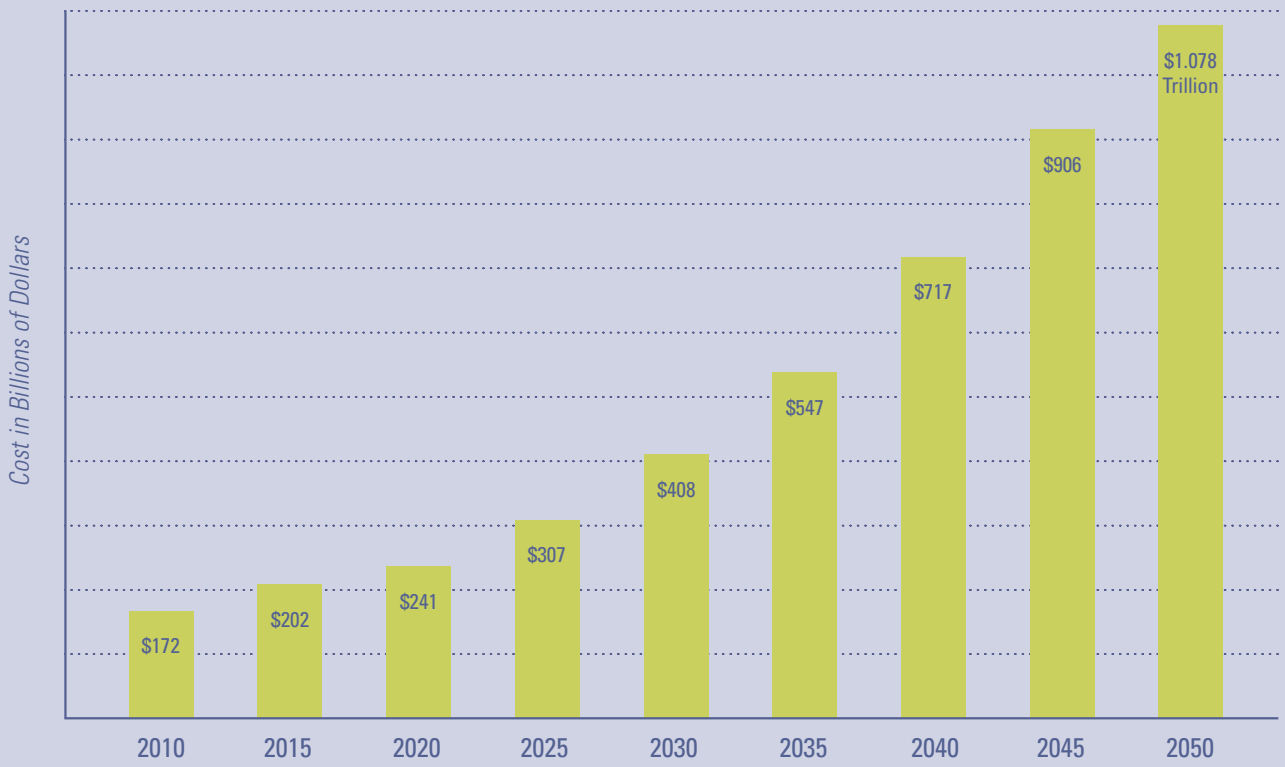
Changing the Trajectory of Alzheimer's Disease: A National Imperative



Costs for Care of People with Alzheimer's Diesase

alzheimer's association®

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During the 40-year period from 2010 to 2050, the total costs of care for Americans age 65 and older with Alzheimer's disease will increase five-fold, from $172 billion to $1.08 trillion per year. These dollar amounts represent the direct costs of care to all payers, including Medicare, Medicaid, out-of-pocket costs to people with the conditions and their families, and costs to other payers (such as private insurance, HMOs and other managed care organizations, and uncompensated care).

All the cost information in the cover chart and throughout the report is in constant, 2010 dollars. Cost figures in the cover chart and throughout the report do not include the costs of care for Americans under age 65 with Alzheimer's because the data is unavailable. The figures also do not include the value of unpaid care provided by families and others, estimated to be $144 billion in 2009.

Introduction

Alzheimer's disease is a devastating condition that results in the loss of memory and other cognitive abilities, and in the ability to care for oneself independently. In 2010, more than 5 million Americans age 65 and older are living with Alzheimer's, and that number will increase rapidly as the baby boomers age.[1]

Millions of family members and friends are also affected by Alzheimer's. These individuals bear the emotional impact of watching someone they care about succumb to and eventually die with the condition. In addition, many face the difficulty of providing increasing amounts of physical, financial and additional assistance for the person. In 2009, an estimated 11 million Americans provided 12.5 billion hours of unpaid care for people with Alzheimer's and other dementias.

People with Alzheimer's disease are also high users of medical, nursing home and other residential care, in addition to in-home and community-based services. Their high use of these services results in high costs to Medicare, Medicaid and other payers, and high out-of-pocket costs for people with the condition and their families.

Currently, there are no known treatments to prevent, cure or even delay the onset or slow the progression of Alzheimer's disease and other dementias. The five medications that are approved for Alzheimer's disease by the U.S. Food and Drug Administration (FDA) temporarily reduce symptoms for some, but they cannot change the underlying course of the disease. Clearly, the ultimate goal is to have treatments that completely prevent or cure Alzheimer's disease and other dementias – eventually resulting in a world without these conditions. Yet, as this report illustrates, even modest and, perhaps, more readily available treatments could prove to be tremendously valuable.

The report presents information about the current trajectory and impact of Alzheimer's disease based on data from a model developed for the Alzheimer's Association by the Lewin Group.[2] Using this model, the report then describes two alternate trajectories in which hypothetical scientific advances result in treatments that can change the course of Alzheimer's disease, either by delaying onset or slowing progression. For these current and alternate trajectories, the report provides estimates of the number of Americans age 65 and older who will have Alzheimer's from 2010 to 2050, the number that will be in the mild, moderate or severe stage of the disease at any point in time, and the costs of their care to all payers.

[1] In addition to people age 65 and older with Alzheimer's and other dementias, the Alzheimer's Association estimates that there are now about half a million Americans under age 65 with these conditions, including about 200,000 people with Alzheimer's disease. This report does not provide information about these individuals because the data needed to develop that information are not available.

[2] See the appendices found at www.alz.org/trajectory for a description of the model and the research findings used to develop it.

The Current Trajectory

Number of Americans with Alzheimer's Disease

The number of Americans age 65 and older who have or will have Alzheimer's disease is projected to increase from 5.1 million in 2010 to 13.5 million in 2050 (see Fig. 1).[3]

In 2010, an estimated 13 percent of Americans age 65 and older will have Alzheimer's disease. By 2050, an estimated 16 percent of Americans age 65 and older will have the condition.

Figure 1:
Number of Americans Age 65 and Older with Alzheimer's Disease, 2010–2050

[3] These numbers include only Americans age 65 and older because the data needed to project the number of people under age 65 with Alzheimer's disease and other dementias is not available.

