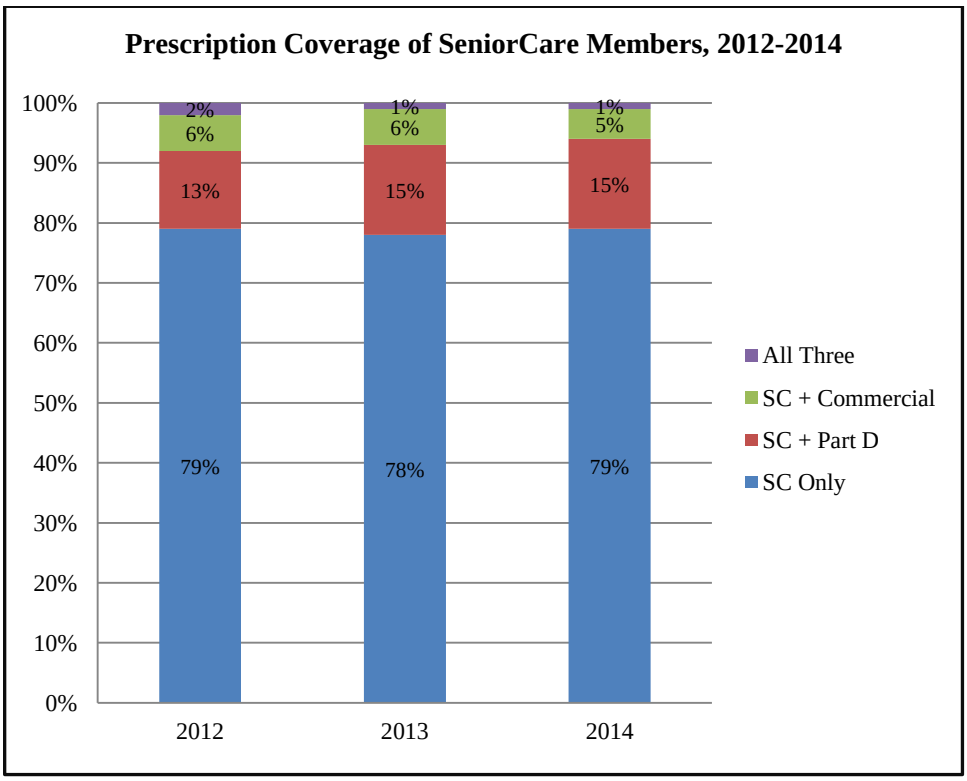
Length of Enrollment (Years)	Members	Percent of Total	Members (Cumulative)	Percent of Total (Cumulative)
0-1	6,142	13%	6,142	13%
1-2	5,619	12%	11,761	25%
2-3	3,811	8%	15,572	33%
3-4	3,259	7%	18,831	40%
4-5	3,679	8%	22,510	48%
5-6	3,366	7%	25,876	55%
6-7	2,060	4%	27,936	60%
7-8	1,627	3%	29,563	63%
8-9	3,460	7%	33,023	70%
9-10	2,643	6%	35,666	76%
10-11	2,121	5%	37,787	80%
11-12	2,786	6%	40,573	86%
12-13	6,367	14%	46,940	100%
Total	46,940	100%	---	---

SeniorCare remains very important to the waiver population as a source of insurance coverage for prescription drugs. During CYs2012- 2014, nearly 80 percent of waiver members had SeniorCare only, with no other prescription drug coverage. Fifteen percent or less had Medicare Part D in addition to

SeniorCare and less than 10 percent had other insurance coverage for prescription drugs (e.g. employer-based insurance or privately-purchased commercial insurance).

Enrollment by Benefit Combination

	2012		2013		2014	
Enrollment Combinations	Members	Percent of Total	Members	Percent of Total	Members	Percent of Total
SC Only	43,684	79%	41,879	78%	40,820	79%
SC +Medicare Part D	7,052	13%	7,877	15%	7,858	15%
SC + Commercial	3,413	6%	3,020	6%	2,654	5%
All Three	1,174	2%	603	1%	498	1%
Total Enrollment	55,323		53,379		51,830	



In CY2014, there were more than 1.5 million drug claims paid on behalf of SeniorCare waiver members, at a cost of nearly $74 million.

	Total Claims	Total Paid Amount
Total pharmacy claims and total amount paid, CY2014	1,510,217	$ 73,913,268.69

SeniorCare members who had prescription claims in CY2014 had an average of 33.6 paid claims each. Fifty-five percent of members had no more than 30 paid claims in the year; only a few members had more than 200 claims during the year.

