

Appendix C

CHANGING THE TRAJECTORY:

Impact of a Hypothetical Treatment That Slows the Progression of Alzheimer's

In addition to the delayed onset scenario discussed in the report, another potential scenario is a treatment that slows the progression of Alzheimer's disease. Unlike a treatment to delay the onset of Alzheimer's, a hypothetical treatment that slows disease progression would result in more people living with Alzheimer's in the future. In this scenario, a larger segment of the population is expected to live with Alzheimer's in the mild and moderate stages, with fewer individuals in the severe stage and fewer deaths due to Alzheimer's. Each year, under this treatment scenario, 10 percent of people living with Alzheimer's in the mild stage will move to the moderate stage and 5 percent of people living with Alzheimer's in the moderate stage will move to the severe stage. This Appendix explores the outcomes of such a treatment, assuming it is available by the National Plan's goal of 2025.

Number of Americans Living with Alzheimer’s Disease

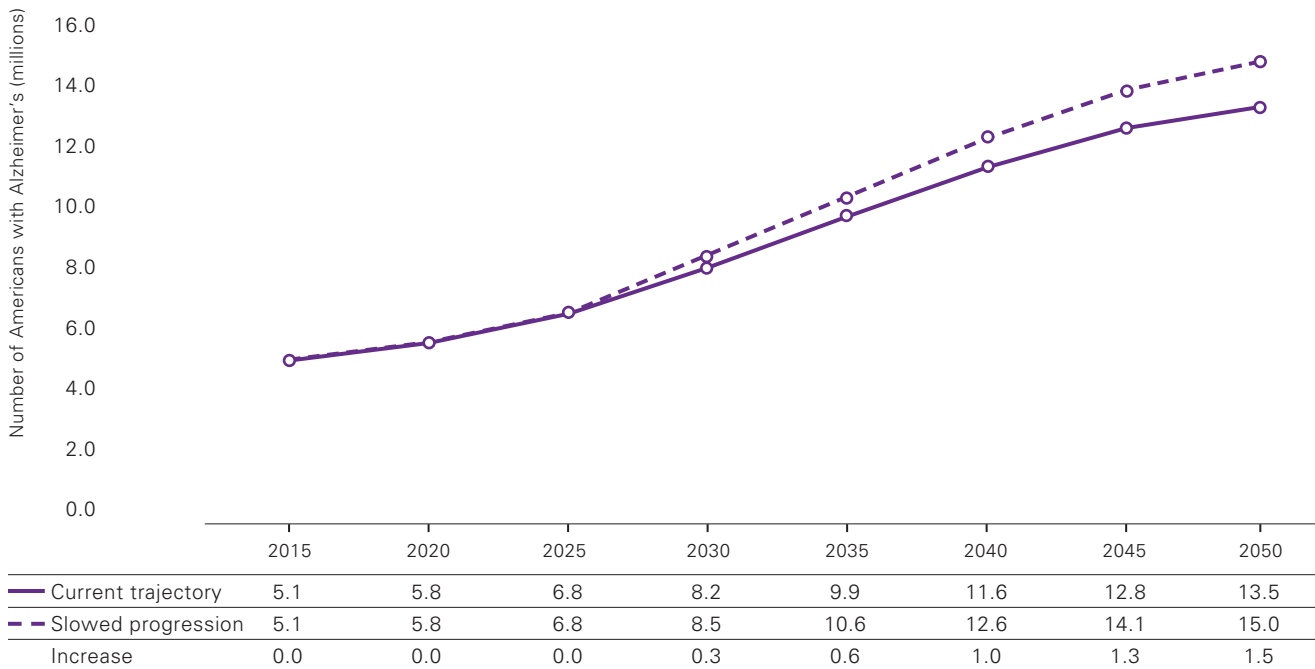
A treatment introduced in 2025 that slows the progression of Alzheimer’s would gradually increase the number of individuals affected by the disease shortly after it became available. For example, in 2030, the total number of Americans age 65 and older living with Alzheimer’s would increase from 8.2 million to 8.5 million (Figure 1). This trend would continue in subsequent years as more individuals expected to develop Alzheimer’s live longer with the disease. In 2035, 10.6 million Americans would be expected to

have Alzheimer’s compared to 9.9 million Americans under the current trajectory. In 2050, 15 million Americans would be expected to have the disease, compared to 13.5 million Americans if there were no available treatment in 2025.