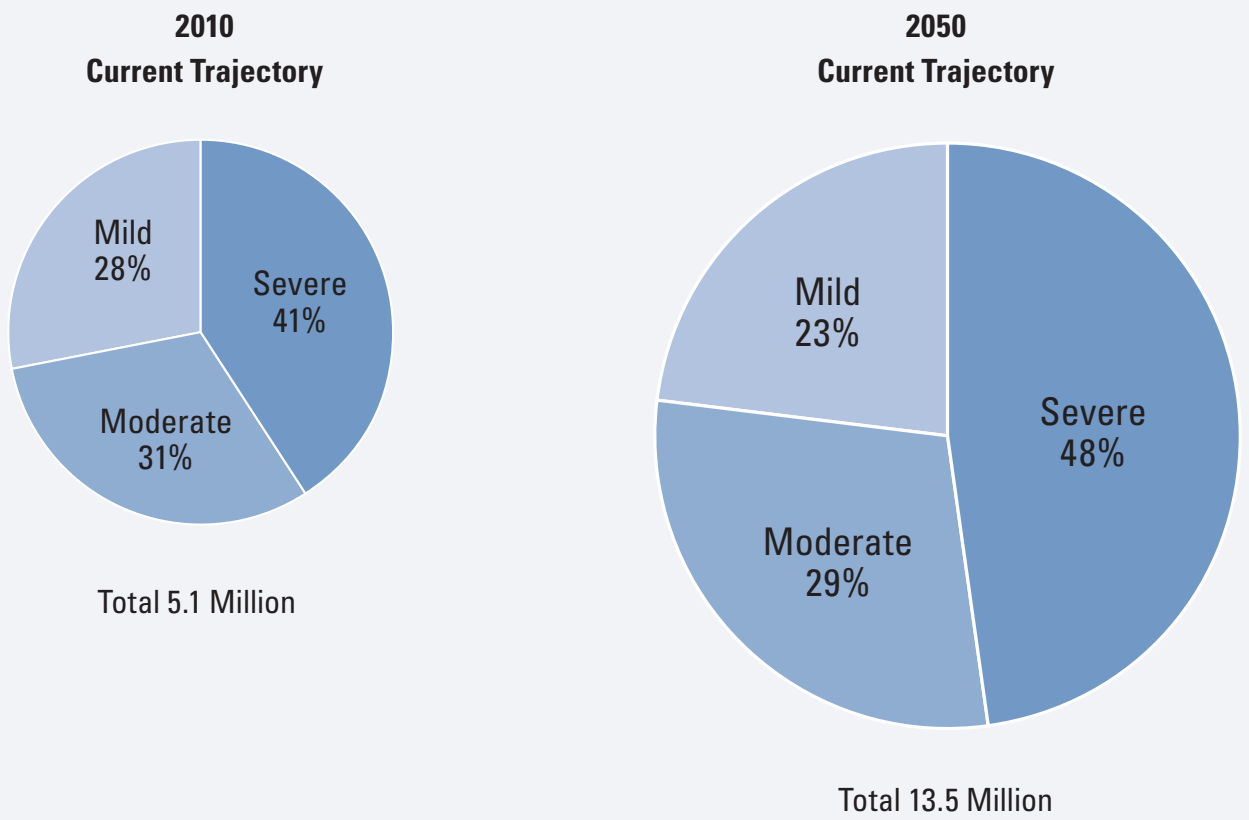
Stage of Disease

At any point in time, some people with Alzheimer's disease are in the mild stage of the condition, some are in the moderate stage, and some are in the severe stage.

As shown in Figure 2, the proportion of people age 65 and older with Alzheimer's in the mild stage will decrease from 28 percent in 2010 to 23 percent in 2050. Likewise, the proportion of people with the condition in the moderate stage will decrease from 31 percent in 2010 to 29 percent in 2050.

In contrast, the proportion in the severe stage will increase from 41 percent in 2010 to 48 percent in 2050. The pie chart for 2050 increases in size to represent the growth of the number of people with Alzheimer's from 5.1 million in 2010 to 13.5 million in 2050. In 2050, 6.5 million people, almost half (48 percent) of the projected 13.5 million Americans with Alzheimer's in that year, will be in the severe stage. In contrast, 3.1 million will be in the mild stage and 3.9 million will be in the moderate stage.

Figure 2:
Proportion of Americans Age 65 and Older with Alzheimer's Disease by Stage of Disease, 2010–2050



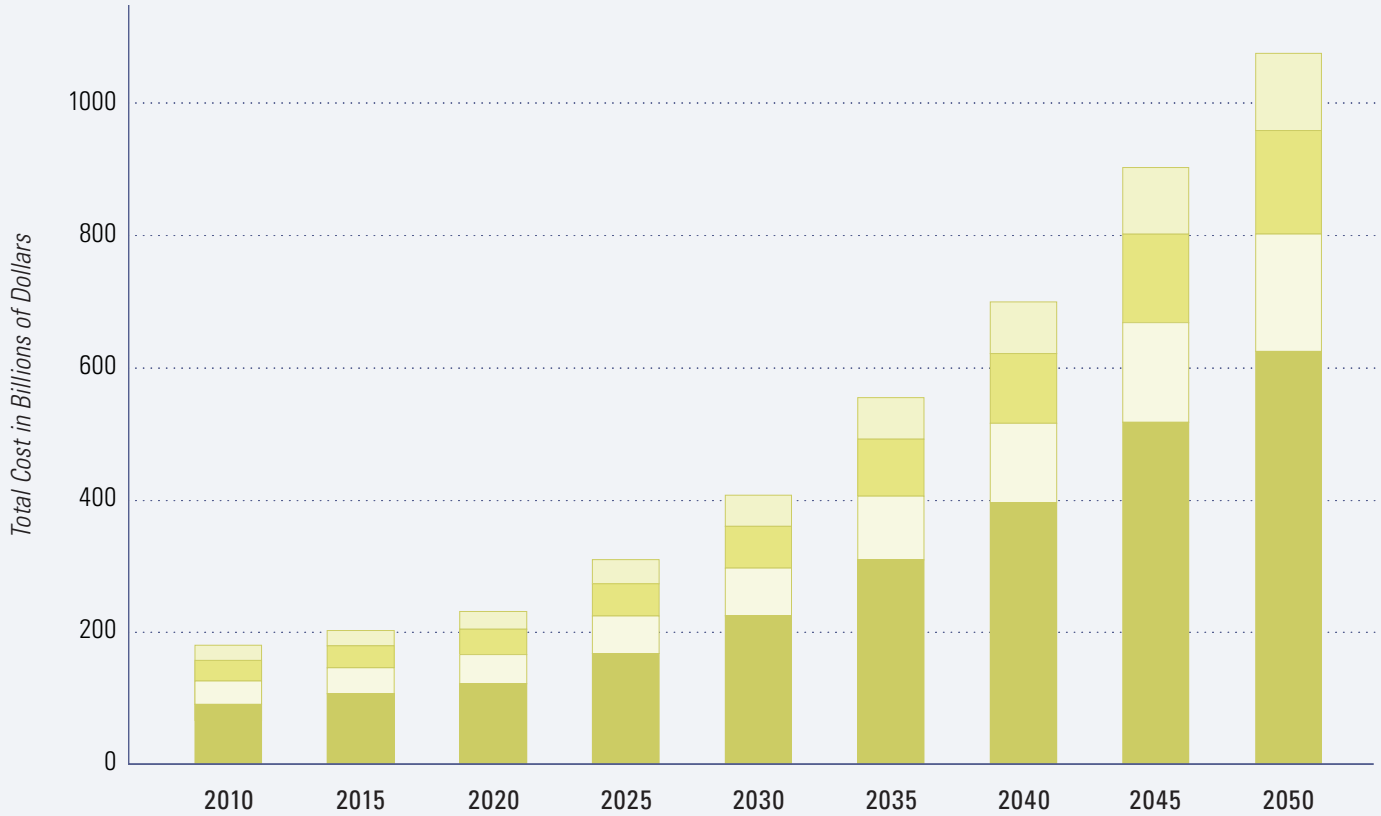
Costs of Care[4]

The figure on the front cover of this report shows that total annual costs to all payers for the care of people with Alzheimer's disease will increase from $172 billion in 2010 to $1.08 trillion in 2050. Figure 3 shows the amounts paid by specific payers, including Medicare, Medicaid, out-of-pocket costs paid by people with the conditions and their families, and costs to other payers (such as private insurance, HMOs and other managed care organizations, and uncompensated care).

As shown in Figure 3, Medicare costs for the care of people with Alzheimer's will increase more than 600 percent, from $88 billion in 2010 to $627 billion in 2050. Medicaid costs will increase 400 percent, from $34 billion in 2010 to $178 billion in 2050. Out-of-pocket costs to people with Alzheimer's and their families will increase more than 400 percent, from $30 billion in 2010 to $157 billion in 2050. Costs to other payers will also increase more than 400 percent from $22 billion in 2010 to $117 billion in 2050.

Cumulative costs to all payers for the care of people with Alzheimer's in the 40-year period from 2010 to 2050 will amount to $20.4 trillion. Cumulative Medicare costs for the care of people with the condition will amount to $11.4 trillion, and cumulative Medicaid costs for their care will amount to $3.6 trillion over the same period.