Claims per Year	Members	Percent of Members	Cumulative Members	Cumulative Percent
1-10	9,299	20.2%	9,299	20.2%
11-20	8,594	18.7%	17,893	38.9%
21-30	7,590	16.5%	25,483	55.4%
31-40	5,965	13.0%	31,448	68.3%
41-50	4,479	9.7%	35,927	78.1%
51-60	3,278	7.1%	39,205	85.2%
61-70	2,306	5.0%	41,511	90.2%
71-80	1,502	3.3%	43,013	93.5%
81-90	1,016	2.2%	44,029	95.7%
91-100	682	1.5%	44,711	97.2%
101-110	409	0.9%	45,120	98.0%
111-120	283	0.6%	45,403	98.7%
121-130	201	0.4%	45,604	99.1%
131-140	144	0.3%	45,748	99.4%
141-150	97	0.2%	45,845	99.6%
151-160	58	0.1%	45,903	99.7%
161-170	35	0.1%	45,938	99.8%
171-180	30	0.1%	45,968	99.9%
181-190	13	0.0%	45,981	99.9%
191-200	15	0.0%	45,996	99.9%
201-210	12	0.0%	46,008	100.0%
211-220	6	0.0%	46,014	100.0%
221-230	4	0.0%	46,018	100.0%
231-240	0	0.0%	46,018	100.0%
241-250	0	0.0%	46,018	100.0%
251-260	0	0.0%	46,018	100.0%
261-270	2	0.0%	46,020	100.0%
Total	46,020	100.0%	---	---

The program encourages the use of generic drugs when available in a given drug classification and also applies a higher copayment for brand-name drugs in an effort to control program costs. In keeping with this, 81 percent of all paid claims in CY2014 were for generic drugs, yet generics accounted for only 18 percent of the total amount paid.

Drug Type	Claims (Unique ICN)	Percent of Total	Total Paid Amount	Percent of Total	Average Paid Amount
Brand	270,637	18%	$ 47,477,356.90	64%	$ 175.43
Generic	1,229,273	81%	$ 13,502,020.66	18%	$ 10.98

Specialty	9,163	1%	$ 12,876,236.74	17%	$ 1,405.24
Other	1,144	< 1%	$ 57,654.39	< 1%	$ 50.40
Total	1,510,217	100%	$ 73,913,268.69	100%	$ 48.94

A breakdown of claims by cost, using $50 cost increments, shows that the great majority of claims paid on behalf of SeniorCare members are for relatively modest amounts. Eighty-three percent of all paid claims in CY2014, representing 11 percent of the total amount paid that year; cost the program less than $50 each; the average amount paid for these claims was $6.68. Ninety-nine and one-half percent of all paid claims were for less than $550; these claims represented 73.3 percent of the total amount paid. (Note that some rows have been omitted from the distribution shown in the table below, to save space.) At the other end of the distribution, a handful of claims in CY2014 cost more than $18,000.

Payment Range (in dollars)	Claims (Unique ICN)	Percent of Total	Total Paid Amount	Percent of Total	Average Paid Amount
0-50	1,253,190	83.0%	$ 8,373,774.61	11.3%	$ 6.68
50-100	67,474	4.5%	$ 4,981,363.16	6.7%	$ 73.83
100-150	38,529	2.6%	$ 4,638,554.17	6.3%	$ 120.39
150-200	37,511	2.5%	$ 6,585,185.28	8.9%	$ 175.55
200-250	28,338	1.9%	$ 6,279,098.32	8.5%	$ 221.58
250-300	43,863	2.9%	$ 12,173,547.87	16.5%	$ 277.54
300-350	14,663	1.0%	$ 4,785,785.95	6.5%	$ 326.39
350-400	9,861	0.7%	$ 3,642,743.24	4.9%	$ 369.41
400-450	3,288	0.2%	$ 1,393,689.28	1.9%	$ 423.87
450-500	1,452	0.1%	$ 693,344.73	0.9%	$ 477.51
500-550	1,125	0.1%	$ 585,038.99	0.8%	
--- Rows have been omitted ---					
> 18000	6	0.0%	$ 320,626.09	0.5%	$ 53,437.68
Total:	1,510,217	100.0%	$ 73,913,268.69	100.0%	---

Pharmaceutical codes are used to uniquely identify medications. The Hierarchical Ingredient Code ("HIC") was created by First Data Bank. The HIC is a 6-character code that identifies the combination of active ingredients in the drug, irrespective of manufacturer. Because the coding is hierarchical, part of the HIC may be used to group drugs together by active ingredient, strength, route, and dosage form. First Data Bank's specific therapeutic class consists of the first 3 characters of the Hierarchical Ingredient Code. For this reason it is called the "HIC3".