A treatment introduced in 2025 that slows the progression of Alzheimer’s would also increase the proportion of the U.S. population age 65 and older with the condition. In 2030, 12 percent of older adults would be living with Alzheimer’s disease instead of 11 percent. In 2050, 18 percent of older adults would have Alzheimer’s instead of 16 percent.

FIGURE 1

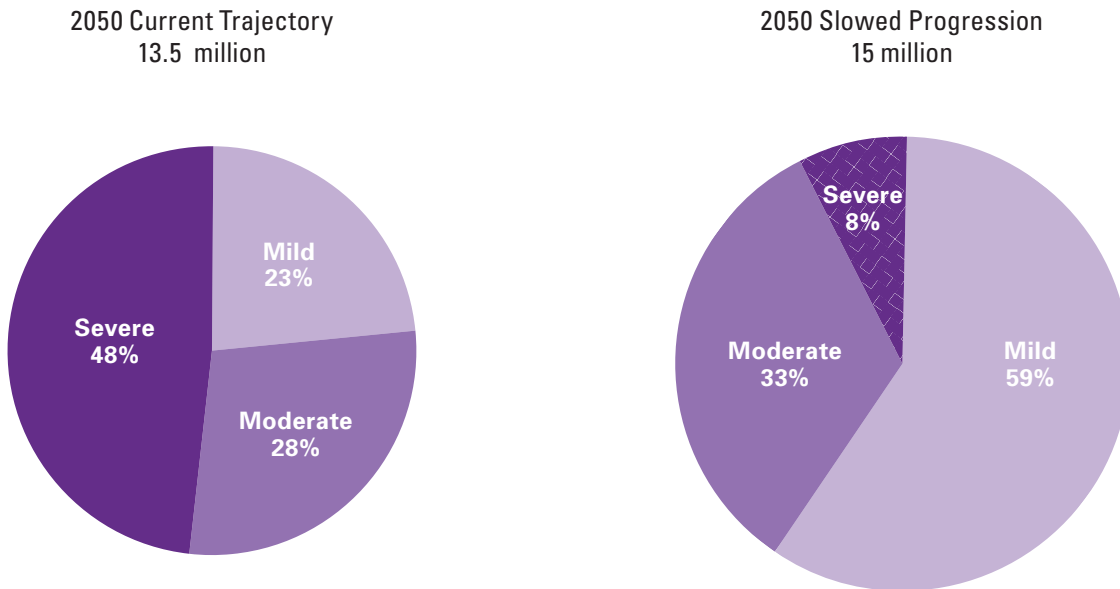
Impact of a Treatment That Slows Progression on the Number of Americans Age 65 and Older Living with Alzheimer’s Disease, 2015-2050



*Totals may not add due to rounding.

FIGURE 2

Impact of a Treatment That Slows Progression on the Proportion of Americans Age 65 and Older Living with Alzheimer’s by Disease Stage, 2050



*Totals may not add due to rounding.

Number of Americans Living with Alzheimer’s by Stage of Disease

The introduction of a treatment in 2025 that slows the progression of Alzheimer’s would increase the proportion of those in the mild and moderate stages, but reduce the proportion of individuals in the severe stage. This is because a larger segment of the population would live longer in the mild and moderate stages of Alzheimer’s after the introduction of such a treatment. Thus, in 2030, 57 percent of individuals living with Alzheimer’s would be in the mild stage if a treatment breakthrough were available, compared to 29 percent under the current trajectory. The proportion of individuals living with Alzheimer’s in the severe stage would decrease from 41 percent in 2030 under the current trajectory to 18 percent with this hypothetical treatment.

In 2050, the proportion of individuals in the mild, moderate and severe stages of Alzheimer’s would change noticeably if a treatment were available to slow the progression of the disease. As shown in Figure 2, the proportion of individuals in the mild stage increases from 23 percent to 59 percent and the proportion of individuals in the moderate stage increases from 28 percent to 33 percent. This means in 2050, under this treatment scenario, 8.9 million individuals living with Alzheimer’s would be in the mild stage and 4.9 million individuals living with Alzheimer’s would be in the moderate stage; compared to 3.1 million and 3.8 million, respectively, under the current trajectory.