Figure 3:
Costs of Care for Americans Age 65 and Older with Alzheimer's Disease and Other Dementias, 2010–2050



	2010	2015	2020	2025	2030	2035	2040	2045	2050
Other Payers	$22	$23	$28	$36	$47	$62	$80	$101	$117
Out-of-pocket	$30	$33	$40	$48	$63	$85	$108	$134	$157
Medicaid	$34	$39	$46	$56	$72	$95	$123	$151	$178
Medicare	$88	$107	$128	$166	$225	$306	$406	$519	$627

[4] All cost figures are reported in constant, 2010 dollars and do not include inflation. Costs of care include the costs of medical care, nursing home and other residential care, paid in-home and community-based services, and medications.

Changing the Trajectory

There are currently no known treatments to prevent, cure or delay the progression of Alzheimer's disease. Although the ultimate goal is to have treatments that completely prevent or cure Alzheimer's, more modest and, perhaps, more readily available treatments could also prove very beneficial.

The following sections describe the impact of two hypothetical treatment breakthroughs: one that would delay onset and one that would slow progression. Delaying onset would mean that people would have more disease-free years before developing Alzheimer's. Slowing progression would mean that those who developed the conditions would spend more years in the mild and moderate stages before progressing to the severe stage.

Impact of a Hypothetical Treatment Breakthrough that Delayed Onset

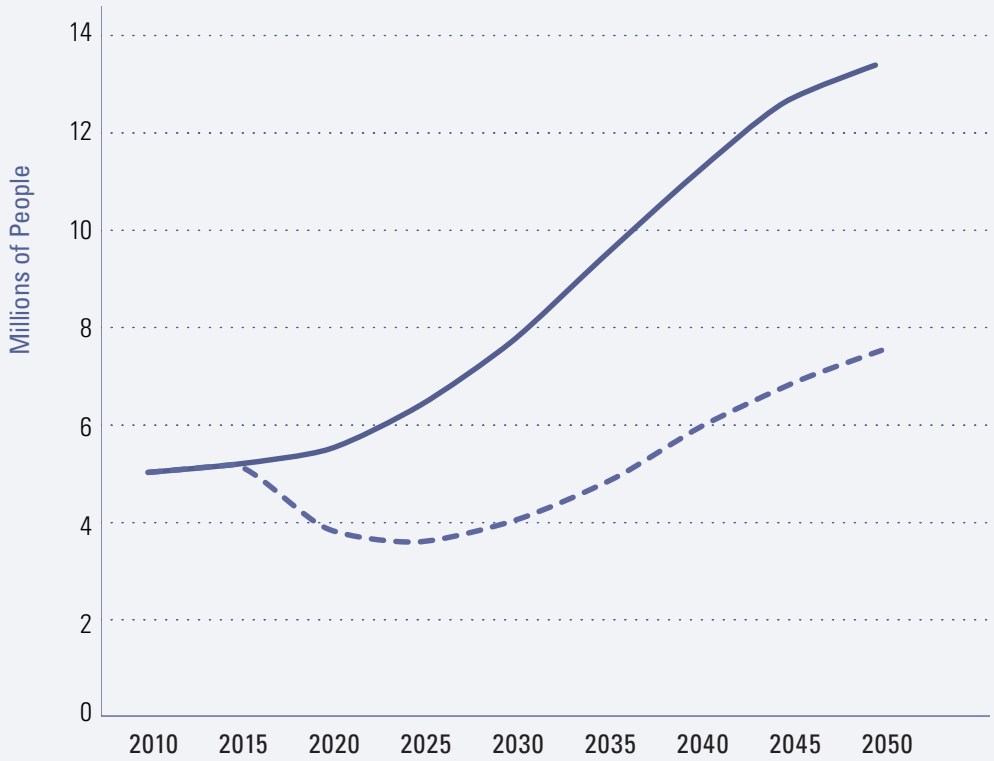
A treatment breakthrough that delayed the onset of Alzheimer's disease would result in an immediate and long-lasting reduction in the number of Americans with the condition and the cost of their care. The hypothetical treatment might be a vaccine that would be given once in a person's life, a medication or cocktail of medications that would be taken one or more times a day starting at different times in a person's life, or a change in diet, exercise or other lifestyle behaviors. The treatment described in the following text and figures would delay the age of onset of Alzheimer's by five years. It is assumed that this treatment would become available in 2015 and begin to show its effects in that year.

Number of Americans with Alzheimer's Disease[5]

A treatment breakthrough that delayed the age of onset of Alzheimer's disease by five years and began to show its effects in 2015 would decrease the total number of Americans age 65 and older with Alzheimer's disease from 5.6 million to 4 million by 2020 (see Fig. 4). As a result, 1.6 million Americans who would be expected to have the condition in 2020 would be free of the condition. In addition, five years later, in 2025, 2.7 million Americans – 42 percent of the 6.5 million people who would be expected to have Alzheimer's in that year – would be disease-free. The biggest effect would be in 2050 when 5.8 million people – 43 percent of the 13.5 million Americans who would be expected to have Alzheimer's without the breakthrough – would not have the condition.

A treatment breakthrough that delayed the age of onset of Alzheimer's disease by five years would reduce the proportion of Americans age 65 and older who have the condition from 10 percent to 7 percent in 2020, and from 16 percent to 9 percent in 2050.

Figure 4:
Americans Age 65 and Older with Alzheimer's Disease, 2010–2050



	2010	2015	2020	2025	2030	2035	2040	2045	2050
Current Trajectory	5.1	5.3	5.6	6.5	7.8	9.5	11.2	12.7	13.5
Delayed Onset	5.1	5.3	4.0	3.8	4.2	5.1	6.1	7.1	7.7
Decrease		0.0	1.6	2.7	3.6	4.4	5.1	5.6	5.8

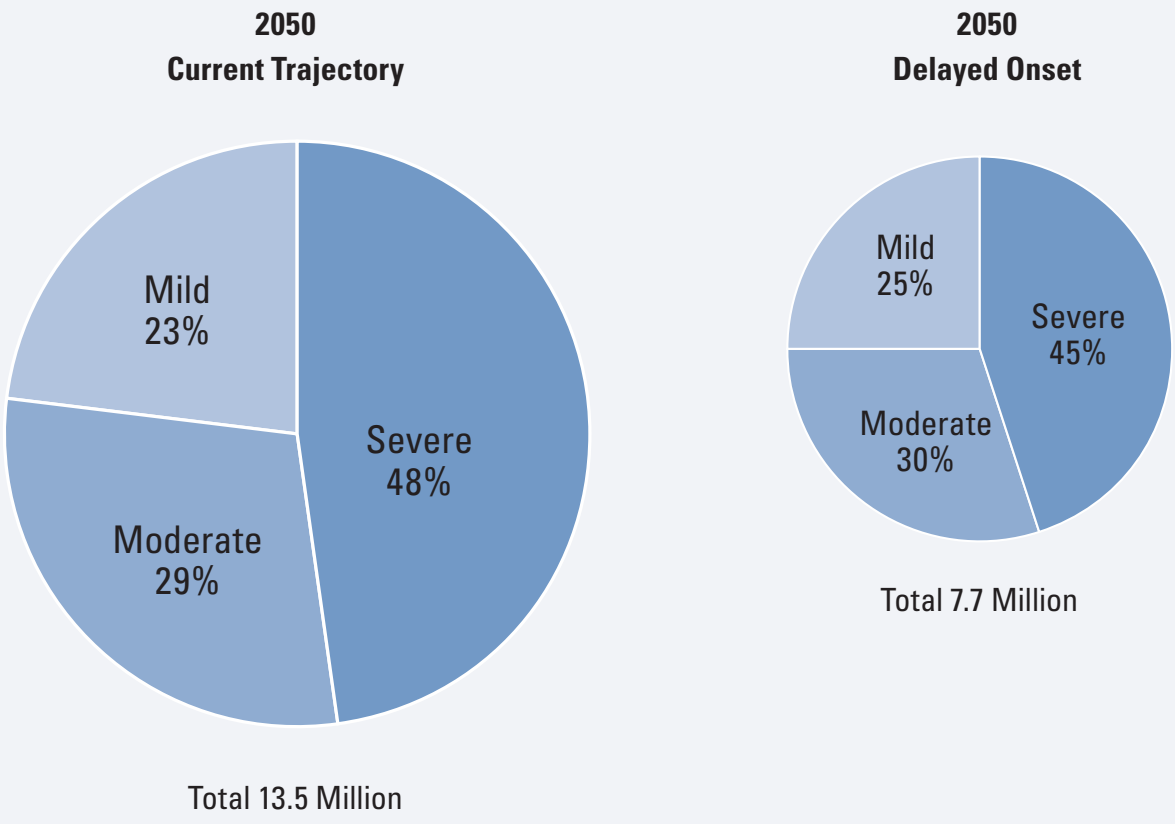
[5] The numbers below include only Americans age 65 and older because the data that would be needed to project the number of people under age 65 with Alzheimer's disease in future years is not available.