The HIC3 coding system was used to classify CY2014 SeniorCare drug claims. The table below shows claims and amounts paid for the 25 types of drugs most commonly purchased by SeniorCare members in CY2014, ranked by the number of paid claims. The number of claims in each class is shown as a percentage of the total of all drugs purchased in CY2014; likewise, the amount paid for drugs in each class is shown as a percentage of the total amount paid for all claims in CY2014. The 25 types of drugs

most-often purchased through SeniorCare by members represented 66 percent of all claims paid in CY2014 and accounted for 44 percent of the total amount paid that year.

Drug Name	Claims	Percent of Total	Amount Paid	Percent of Total
Proton-pump inhibitors	88,502	6%	$ 2,439,315.98	3%
Antihyperlipidemic - HMG COA reductase inhibitors	88,222	6%	$ 1,694,406.78	2%
Beta-adrenergic blocking agents	87,499	6%	$ 2,478,232.04	3%
Analgesics, narcotics	61,493	4%	$ 1,379,893.79	2%
Calcium channel blocking agents	50,365	3%	$ 768,821.59	1%
Anticonvulsants	47,734	3%	$ 1,466,438.77	2%
Antihypertensives, ace inhibitors	47,368	3%	$ 169,114.99	0%
Potassium replacement	46,459	3%	$ 897,067.05	1%
Thyroid hormones	42,507	3%	$ 784,956.01	1%
Selective serotonin reuptake inhibitor (SSRIs)	41,711	3%	$ 100,140.30	0%
Loop diuretics	41,349	3%	$ 108,288.85	0%
Miotics/other intraocular pressure reducers	36,331	2%	$ 2,117,164.79	3%
Anti-anxiety drugs	35,449	2%	$ 49,391.87	0%
Anticoagulants, Coumarin type	35,111	2%	$ 107,430.75	0%
Insulins	29,623	2%	$ 7,901,109.39	11%
Antihypertensives, angiotensin receptor antagonist	29,298	2%	$ 996,882.31	1%
Thiazide and related diuretics	24,474	2%	$ 101,034.50	0%
Platelet aggregation inhibitors	24,077	2%	$ 649,176.31	1%
Bone resorption inhibitors	23,532	2%	$ 322,575.83	0%
Glucocorticoids	22,066	1%	$ 597,779.01	1%
Beta-adrenergic and glucocorticoid combinations	21,489	1%	$ 4,881,426.16	7%
Benign prostatic hypertrophy/micturition agents	21,137	1%	$ 116,254.39	0%
Antihyperglycemic, biguanide type	17,209	1%	$ 96,576.34	0%
Lipotropics	16,665	1%	$ 2,002,748.11	3%
Beta-adrenergic agents	15,018	1%	$ 630,196.65	1%
Total Claims and Amount Paid, Top 25 Drugs (HIC3)	**994,688**	**66%**	**$ 32,856,422.56**	**44%**
Total Claims and Amount Paid, All Drugs in CY2014	**1,510,217**	**100%**	**$ 73,913,268.69**	**100%**

APPENDIX B
Survey of Recent SeniorCare Waiver Enrollees

The cover letter for the survey is as follows:

Dear Wisconsin Resident,

The Wisconsin Department of Health Services manages the SeniorCare program. We are conducting a survey to learn more about who takes part in the program and how well SeniorCare helps with the cost of prescription medicines. You have been randomly chosen to take part in the survey. We hope that you will help us to serve you better by telling us about your experience with SeniorCare.

There are several things that are important for you to know. First, the survey is voluntary. That is, you may choose to take the survey or not; the decision is up to you. If you choose not to, this will not affect the benefits that you get.

Second, some survey questions ask about your experiences with the SeniorCare program. Other questions ask about your health and other insurance coverage that you have. We don't think that most people will object to these questions, but you may skip questions that you do not wish to answer.

If you take part, what you say will be confidential. Your answers will be added to the answers of other people so that no person or household can be identified. Your name will not be used in any reports about the survey.

You may notice a number on this survey and on the return envelope. This number is used to keep track of the surveys so that reminders don't have to be sent to people who have already returned their survey. If you return your survey, we will use this number to remove your name from the list for follow-up mailings.

If you have trouble reading or answering the questions, you may ask someone such as a spouse, relative, or someone else to help you. After you complete the survey, place it in the return envelope and mail it back to us by [INSERT DATE].

If you have questions, please call XXX-XXX-XXXX. All calls to this number are free. While your participation is voluntary, we hope you will take the time to answer these questions. Most people find that this takes about 20 minutes. It is important to us that all opinions are represented. Thank you for your help.

Sincerely,
[SPONSOR]

Enclosed:

Questionnaire; return envelope

The survey begins on the following page.

SENIORCARE SURVEY

Thank you for taking part in the SeniorCare Survey! The survey is intended to learn more about who takes part in SeniorCare and how well the program helps Wisconsin residents with the cost of prescription medicines. It will take about 20 minutes to complete the survey. Your participation is voluntary, and everything you say will be kept confidential. Your responses will be added to the responses of other people participating in the survey so that no person or household can be identified.