The most dramatic change is the proportion of individuals in the severe stage — decreasing from 48 percent to 8 percent if a hypothetical treatment were available. This means the number of individuals expected to be living in the severe stage of Alzheimer’s in 2050 would drop from 6.5 million to 1.2 million.

Costs of Care

A treatment in 2025 that slows the progression of Alzheimer’s disease would reduce the total costs of care, compared to the current trajectory. In 2030, total costs to all payers would decrease from \$451 billion under the current trajectory to \$359 billion with a treatment, a savings of \$92 billion (Figure 3). In 2050, total costs to all payers would decrease from \$1.101 trillion under the current trajectory to \$837 billion with a treatment, a savings of \$264 billion.

Reductions in Medicare costs account for nearly 40 percent of the savings under this treatment scenario. After introduction of a treatment to slow the progression of Alzheimer’s, Medicare costs for people

living with Alzheimer’s would decrease to \$198 billion in 2030, \$35 billion less than the \$233 billion under the current trajectory. In 2050, Medicare costs would be \$485 billion, \$104 billion less than the \$589 billion under the current trajectory (Figure 4).

A treatment that slows the progression of Alzheimer’s would also decrease Medicaid costs for people living with the disease. In 2030, Medicaid costs for people living with Alzheimer’s would be reduced by \$27 billion, from \$77 billion to \$50 billion (Figure 5). In 2050, Medicaid costs would be \$102 billion, \$74 billion less than the current trajectory (\$176 billion).

FIGURE 3

Impact of a Treatment That Slows Progression on Total Costs of Care for Americans Age 65 and Older Living with Alzheimer’s Disease and Other Dementias, 2015-2050



*All cost figures are reported in 2015 dollars. Totals may not add due to rounding.

FIGURE 4

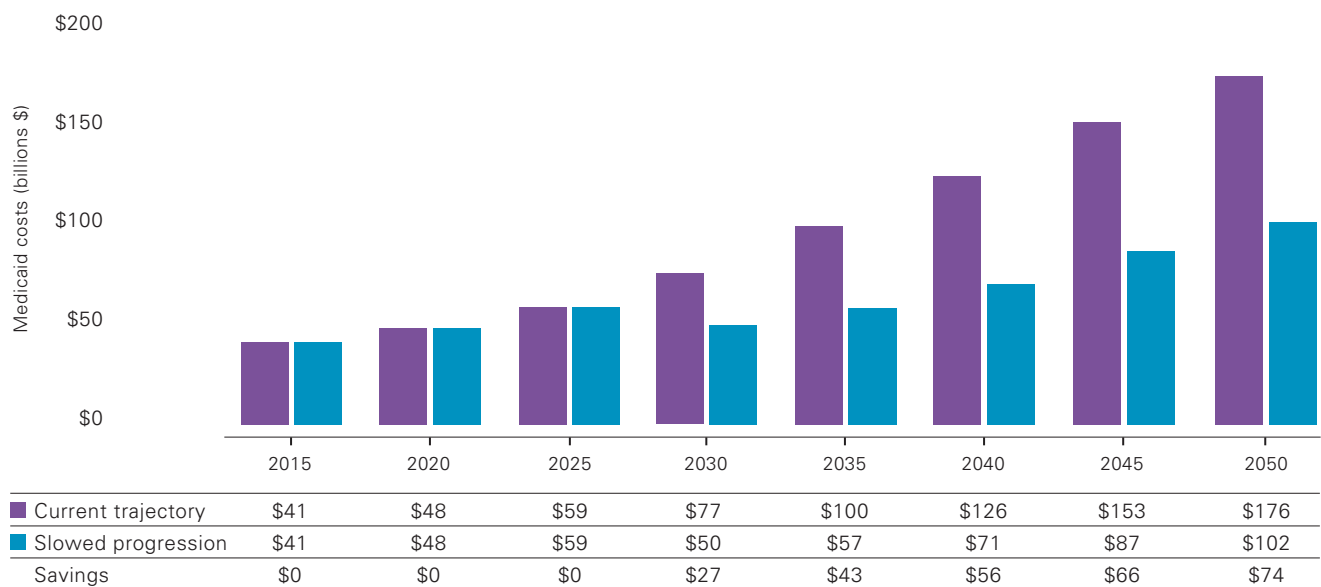
Impact of a Treatment That Slows Progression on Medicare Costs, 2015-2050



*All cost figures are reported in 2015 dollars. Totals may not add due to rounding.

