

# Social Costs of Alzheimer's Disease Treatment

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## Editorial Note

Alzheimer's disease (AD) may be a neurodegenerative disease that sometimes starts slowly and progressively worsens. It's the explanation for 60–70% of cases of dementia. The foremost common early symptom is difficulty in remembering recent events. Because the disease advances, symptoms can include problems with language, disorientation (including easily getting lost), mood swings, loss of motivation, self-neglect, and behavioral issues. As an individual's condition declines, they often withdraw from family and society. Gradually, bodily functions are lost, ultimately resulting in death. Although the speed of progression can vary, the standard anticipation following diagnosis is three to nine years.

Alzheimer's disease is believed to occur when abnormal amounts of amyloid beta, accumulating extracellularly as amyloid plaques, and tau proteins, accumulating intracellularly as neurofibrillary tangles, form within the brain affecting neuronal functioning and connectivity, leading to a progressive loss of brain function. This altered protein clearance ability is age-related, regulated by brain cholesterol, and related to other neurodegenerative diseases. Neuropsychological tests including cognitive tests like the Mini-Mental State Examination (MMSE) are widely used to evaluate the cognitive impairments needed for diagnosis. More comprehensive test arrays are necessary for top reliability of results, particularly within the earliest stages of the disease.

Neurological examination in early Alzheimer's disease will usually provide normal results, apart from obvious cognitive impairment, which can not differ from that resulting from other diseases processes, including other causes of dementia. There is no cure for Alzheimer's disease; available treatments offer relatively small symptomatic benefits but remain palliative in nature. Current

treatments are often divided into pharmaceutical, psychosocial, and caregiving. Dementia, and specifically Alzheimer's disease, could also be among the foremost costly diseases for society in Europe and therefore the US, while their costs in other countries like Argentina, and South Korea, also are high and rising. These costs will probably increase with the aging of society, becoming a crucial social problem. AD-associated costs include direct medical costs like home care, direct nonmedical costs like in-home day care, and indirect costs like lost productivity of both patient and caregiver. Numbers vary between studies, with a 2006 study estimating worldwide annual dementia costs of US\$160 billion (equivalent to \$205 billion in 2020), while a 2013 study estimated annual costs of Alzheimer's disease within the US alone were \$200 billion (equivalent to \$222 billion in 2020).

The greatest origin of costs for society is that the long-term care by health care professionals and particularly institutionalisation, which corresponds to 2/3 of the entire costs for society. The value of living reception is additionally very high, especially when informal costs for the family, like caregiving time and caregiver's lost earnings, are taken under consideration. Costs increase with dementia severity and therefore the presence of behavioral disturbances, and are associated with the increased caregiving time required for the supply of physical care. Therefore, any treatment that slows cognitive decline, delays institutionalisation or reduces caregivers' hours will have economic benefits. Economic evaluations of current treatments have shown positive results.

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