Instructions:

- Most of the questions ask you to check one or more boxes. You can mark your answer like this: ☒. There are just a few questions that ask you to write an answer.
- Section 1 refers to the six months **before** you got your SeniorCare card.
- Section 2 refers to the recent period **since** you got your SeniorCare card; some of these questions are similar to those in Section 1, except for the time period that the question asks about.
- Section 3 involves questions about your health.
- You may ask another person such as a spouse, friend, or other caregiver to help you with the survey as needed.
- When you have completed the survey, put it in the return envelope that was provided and place it in the mail.

SECTION 1: BEFORE SENIORCARE

Questions in this section refer to the **six months before** you got your SeniorCare card.

1. Did you have health insurance for all or part of the six months before you got your SeniorCare card?

   ☐ Yes ☐ No (go to Question 4)

2. If you answered Yes to Question 1, what was the source of this insurance coverage? Check all that apply.

   ☐ I got insurance through my job or my spouse's job
   ☐ I bought insurance on my own or with my spouse
   ☐ I got insurance through Medicare
   ☐ I got insurance through Medicaid
   ☐ I got insurance through the Veteran's Administration or other public source
   ☐ I had other insurance. (Specify) _____
   ☐ Don't Know

3. If you answered Question 2, did the insurance you checked cover all or part of the cost of your prescription medicines?

☐ Yes ☐ No ☐ Don't Know

4. In the six months before you got your SeniorCare card, did you fill or refill any prescriptions for your own medicine(s)?

☐ Yes ☐ No ➡ 5. If No, is that because you didn't have any prescriptions to fill or refill?

☐ Yes (Go to Section 2) ☐ No

Sometimes people may not fill prescriptions, or they may take less medicine than prescribed. Before you got your SeniorCare card….

6. How often did you decide not to fill or refill a prescription because you did not have enough money to pay for the medicine?

☐ Often ☐ Sometimes ☐ Never ☐ Don't Know

7. How often did you delay getting a prescription filled or refilled because you did not have enough money to pay for the medicine?

☐ Often ☐ Sometimes ☐ Never ☐ Don't Know

8. How often did you skip doses or take smaller doses to make the medicine last longer, because you did not have enough money to pay for the medicine?

☐ Often ☐ Sometimes ☐ Never ☐ Don't Know

Sometimes people go without things they need or want in order to pay for prescription medicines. In the six months before you got your SeniorCare card…

9. Did you ever have less to spend on food, heat or other things you needed in order to pay for prescription medicines? ☐ Yes ☐ No

10. Did you ever give up going out or doing things you enjoyed in order to pay for prescription medicines? ☐ Yes ☐ No

11. Did you ever have to put off or decide not to buy something you wanted in order to pay for prescription medicines? ☐ Yes ☐ No

12. In general, how difficult was it for you to pay for the medicines prescribed for you in the six months before you got your SeniorCare card?

☐ Very Difficult ☐ Somewhat Difficult ☐ A Little Difficult ☐ Not at all Difficult

SECTION 2: SINCE SENIORCARE

Questions in this section refer to the recent period **since** you got your SeniorCare card.

13. Have you had other health insurance for all or part of the time since you got your SeniorCare card?

☐ Yes ☐ No (go to Question 16)

14. If you answered Yes to Question 13, what is the source of this insurance coverage? Check all that apply.

☐ I got insurance through my job or my spouse's job
☐ I bought insurance on my own or with my spouse
☐ I got insurance through Medicare
☐ I got insurance through Medicaid
☐ I got insurance through the Veteran's Administration or another public source
☐ I had other insurance. (Specify) _____
☐ Don't Know

15. If you answered Question 14, does the insurance you checked cover all or part of the cost of your prescription medicines?

☐ Yes ☐ No ☐ Don't Know

16. How easy was it to enroll in SeniorCare?

☐ Very Easy ☐ Somewhat Easy ☐ Somewhat Difficult ☐ Very Difficult

17. Have you filled or refilled any prescriptions for your own medicine(s) since you got your SeniorCare card?

☐ Yes ☐ No ➡ 18. If No, is that because you didn't have any prescriptions to fill or refill?

☐ Yes (Go to Section 3) ☐ No

19. How easy is it to fill a prescription using the SeniorCare card?

☐ Very Easy ☐ Somewhat Easy ☐ Somewhat Difficult ☐ Very Difficult ☐ Don't Know

20. Are there any prescription medicines you need that are **not** covered by SeniorCare?

☐ Yes ☐ No ☐ Don't Know

21. Since you got your SeniorCare card, has your pharmacist ever discussed all of your medicines with you?

☐ Yes ☐ No (go to Question 24) ☐ Don't Know (go to Question 24)

If you answered Yes to Question 21, tell us whether you agree or disagree with the following statements about the discussion with your pharmacist:

22. The pharmacist helped me to understand why I need to take my medicine(s).

☐ Agree ☐ Disagree

23. The pharmacist helped me to understand how to take my medicine(s) safely and correctly.

☐ Agree ☐ Disagree

Since getting your SeniorCare card…

24. How often have you decided not to fill or refill a prescription because you did not have enough money to pay for the medicine?