Stage of Disease

Although a treatment breakthrough delaying the onset of Alzheimer's disease by five years would reduce the *number* of Americans with the condition, for a time it would increase the *proportion* of those with the condition who were in the severe stage. In 2020, more than half (53 percent) of those with Alzheimer's would be in the severe stage, compared with 42 percent who would be expected to be in the severe stage without the treatment breakthrough. This would occur because no new people would develop the condition starting in 2015, thus greatly reducing the number of individuals in the mild stage, while the new treatment would have no effect on those who already had the condition. As shown in Figure 5, in 2050, 45 percent of Americans age 65 and older with Alzheimer's would be in the severe stage, compared with 48 percent who would be expected to be in the severe stage without the treatment breakthrough.

At no time would this hypothetical treatment increase the number of people in the severe stage. For instance, even though (as shown in Figure 5) the *proportion* of people age 65 and older with Alzheimer's who are in the severe stage would be almost the same in 2050 with or without the treatment breakthrough (45 percent versus 48 percent), the *number* of people in the severe stage would be much smaller (3.5 million with the treatment breakthrough versus 6.5 million without it). This is because the treatment breakthrough would decrease the total number of people with Alzheimer's.

Figure 5:
Impact of a 5-Year Delay in Onset by Stage of Disease, Americans Age 65 and Older with Alzheimer's Disease, 2050

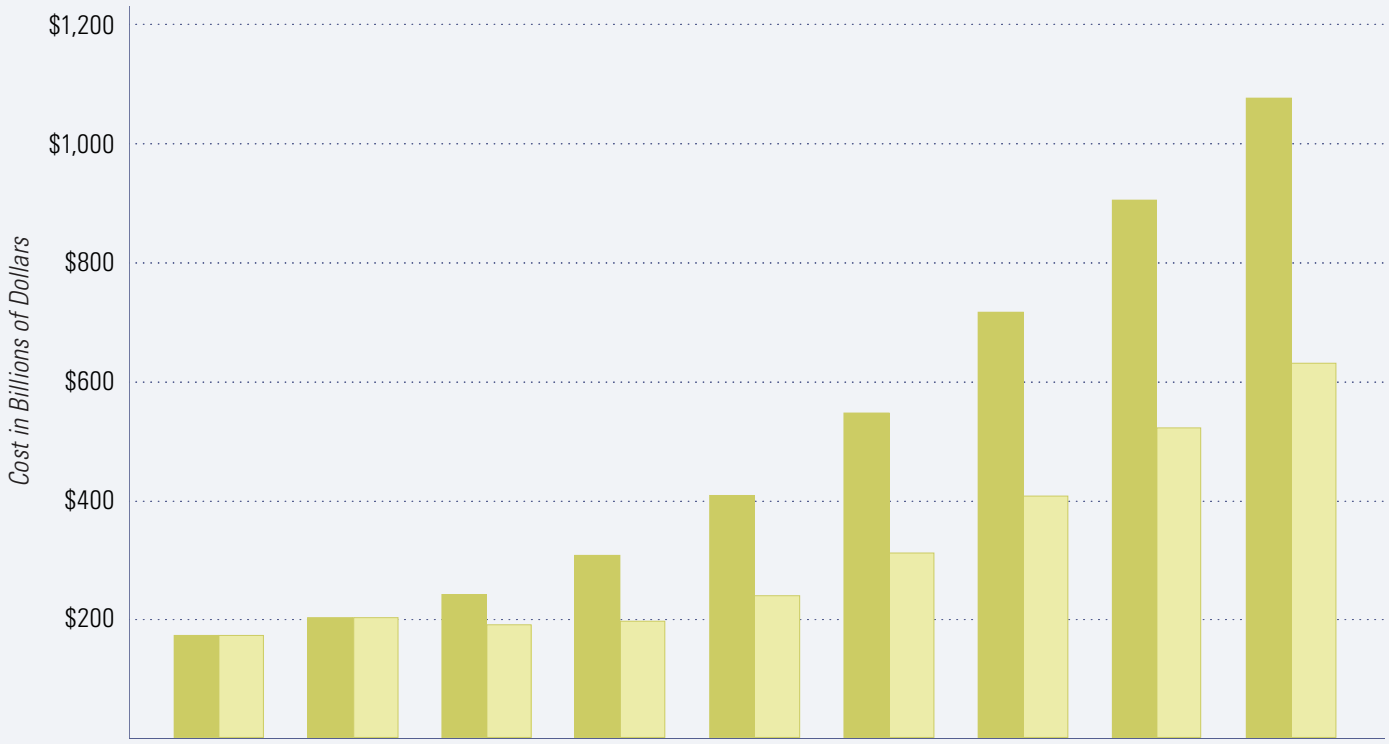


Costs of Care[6]

A treatment breakthrough that delayed the age of onset of Alzheimer's by five years would reduce total costs immediately. By 2020, five years after the introduction of the treatment in 2015, total costs to all payers for the care of people with the condition would be $50 billion less than would be expected without the breakthrough (see Fig. 6). By 2050, the reduction in total costs to all payers would be $447 billion; decreasing from an expected $1.078 trillion to $631 billion with the breakthrough.

Reductions in Medicare costs would account for almost half of the decrease in costs to all payers from a treatment breakthrough delaying the average age of onset of Alzheimer's by five years. In 2020, Medicare costs for the care of people with the condition would be reduced by $33 billion, from $128 billion to $95 billion. The cost reduction for Medicare in 2050 would be $283 billion, from $627 billion to $344 billion (see Fig. 7).

Figure 6:
Impact of a 5-Year Delay in Onset on Costs, Americans Age 65 and Older with Alzheimer's Disease, 2010–2050



	2010	2015	2020	2025	2030	2035	2040	2045	2050
Current Trajectory	$172	$202	$240	$307	$408	$547	$717	$906	$1,078
Delayed Onset	$172	$202	$190	$196	$239	$311	$407	$522	$631
Reduced Cost	$0	$0	$50	$111	$170	$236	$310	$384	$447

[6] All cost figures are reported in constant, 2010 dollars and do not include inflation. Costs of care include the same categories of costs for medical care, nursing home and other residential care, paid in-home and community-based services, and medications that were included in the current trajectory costs.

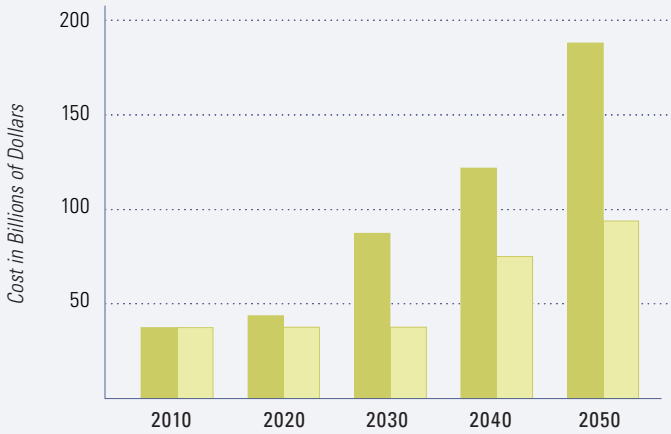
In 2020, Medicaid costs for the care of people with Alzheimer's would be reduced from the expected $46 billion to $37 billion for a savings of $9 billion. In 2050, Medicaid costs would be reduced from $178 billion to $99 billion for a savings of $79 billion (see Fig. 8).

Out-of-pocket costs to people with Alzheimer's and their families would be reduced from $40 billion to $30 billion in 2020 for a savings of $10 billion. In 2050, out of pocket costs would be reduced from $157 billion to $87 billion for a savings of $70 billion (see Fig. 9).

Costs to other payers would also be reduced, from $28 billion to $21 billion in 2020, and from $117 billion to $64 billion in 2050.