FIGURE 5

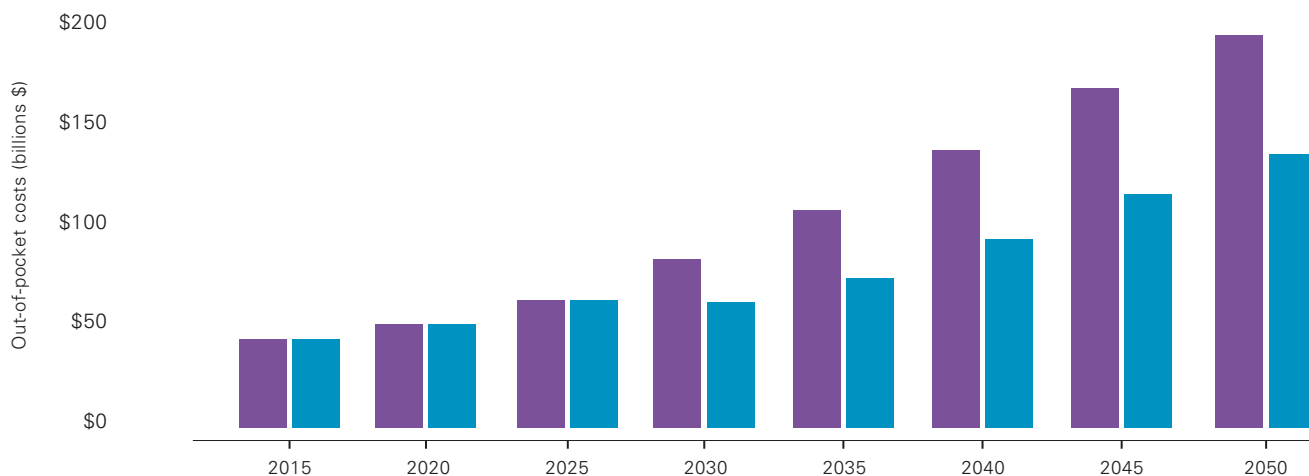
Impact of a Treatment That Slows Progression on Medicaid Costs, 2015-2050



*All cost figures are reported in 2015 dollars. Totals may not add due to rounding.

FIGURE 6

Impact of a Treatment That Slows Progression on Out-Of-Pocket Costs, 2015-2050



	2015	2020	2025	2030	2035	2040	2045	2050
Current trajectory	\$44	\$51	\$64	\$84	\$110	\$140	\$171	\$198
Delayed progression	\$44	\$51	\$64	\$62	\$75	\$95	\$117	\$137
Savings	\$0	\$0	\$0	\$22	\$35	\$45	\$54	\$61

*All cost figures are reported in 2015 dollars. Totals may not add due to rounding.

People living with Alzheimer’s and their families would also see a reduction in their out-of-pocket costs under this treatment scenario. Out-of-pocket costs in 2030 would decline from \$84 billion to \$62 billion. In 2050, out-of-pocket costs decline to \$137 billion, \$61 billion less than the current trajectory of \$198 billion (Figure 6).

A treatment that slows progression would also reduce costs to other payers over time. In 2030, costs to other payers — such as private insurance, HMOs and other managed care organizations, and those that cover

uncompensated care — would decrease from \$58 billion to \$49 billion. In 2050, costs to other payers would be \$25 billion less, falling from \$138 billion to \$113 billion.

The costs of care in this section do not include the costs of a hypothetical treatment to slow the progression of Alzheimer’s disease. As mentioned in the report, costs for such a treatment would be influenced by a number of factors such as the costs associated with the development of a treatment, the delivery costs of a treatment, the length of the treatment and any related government policy changes.

The 10-Year Budget Impact

Similar to a hypothetical treatment that delays the onset of Alzheimer’s, a hypothetical treatment that slows its progression would have an impact on the costs of caring for people with the disease within the first 10 years of its introduction. This section explores the cost implications on various payers for the 10-year budget period following the introduction of such a treatment in 2025.