☐ Often ☐ Sometimes ☐ Never ☐ Don't Know

25. How often have you delayed getting a prescription filled or refilled because you did not have enough money to pay for the medicine?

☐ Often ☐ Sometimes ☐ Never ☐ Don't Know

26. How often have you skipped doses or taken smaller doses to make the medicine last longer, because you did not have enough money to pay for the medicine?

☐ Often ☐ Sometimes ☐ Never ☐ Don't Know

Sometimes people go without things they need or want so they can pay for prescription medicines. Since you got your SeniorCare card…

27. Have you ever had less to spend on food, heat or other necessities in order to pay for prescription medicines? ☐ Yes ☐ No

28. Have you ever had to give up going out or doing things you enjoy in order to pay for prescription medicines? ☐ Yes ☐ No

29. Have you ever had to put off or decide not to buy something you wanted in order to pay for prescription medicines? ☐ Yes ☐ No

30. In general, how difficult has it been to pay for the medicine(s) prescribed for you since you got your SeniorCare card?

☐ Very Difficult ☐ Somewhat Difficult ☐ A Little Difficult ☐ Not at All Difficult

31. Would you say that the amount of money you spend on prescription medicines now is more, about the same, or less than you spent before you got your SeniorCare card?

☐ More ☐ About the same ☐ Less ☐ Don't Know

SECTION 3: ABOUT YOU

32. How would you describe your overall health?

☐ Excellent ☐ Very Good ☐ Good ☐ Fair ☐ Poor

33. What health conditions, if any, do you have? Check all that apply below and check the ones you currently take medicine for. If you have no specific health conditions, leave this question blank and go to Question 34.

Health Condition (check those you have)	Do you take medicine for the conditions checked?
☐ Alzheimer's disease or dementia	☐ Yes ☐ No ☐ Don't Know
☐ Arthritis	☐ Yes ☐ No ☐ Don't Know
☐ Asthma, emphysema or chronic obstructive pulmonary disease (COPD)	☐ Yes ☐ No ☐ Don't Know
☐ Cancer or other malignancy	☐ Yes ☐ No ☐ Don't Know
☐ Diabetes or high blood sugar	☐ Yes ☐ No ☐ Don't Know
☐ Depression	☐ Yes ☐ No ☐ Don't Know
☐ Heart disease or any heart condition	☐ Yes ☐ No ☐ Don't Know
☐ High cholesterol	☐ Yes ☐ No ☐ Don't Know
☐ Hypertension or high blood pressure	☐ Yes ☐ No ☐ Don't Know
☐ Osteoporosis or soft or fragile bones	☐ Yes ☐ No ☐ Don't Know
☐ Stroke	☐ Yes ☐ No ☐ Don't Know
☐ Stomach ulcers, heartburn or reflux	☐ Yes ☐ No ☐ Don't Know
☐ Other: _____	☐ Yes ☐ No ☐ Don't Know
☐ Other: _____	☐ Yes ☐ No ☐ Don't Know

34. **In the past two years** —how many times have you gone to a hospital emergency department to get care for yourself?

☐ Never ☐ 1 time ☐ 2 times ☐ 3 times
☐ 4 times ☐ 5-9 times ☐ 10 times or more

35. **In the past two years**— how many times have you been a patient in a hospital for an overnight stay or longer?

☐ Never ☐ 1 time ☐ 2 times ☐ 3 times
☐ 4 times ☐ 5-9 times ☐ 10 times or more

36. **In the past two years** —have you ever been admitted to a nursing home or similar place that provides long term care?

☐ Yes ☐ No

37. What is your age, in years? _____ years

38. Are you male or female?

☐ Male ☐ Female

39. What is your marital status?

☐ Married ☐ Divorced ☐ Separated
☐ Widowed ☐ Never Married

40. In which Wisconsin county do you live? _____

41. Did someone help you with this survey?

☐ Yes ☐ No (go to Question 44)

42. If you answered Yes to Question 41, who helped you with this survey?

☐ Spouse ☐ Guardian
☐ Other relative ☐ Other, please specify: _____
☐ Friend or neighbor

43. How did that person help? Mark one or more.

☐ Read the questions to me
☐ Wrote down the answers I gave
☐ Answered the questions for me
☐ Translated the questions into my language
☐ Helped in some other way

44. Those are all of the questions we have. If you have comments to share about your experiences with the SeniorCare program, please include them below.