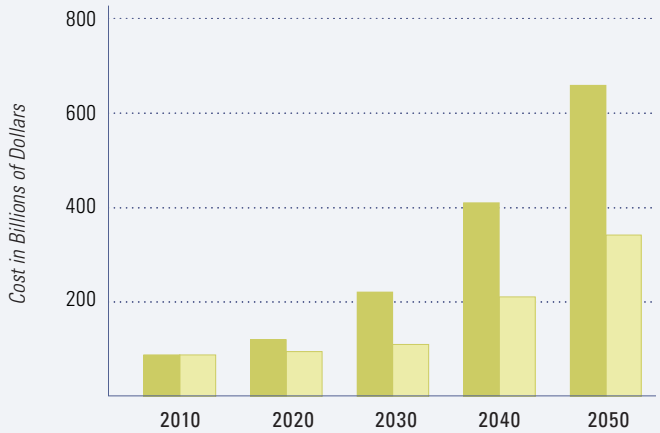
The costs in this section do not include the costs of the hypothetical treatment to delay onset. This is because the possible treatments range so widely in cost, from a relatively low cost treatment, such as a change in diet or exercise, to a relatively high cost treatment, such as a medication or a cocktail of medications that would be taken several times a day. Treatment costs would also be affected by additional factors, such as length of treatment, number of individuals requiring treatment and any related government policy changes.

Figure 8:
Medicaid Costs, 5-Year Delayed Onset



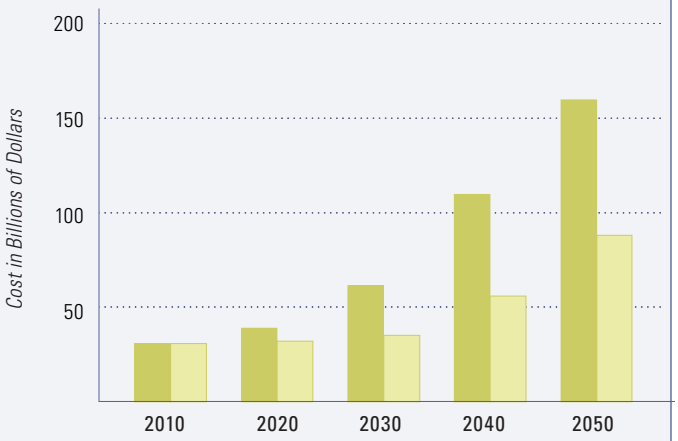
	2010	2020	2030	2040	2050
Current Trajectory	$34	$46	$72	$123	$178
Delayed Onset	$34	$37	$39	$64	$99

Figure 7:
Medicare Costs, 5-Year Delayed Onset



	2010	2020	2030	2040	2050
Current Trajectory	$88	$128	$225	$406	$627
Delayed Onset	$88	$95	$118	$212	$344

Figure 9:
Out-of-Pocket Costs, 5-Year Delayed Onset



	2010	2020	2030	2040	2050
Current Trajectory	$30	$40	$63	$108	$157
Delayed Onset	$30	$30	$34	$58	$87

Impact of a Hypothetical Treatment Breakthrough That Slowed Progression

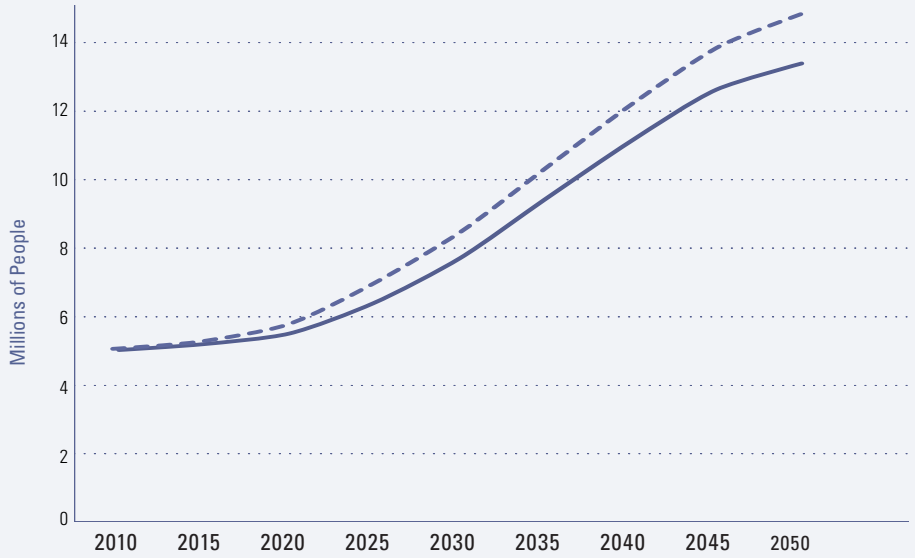
A treatment breakthrough that slowed the progression of Alzheimer's disease would result in more people with the condition in 2050 than would be expected without such a breakthrough because more people would be living longer with the disease. A larger segment would be in the mild stage and the costs of their care would be substantially reduced for all payers. The hypothetical treatment might be a medication or cocktail of medications that would be taken one or more times a day or a change in diet, exercise or other lifestyle behaviors. With the hypothetical treatment breakthrough described in this section, people would still develop Alzheimer's, but on average they would remain in the mild stage five times longer than they do now. Once they transitioned to the moderate stage, they would remain in that stage about five times longer than they do now. In the following text and graphs, it is assumed that the hypothetical treatment would become available in 2015 and begin to show its effects gradually starting in that year.

Number of Americans with Alzheimer's Disease [7]

A treatment breakthrough to slow the progression of Alzheimer's disease, as described above, would begin to show its effects in 2015, increasing the number of Americans age 65 and older with Alzheimer's from 5.6 million to 5.8 million in 2020. As shown in Figure 10, 15 million Americans age 65 and older would have Alzheimer's in 2050, as compared with 13.5 million who would be expected to have the condition without the treatment breakthrough.

This hypothetical treatment breakthrough would increase the proportion of Americans age 65 and older who have the condition from 10 percent to 11 percent in 2020, and from 16 percent to 18 percent in 2050.

Figure 10:
Impact of Slowed Progression on Alzheimer's Disease Growth, Americans Age 65 and Older with Alzheimer's, 2010–2050



	2010	2015	2020	2025	2030	2035	2040	2045	2050
Current Trajectory	5.1	5.3	5.6	6.5	7.8	9.5	11.2	12.7	13.5
Slowed Progression	5.1	5.3	5.8	7.0	8.5	10.4	12.3	14.0	15.0

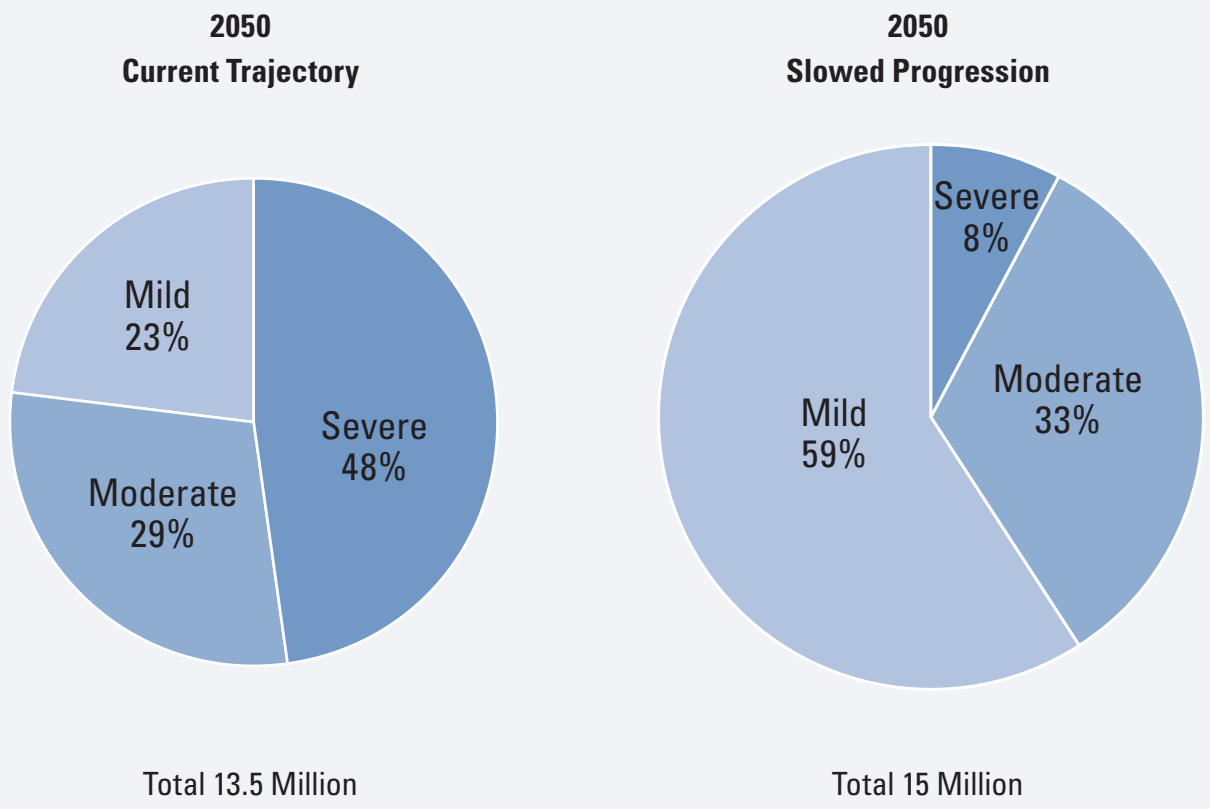
[7] The numbers below include only Americans age 65 and older because the data needed to project the number of people under age 65 with Alzheimer's disease in future years is not available.