10-Year Costs of Care Based on the Current Trajectory

In the 10-year window following 2025, as highlighted in the report, the total annual costs to all payers for the care of people living with Alzheimer’s and other dementias under the current trajectory will increase from \$360 billion in 2026 to \$596 billion in 2035. Table 1 illustrates these costs paid by Medicare, Medicaid, affected individuals and their families, and other payers such as private insurance, HMOs and other managed

care organizations, and those that cover uncompensated care. It is restated here for comparison purposes.

In this 10-year period, Medicare costs for people with Alzheimer’s and other dementias are projected to grow from \$184 billion in 2026 to \$311 billion in 2035. Medicaid costs will also increase from \$62 billion in 2026 to \$100 billion in 2035. Cumulatively over the course of this 10-year period, federal and state governments will pay an estimated \$3.2 trillion to care for people with Alzheimer’s and other dementias.

Likewise, out-of-pocket costs for people affected by Alzheimer’s will increase from \$68 billion in 2026 to \$110 billion in 2035. Costs to other payers will also increase from \$46 billion in 2026 to \$76 billion in 2035. Over this 10-year period, individuals and families affected by Alzheimer’s will cumulatively pay \$877 billion. Similarly, cumulative costs for other payers will be \$601 billion over the same period.

TABLE 1

Baseline Costs of Caring for Individuals with Alzheimer’s Disease and Other Dementias (in billions of 2015 dollars)

	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	10-Year Costs
Medicare	\$184	\$195	\$207	\$220	\$233	\$248	\$263	\$278	\$294	\$311	\$2,433
Medicaid	\$62	\$66	\$69	\$73	\$77	\$81	\$86	\$90	\$95	\$100	\$797
Out-of-Pocket	\$68	\$72	\$76	\$80	\$84	\$89	\$94	\$99	\$105	\$110	\$877
Other payers	\$46	\$49	\$52	\$55	\$58	\$61	\$65	\$68	\$72	\$76	\$601
Total costs	\$360	\$381	\$403	\$427	\$451	\$480	\$507	\$536	\$566	\$596	\$4,708

*Totals may not add due to rounding.

Impact of a Hypothetical Treatment That Slows the Progression of Alzheimer’s Disease on the 10-Year Costs of Care

As mentioned in the previous section, if a hypothetical treatment became available in 2025 that slows the progression of Alzheimer’s disease, it would decrease the total costs of care immediately.

Table 2 illustrates the savings that would be achieved if a treatment that slows the progression of Alzheimer’s became available in 2025. In the first year, Medicare would save \$9 billion. In 2035, Medicare savings would total \$56 billion. Medicaid savings would grow from \$7 billion in 2026 to \$43 billion in 2035,

compared to the current trajectory. Over the course of the 10 year period, the cumulative savings for federal and state governments would be \$628 billion.

Similarly, if a hypothetical treatment were available in 2025, families affected by Alzheimer’s disease would see an immediate decrease in their out-of-pocket spending. In 2026, individuals living with Alzheimer’s and their families would spend \$5 billion less on their costs of care. In 2035, these savings would grow to \$35 billion. Savings for other payers would increase from \$2 billion in 2026 to \$14 billion in 2035. From 2026 to 2035, total savings for all payers would be \$937 billion — nearly 20 percent of the total costs under the current trajectory.

TABLE 2

Savings from a Treatment in 2025 That Slows the Progression Alzheimer’s Disease (in billions of 2015 dollars)

	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	10-Year Savings
Medicare	-\$9	-\$17	-\$23	-\$30	-\$35	-\$40	-\$45	-\$49	-\$53	-\$56	-\$357
Medicaid	-\$7	-\$13	-\$18	-\$22	-\$27	-\$31	-\$34	-\$37	-\$40	-\$43	-\$271
Out-of-Pocket	-\$5	-\$10	-\$15	-\$18	-\$22	-\$25	-\$28	-\$30	-\$33	-\$35	-\$221
Other	-\$2	-\$4	-\$6	-\$7	-\$9	-\$10	-\$11	-\$12	-\$13	-\$14	-\$88
Total	-\$23	-\$44	-\$62	-\$78	-\$92	-\$106	-\$118	-\$129	-\$139	-\$148	-\$937

*Totals may not add due to rounding.