***Thank you* for your help!**

Please put your completed survey in the return envelope that was provided and place it in the mail.

APPENDIX C
Details of Analyses for Hypotheses 3-5

This appendix provides the details for the analysis of Hypotheses 3-5, which are:

3. The rate of Medicaid entry among Wisconsin seniors age 65 and older will be lower after SeniorCare implementation than before SeniorCare.

4. The rate of hospital admissions among Wisconsin seniors age 65 and older for selected medical conditions such as diabetes and heart disease will be lower after SeniorCare implementation than before SeniorCare.

5. The rate of Medicaid-funded nursing home admissions among Wisconsin seniors age 65 and older will be lower after SeniorCare implementation than before SeniorCare.

The number of Wisconsin seniors age 65 and older who were dually eligible for Medicare and Medicaid, hospitalizations for selected conditions, and the number of dual eligibles living in a nursing home during several years prior to SeniorCare implementation were compared to the same measures during the years after SeniorCare began. SeniorCare enrollment data and claims records were obtained from the SeniorCare program and Medicaid data was obtained from Wisconsin's MMIS, known as ForwardHealth interChange. Wisconsin transitioned to interChange in 2008; the system supports a number of critical programs administered by DHS.

It is difficult to isolate individuals age 65 and over who qualify for full Medicaid benefits under the "medically needy" provisions, therefore, the analyses for Hypothesis 3 and 5 were conducted using data on "full-benefit dual eligibles" age 65 and over. These were individuals eligible for both Medicare and full Medicaid benefits, and so encompass the "medically needy" group.

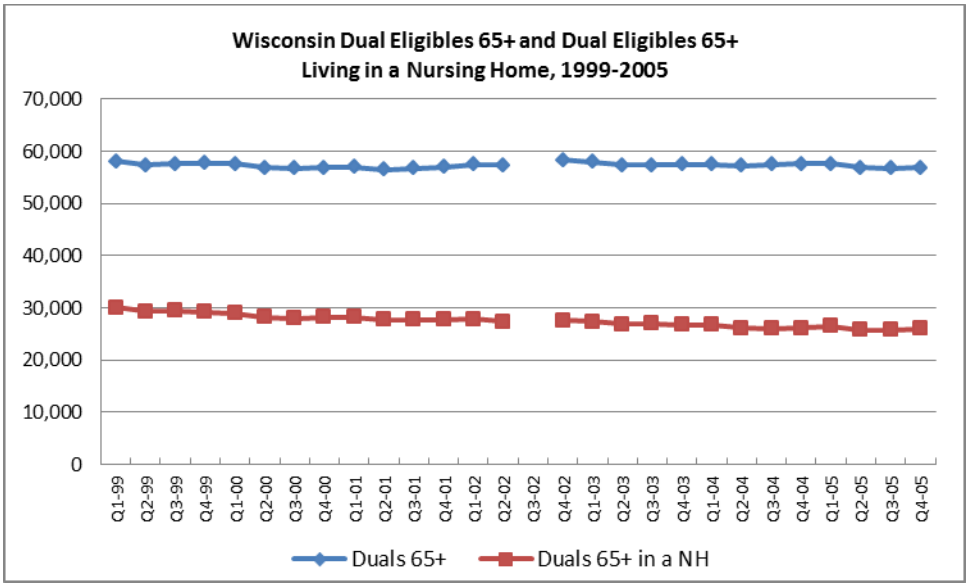
Likewise, the analysis for Hypothesis 5 looks at the number of dual eligibles age 65 and over who are living in a nursing home (whose costs are paid by Medicaid), and examines the extent to which this changes after SeniorCare implementation. Due to resource limitations, the evaluation focuses on Medicaid-funded nursing home care and does not address rehabilitation stays paid by Medicare.

Hospital discharge data and population data needed to assess Hypothesis 4 were obtained from the Office of Health Informatics, Division of Public Health, in DHS. Wisconsin's non-Veteran's Administration hospitals have been required by statute to report information from their billing systems on all inpatients since 1989. These data, which are compiled and edited by the Wisconsin Hospital Association and shared with DHS' Office of Health Informatics, were used to compare hospital admissions among seniors for selected health conditions, before and after SeniorCare implementation in CY2002. Hospitalizations for heart disease were considered to be those with ICD-9 codes 414.0-414.9, 428.0-428.9, exclusive of Medicaid as payer and non-Wisconsin residents. Hospitalizations for diabetes were those with ICD-9 codes 250.0-250.93, exclusive of Medicaid as payer and non-Wisconsin residents. Data for CY1999, unlike later years, do not include Minnesota hospitals.