Stage of Disease

Although a treatment breakthrough that slowed the progression of Alzheimer's disease would increase the total number of Americans age 65 and older with the condition, it would also greatly decrease the number and proportion of those with the condition who were in the severe stage. In 2020, the number of people with the condition who were in the severe stage would drop from 2.4 million to 1.1 million and the proportion would drop from 42 percent to 18 percent. Figure 11 shows the results for 2050, when only 8 percent of people with Alzheimer's disease would be in the severe stage, compared with the 48 percent that would have been in the severe stage without the treatment breakthrough. The number in the severe stage in 2050 would drop from an expected 6.5 million to 1.2 million.

Conversely, in 2020, the number of Americans age 65 and older with Alzheimer's who were in the mild stage would increase from 1.6 million to 3.3 million and the proportion of those in the mild stage would double from 28 percent to 56 percent. In 2050, 59 percent of people with Alzheimer's would be in the mild stage, compared with the 23 percent that would have been in the mild stage without the treatment breakthrough (see Fig. 11). In 2050, the number in the mild stage would increase from the expected 3.1 million to 8.9 million.

Figure 11:
Impact of Slowed Progression by Stage of Disease, Americans Age 65 and Older with Alzheimer's Disease, 2050

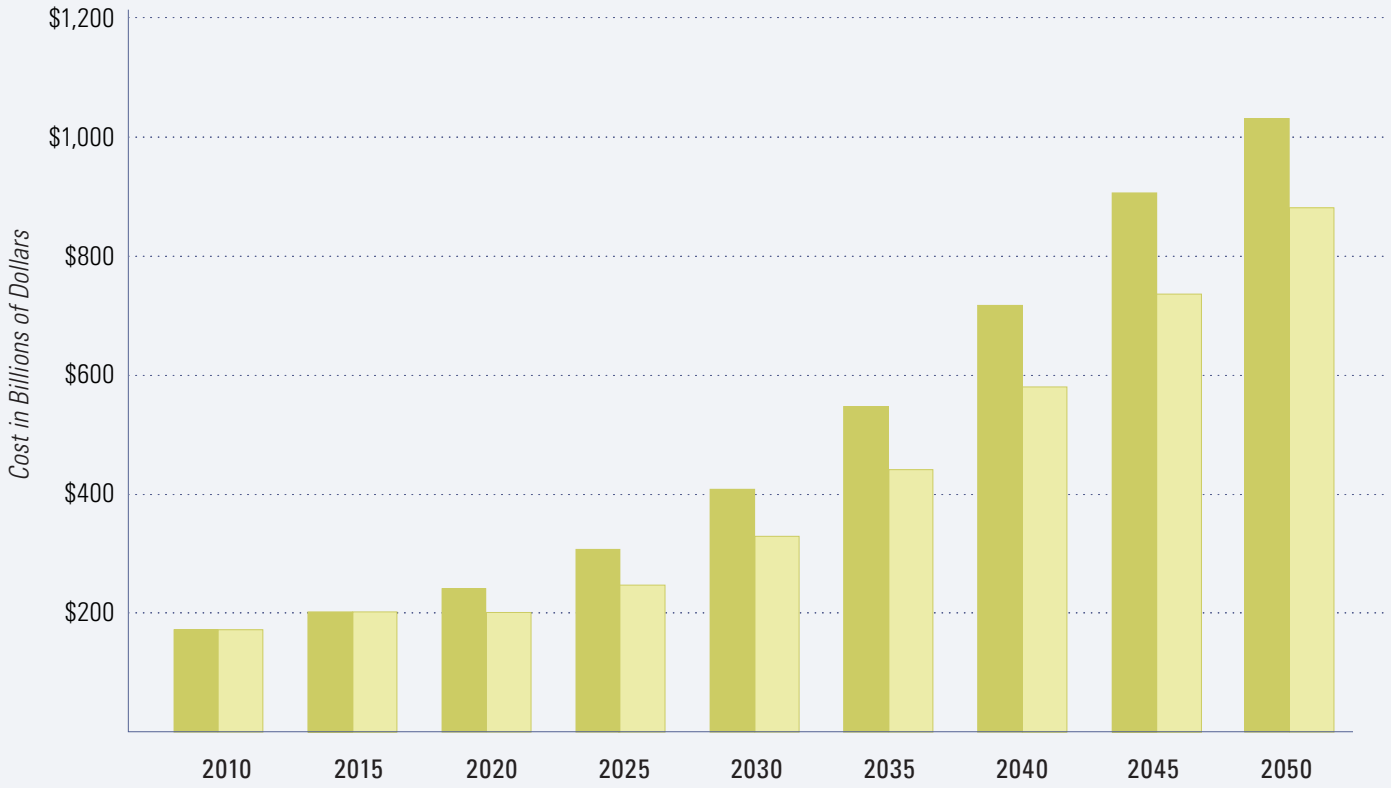


Costs of Care[8]

A treatment breakthrough that slowed the progression of Alzheimer's would reduce the costs to all payers of care for people with the condition from $241 billion to $201 billion in 2020 for a savings of $40 billion (see Fig. 12). By 2050, the reduction in total costs to all payers would be $197 billion ($881 billion versus the expected $1.078 trillion without the breakthrough).

In 2020, Medicare costs for the care of people with Alzheimer's disease would be reduced from the expected $128 billion to $108 billion for a savings of $20 billion. In 2050, Medicare costs would be reduced from the expected $627 billion to $509 billion for a savings of $118 billion (see Fig. 13).

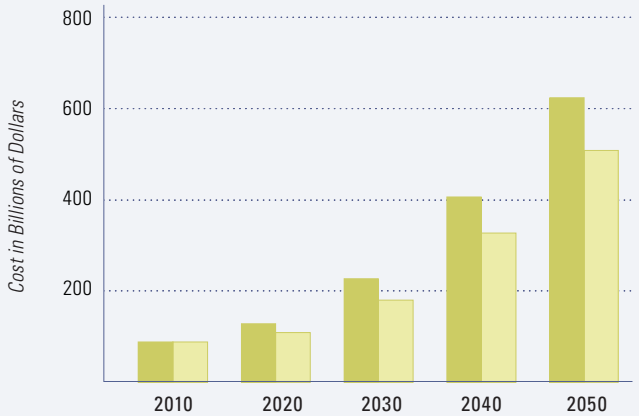
Figure 12:
Impact of a Slowed Progression on Costs, Americans Age 65 and Older with Alzheimer's Disease, 2010–2050



	2010	2015	2020	2025	2030	2035	2040	2045	2050
Current Trajectory	$172	$202	$241	$307	$408	$547	$717	$906	$1,078
Delayed Onset	$172	$202	$201	$247	$329	$441	$580	$736	$881
Reduced Cost	$0	$0	$40	$61	$79	$105	$136	$170	$197

[8] All cost figures are reported in constant, 2010 dollars and do not include inflation. Costs of care include the costs of medical care, nursing home and other residential care, and paid in-home and community-based services.

Figure 13:
Medicare Costs, Slowed Progression



	2010	2020	2030	2040	2050
Current Trajectory	$88	$128	$225	$406	$627
Slowed Progression	$88	$108	$181	$328	$509
Cost Savings	$0	$20	$44	$78	$118

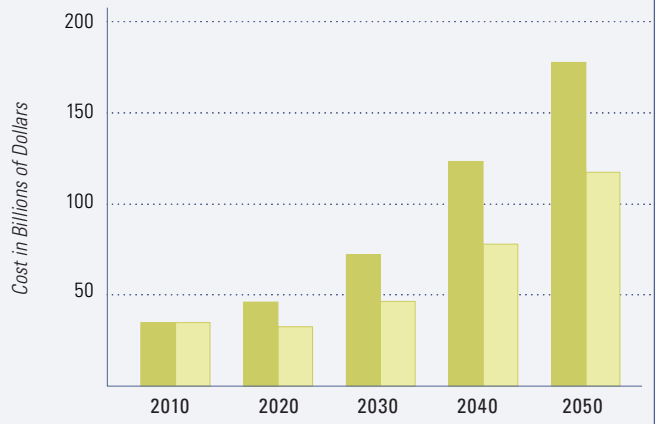
In 2020, Medicaid costs for the care of people with the condition would be reduced from the expected $46 billion to $32 billion for a savings of $14 billion. In 2050, Medicaid costs would be reduced from the expected $178 billion to $116 billion for a savings of $62 billion (see Fig. 14).

Out-of-pocket costs to people with Alzheimer's and their families would be reduced from the expected $40 billion to $32 billion in 2020 for a savings of $8 billion. In 2050, out-of-pocket costs would be reduced from the expected $157 billion to $132 billion for a savings of $25 billion (see Fig. 15).

Costs to other payers would not change in 2020 or 2025, but would begin to increase from $1 billion in 2030 to $6 billion in 2050.

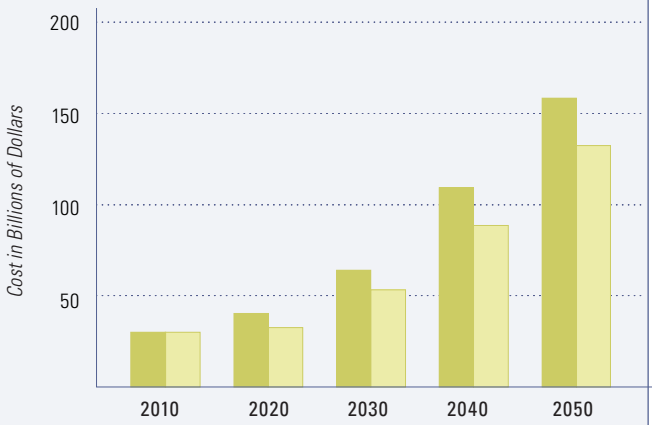
The costs in this section do not include the costs of the hypothetical treatment to delay onset. This is because possible treatments range so widely in cost, from a relatively low cost treatment, such as a change in diet or exercise, to a relatively high cost treatment, such as a medication or a cocktail of medications that would be taken several times a day. It is also unclear how many people would need the treatment and for how long.

Figure 14:
Medicaid Costs, Slowed Progression



	2010	2020	2030	2040	2050
Current Trajectory	$34	$46	$72	$123	$178
Slowed Progression	$34	$32	$46	$77	$116
Cost Savings	$0	$14	$26	$46	$62

Figure 15:
Out-of-Pocket Costs, Slowed Progression

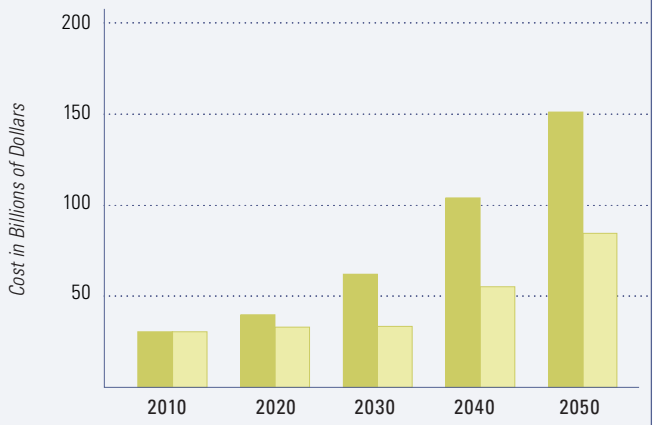


	2010	2020	2030	2040	2050
Current Trajectory	$30	$40	$63	$108	$157
Slowed Progression	$30	$32	$53	$89	$132
Cost Savings	$0	$8	$10	$18	$25

A Closer Look: Medicaid Costs for Nursing Home Care[9]

About half of all nursing home residents in the United States are people with Alzheimer's disease, and about half of nursing home residents with Alzheimer's rely on Medicaid to help pay for their nursing home care. As a result, Medicaid costs for nursing home care for people with the condition are substantial. In 2010 Medicaid costs for nursing home care for people with Alzheimer's will be $30 billion. Without a treatment breakthrough, these costs will increase to $150 billion in 2050 (see Fig. 16).

Figure 16:
Medicaid Nursing Home Costs, Delayed Onset



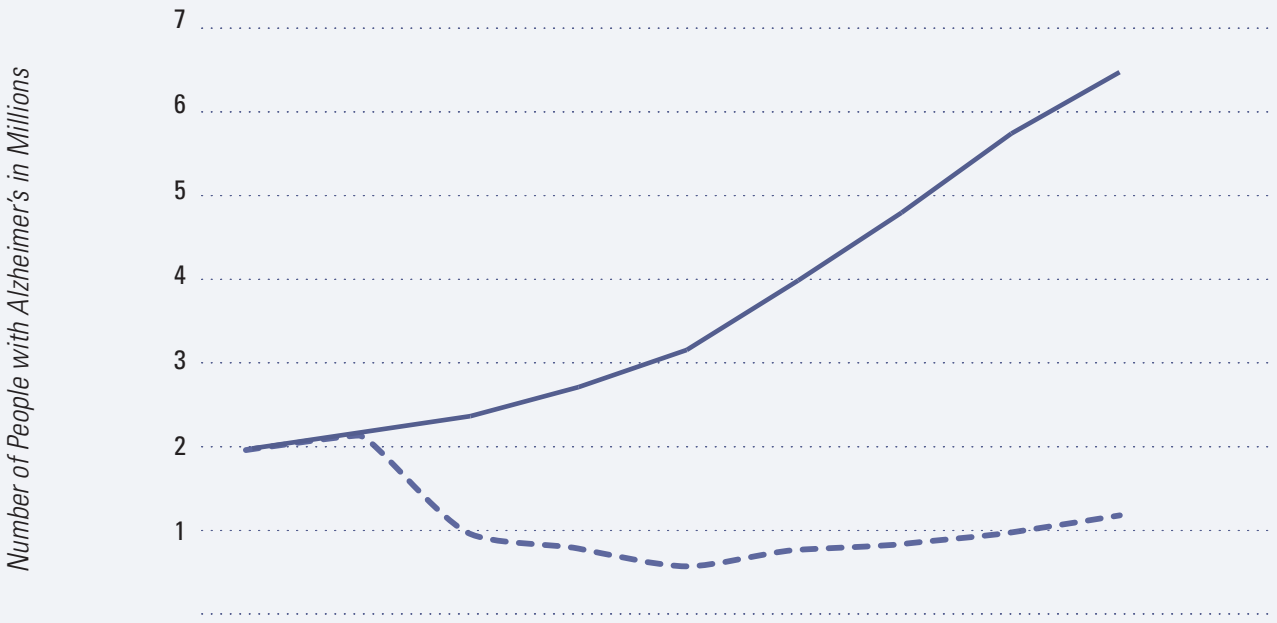
	2010	2020	2030	2040	2050
Current Trajectory	$30	$40	$62	$104	$150
Delayed Onset	$30	$32	$33	$55	$84
Cost Savings	$0	$8	$29	$49	$66

The federal government and state governments share Medicaid costs, including Medicaid costs for nursing home care. The federal share of Medicaid costs for nursing home care for people with Alzheimer's will be $17 billion in 2010 and $85 billion in 2050. The state share of Medicaid costs for nursing home care for people with the condition will be $14 billion 2010 and $67 billion in 2050.