Although ideally this evaluation would also have examined the effects of SeniorCare on seniors' use of emergency department services as well as inpatient stays, hospitals in Wisconsin were not required to begin reporting emergency department data until CY2002, the year in which SeniorCare was implemented. Therefore it would not have been possible to obtain data on emergency department usage prior to CY2002 to serve as a baseline.

In the figures that follow related to Hypotheses 3-5, the data for the third quarter of 2002 (SeniorCare began in September 2002, near the end of that quarter) has been omitted to make it easier to view pre-SeniorCare and post-SeniorCare trends in the data.

The figure below shows the data for Hypothesis 3 and 5 plotted over time. The data represents the number of Dual Eligibles Age 65+ and the number of Dual Eligibles Ages 65+ Living in a Nursing Home on a quarterly basis from CYs1999-2005.



Data Source: ForwardHealth interChange (Wisconsin's MMIS)
'Dual Eligibles' were defined as individuals eligible for Medicare Part A and/or Part B and having a claim for Medicaid services on at least one day of the quarter.
'Dual Eligibles Living in a Nursing Home' is defined as individuals eligible for Medicare Part A and/or Part B and having at least one claim for Medicaid-funded nursing home care during the quarter.

The segmented regression model described earlier was run using the number of Dual Eligibles Age 65+ per Quarter as the dependent variable. The model was also was run using the number of Dual Eligibles Age 65+ per Quarter Living in a Nursing Home as the dependent variable. For each of these analyses, indicators for Time (number of quarters from the start of the series), SeniorCare (0 for time periods before SeniorCare and 1 for time periods after SeniorCare) and Time After SeniorCare (0 for periods before SeniorCare and taking sequential values of 1-12 for periods after SeniorCare) as the independent variables. In both cases, a test for autocorrelation in the data showed evidence of positive autocorrelation; to correct for this, the data were lagged by two quarters. The overall models were tested and found to be significant ($p = .003$ for the dependent variable Dual Eligibles 65+ and $p < .001$ for the dependent variable Dual Eligibles 65+ Living in a Nursing Home).

The table below summarizes the results of these analyses. With Dual Eligibles Ages 65+ as the dependent variable, the coefficient for Time was significant (p = .012), indicating a downward trend in the number of dual eligibles over time. In addition, the coefficient for SeniorCare was significantly different from zero (p = .000). Contrary to expectations, however, this indicates that on average, the number of dual eligibles is somewhat higher following the implementation of SeniorCare rather than lower.

When the number of dual eligibles per quarter was transformed into a percentage of the Wisconsin population age 65 and over with income less than 200 percent of the FPL, similar results were obtained and are not shown here.

Outcome Measure	Variable	Coefficient	Std. Error	t-statistic	Probability
Dual Eligibles 65+	Constant β_0	57847.824	268.201	215.688	.000
	β_1 (Time)	-75.527	27.517	-2.745	.012
	β_2 (SeniorCare)	1266.857	292.508	4.331	.000
	β_3 (Time After SeniorCare)	15.703	38.915	.404	.690
Dual Eligibles 65+ in a Nursing Home	Constant β_0	30133.786	194.241	155.136	.000
	β_1 (Time)	-184.104	19.929	-9.238	.000
	β_2 (SeniorCare)	379.626	211.845	1.792	.087
	β_3 (Time After SeniorCare)	36.632	28.183	1.300	.207
Duals 65+ with Community-Based Long Term Care	Constant β_0	28873.242	117.162	246.438	.000
	β_1 (Time)	-197.275	12.021	-16.411	.000
	β_2 (SeniorCare)	-112.429	127.781	-.880	.388
	β_3 (Time After SeniorCare)	-24.989	17.000	-1.470	.156

Using the number of Dual Eligibles age 65+ per quarter who were in a nursing home as the dependent variable and the indicators for Time, SeniorCare and Time After SeniorCare as the independent variables, a test for autocorrelation in the data showed evidence of positive autocorrelation; to correct for this, the data were lagged by two quarters.