People with Alzheimer's disease are most likely to use nursing home care when they are in the severe stage of their condition. This is not always true since some people with Alzheimer's who are in the mild or moderate stage need nursing home care because they have other serious medical conditions. Nevertheless, nursing home residents with Alzheimer's are most likely to be in the severe stage, and it is reasonable to expect that a reduction in the total number of people with the condition who are in the severe stage would result in costs savings for Medicaid.

[9] These Medicaid costs are included in the total costs and Medicaid costs cited previously in this report. They are pulled out and discussed separately in this section because of the importance of Medicaid costs for nursing home care, particularly for state governments.

Figure 17:
Impact of Slowed Progression on Severe Stage, Americans Age 65 and Older with Alzheimer's, 2010–2050



	2010	2015	2020	2025	2030	2035	2040	2045	2050
Current Trajectory	2.0	2.2	2.4	2.7	3.2	4.0	4.9	5.8	6.5
Delayed Progression	2.0	2.2	1.1	0.7	0.6	0.7	0.8	1.0	1.2
Decrease	0.0	0.0	1.3	2.0	2.6	3.3	4.1	4.8	5.3

Figure 17 shows the reduction in the total number of people with Alzheimer's who would be in the severe stage from 2015 to 2050, assuming a treatment breakthrough that slows the progression of the condition. With a treatment breakthrough, the number of people with Alzheimer's would be reduced from 2.4 million to 1.1 million in 2020 and from 6.5 million to 1.2 million in 2050.[10] A treatment breakthrough that delayed the onset of Alzheimer's who were in the severe stage from 2.4 million to 1.1 million in 2020 and from 6.5 million to 1.2 million in 2050.[11] Thus, both hypothetical treatment breakthroughs described in this report would reduce the total number of people with Alzheimer's who are in the severe stage and would be expected to result in cost savings for Medicaid.

[10] The impact of this reduction in 2050 was illustrated earlier in terms of the percentage of all people with the condition who would be in the severe stage (See Fig. 11).

[11] The impact of this reduction in 2050 was illustrated earlier in terms of the percentage of all people with the condition who would be in the severe stage (See Fig. 5).

Figures 16 and 18 confirm this expectation based on the Lewin Group model. As shown in Figure 16, a treatment breakthrough that delayed the onset of Alzheimer's disease by five years would reduce Medicaid costs for nursing home care of people with the condition by 20 percent in 2020, from the expected $40 billion to $32 billion, resulting in $8 billion in savings for Medicaid. In 2050, Medicaid costs for nursing home care of people with Alzheimer's would decrease by 44 percent, from the expected $150 billion to $84 billion, resulting in $66 billion in savings for Medicaid. The federal share of these costs would be 18 percent lower than expected in 2020 ($18 billion versus $22 billion) and 44 percent lower than expected in 2050 ($47 billion versus $84 billion). State Medicaid costs would be 22 percent lower than expected in 2020 ($14 billion versus $18 billion) and 44 percent lower than expected in 2050 ($37 billion versus $66 billion).

Figure 18 shows that a treatment breakthrough that slowed progression of Alzheimer's disease would also result in savings for Medicaid. Such a treatment breakthrough would reduce Medicaid costs for nursing home care of people with the condition by 35 percent in 2020, from the expected $40 billion to $26 billion, resulting in $14 billion in savings for Medicaid. In 2050, Medicaid costs for nursing home care of people with Alzheimer's would be reduced by 43 percent, from the expected $150 billion to $86 billion, resulting in $64 billion in savings for Medicaid. The federal share of these costs would be 32 percent lower than expected in 2020 ($15 billion versus $22 billion), and 43 percent lower than expected in 2050 ($48 billion versus $84 billion). The state share of Medicaid costs for nursing home care of people with Alzheimer's would be 39 percent lower than expected in 2020 ($11 billion versus $18 billion) and 42 percent lower than expected in 2050 ($38 billion versus $66 billion).

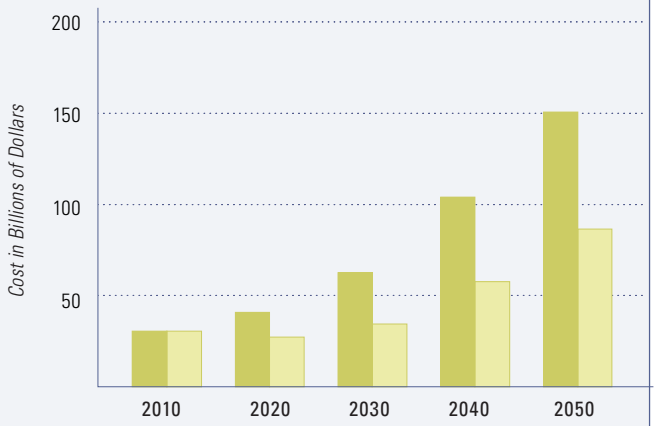
Although this section has focused on Medicaid costs for nursing home care of people with Alzheimer's disease, it should be noted that a treatment breakthrough that delayed the onset or slowed the progression of the condition would also reduce nursing home costs for other payers, including Medicare, individuals with the condition and their families, and other payers.

- Medicare costs: A treatment breakthrough that delayed the onset of Alzheimer's by five years would reduce Medicare costs for nursing home care of people with Alzheimer's in 2050 from the expected $53 billion to $29 billion, resulting in $24 billion in Medicare savings in that year; likewise, a treatment breakthrough that slowed progression would reduce Medicare costs for nursing home care of people with the condition in 2050 from the expected $53 billion to $30 billion, resulting in $23 billion in Medicare savings.

- Out-of-pocket costs: A treatment breakthrough that delayed the onset of Alzheimer's by five years would reduce out-of-pocket costs paid for nursing home care by people with the condition and their families in 2050 from the expected $76 billion to $42 billion, resulting in $34 billion in savings in that year; a treatment breakthrough that slowed progression would reduce out-of-pocket costs for nursing home care for people with the condition in 2050 by the same amount, from the expected $76 billion to $42 billion, resulting in $34 billion in savings in out-of-pocket costs for people with the condition and their families.

- Costs to other payers: A treatment breakthrough that delayed the onset of Alzheimer's by five years would reduce the costs to other payers for nursing home care of people with Alzheimer's in 2050 from the expected $9 billion to $5 billion, resulting in $4 billion in savings for other payers in that year; a treatment breakthrough that slowed progression would reduce costs to other payers for nursing home care of people with the condition in 2050 by the same amount, from the expected $9 billion to $5 billion, resulting in $4 billion in savings for other payers.

Figure 18:
Medicaid Nursing Home Costs, Slowed Progression



	2010	2020	2030	2040	2050
Current Trajectory	$30	$40	$62	$104	$150
Slowed Progression	$30	$26	$34	$57	$86
Cost Savings	$0	$14	$28	$47	$64

Conclusion

This report describes the current trajectory of Alzheimer's disease and its projected impact, and contrasts this baseline with the impact of the condition under two hypothetical treatment scenarios.

Both of the hypothetical treatments described in this report would result in substantial positive outcomes for people with Alzheimer's, and for the nation as a whole, even if the outcomes are well short of a cure.

In fact, these scenarios are similar in assumptions and results as to what has already been achieved in other diseases and conditions, including heart disease, stroke, some cancers and HIV/AIDS, where there has been a substantial and sustained societal commitment to overcome these diseases. A similar commitment to overcome Alzheimer's could reduce the devastating impact of the condition and significantly decrease the expected costs of caring for those with them.

Appendices

The appendices include a detailed description of the model developed for the Alzheimer's Association by the Lewin Group and detailed tables showing baseline data and changes that would result from the two hypothetical treatment breakthroughs.

These appendices, along with a copy of this report, can be found on the Association's Web site at: www.alz.org/trajectory.

The Alzheimer's Association is the leading voluntary health organization in Alzheimer care, support and research.

Our mission is to eliminate Alzheimer's disease through the advancement of research; to provide and enhance care and support for all affected; and to reduce the risk of dementia through the promotion of brain health.

Our vision is a world without Alzheimer's disease.

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