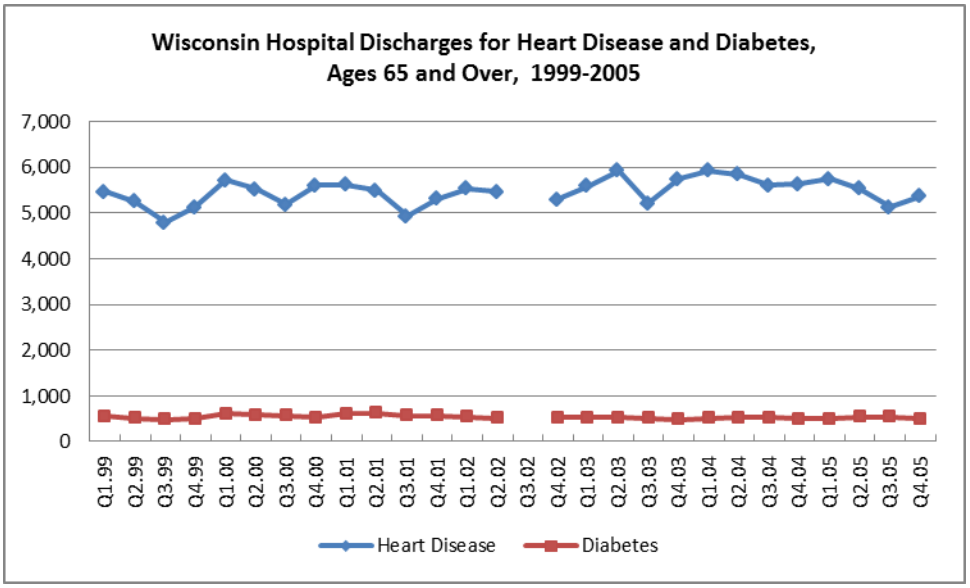
In this case the overall model is also significant (p < .0001). However, this is due primarily to the downward trend in the number of dual eligibles living in a nursing home; only the coefficient for Time is significantly different from zero, reflecting the decrease over time in the number of dual eligibles age 65 and over who are in a nursing home. There is no effect due to SeniorCare implementation in either the level of the outcome variable or the trend.

When the number of dual eligibles per quarter who were living in a nursing home was converted into a percentage of the Wisconsin population age 65 and over with income less than 200 percent of the FPL, similar results were obtained and are not shown here.

As a matter of interest, data pertaining to the number of Wisconsin dual eligibles age 65 and over who received Medicaid-funded community-based long-term care services each quarter from CYs1999-2005 was also examined using the approach described here. 'Dual Eligibles Receiving Community-Based Long Term Care' was defined as individuals eligible for Medicare Part A and/or Part B and having at least one claim for Medicaid-funded long-term care during the quarter. These data are not shown graphically, but the results of the regression analysis are included in the previous table. Again, only the coefficient for

Time is significant, reflecting a decline over time in the number of dual eligibles receiving community-based long term care. The implementation of SeniorCare had no effect on this measure.

The graph below shows the data for Hypothesis 4 plotted over time. These data represent the number of heart disease-related hospital discharges among Wisconsin seniors age 65 and over per quarter from CYs1999-2005, as well as the diabetes-related discharges for the same population and the same time period.



Data Source: Office of Health Informatics, Division of Public Health, DHS
Hospitalizations for Heart Disease: ICD-9 codes 414.0-414.9, 428.0-428.9 (exclusive of Medicaid as payer and non-WI residents); data for CY1999 do not include Minnesota hospitals.
Hospitalizations for Diabetes: ICD-9 Codes 250.0-250.93 (exclusive of Medicaid as payer and non-WI residents); data for CY1999 do not include Minnesota hospitals.

Using the number of heart disease-related hospital discharges among Wisconsin seniors age 65 and over per quarter as the dependent variable and indicators for Time, SeniorCare and Time After SeniorCare as the independent variables, a regression was run using the model described earlier. None of the coefficients are significantly different from zero. This indicates that the number of hospitalizations for heart disease among Wisconsin residents age 65 and over did not change after SeniorCare began Similar results were obtained when the number of heart disease-related hospitalizations was transformed into the rate per 1,000; these results are not shown here.

Outcome Measure	Variable	Coefficient	Std. Error	t-statistic	Probability
Heart Disease-Related Discharges (Counts), Persons 65+	Constant β_0	5287.000	147.347	35.881	.000
	β_1 (Time)	7.700	16.206	.475	.639
	β_2 (SeniorCare)	270.115	207.911	1.299	.206
	β_3 (Time After SeniorCare)	-20.997	25.820	-.813	.424
Diabetes-Related Discharges (Counts), Persons 65+	Constant β_0	546.638	19.271	28.365	.000
	β_1 (Time)	.679	2.120	.320	.752
	β_2 (SeniorCare)	-37.855	27.193	-1.392	.177
	β_3 (Time After SeniorCare)	-1.080	3.377	-.320	.752

When the same model was run using the number of diabetes-related hospital discharges among Wisconsin seniors age 65 and over per quarter as the dependent variable and indicators for Time, SeniorCare and Time After SeniorCare as the independent variables, the test of the overall regression model was not significant, indicating that the model does not provide a good fit for these data, and the coefficients for the predictors did not reach statistical significance. It does not appear that the implementation of SeniorCare had any effect on statewide hospitalizations for diabetes among Wisconsin seniors. When the rate of diabetes-related hospital discharges per 1,000 was used rather than the number of discharges, similar results were obtained and are not shown here.