

Management of Alzheimer's Disease in the Managed Care Setting

Paul Stander, M.D.

For a CME/CEU version of this article please go to <http://www.namcp.org/cmeonline.htm>, and then click the activity title.

Summary

There are some strategies that managed care organizations may want to implement that can help address both the inadequacies in care and the cost challenges of Alzheimer's disease. Medications can play a significant role in reducing overall costs of Alzheimer's care.

Key Points

- Early diagnosis and treatment of Alzheimer's may result in cost savings.
- Preserving cognitive function and reducing behavior issues are the primary reasons for medication use.
- Use of cholinesterase inhibitors in mild to moderate Alzheimer's disease has been shown to result in overall cost savings.
- There are many opportunities for managed care organizations to improve care of patients with Alzheimer's disease.

IN TERMS OF COST, ALZHEIMER'S DISEASE (AD) is the third leading cause of illness in the United States.¹ The prevalence of AD is predicted to increase from 4 million patients in 2000 to 14.3 million in 2050 (Exhibit 1).² The costs and burden on society are going to increase dramatically with the increasing prevalence.

One source of excessive cost in the early stages of this disease is a general failure to diagnose cognitive impairment early. Because of delayed diagnosis, AD is not diagnosed in the mild stage when it is probably most treatable. This results in increased costs of diagnosis, functional impairment and accidents, poor control of medical comorbidities, and caregiver burden. Increasing medication costs through the use of cognitive enhancers, psychotropics, and antidepressants are another reason AD is a costly disease. In the later stages, the main costs are related to institutionalization and hospitalization.

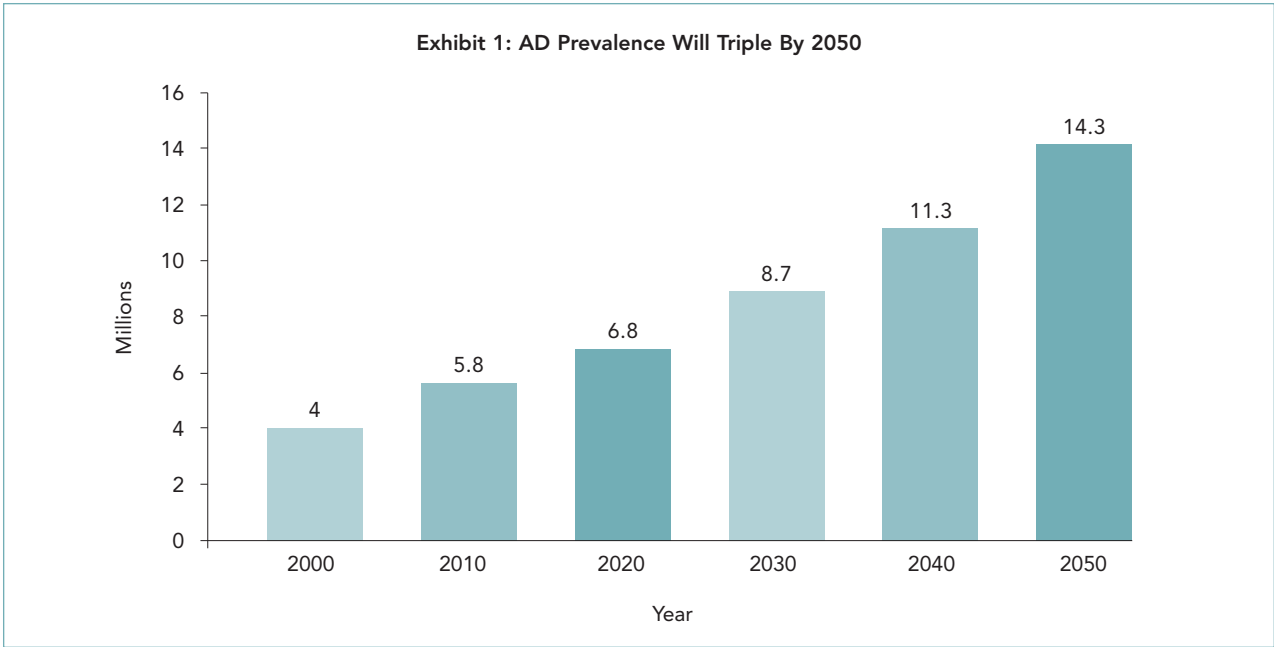
There are several barriers to early diagnosis of this disease. There is fear of reporting and denial by the patient and caregivers. This results in a two-year delay in diagnosis, which may result in missing the window of treating those patients who have early disease. Another barrier is the lack of physicians with training in geriatrics and treatment of dementia. A lack of physician expertise in brief psychometrics leads to

the failure to recognize early AD in a significant number of cases. Other barriers are the time required to diagnosis the disease and the lack of adequate reimbursement for this process. There also are myths that the diagnosis can only be made upon death and that once diagnosed, nothing can be done.

In general, the severity of AD is denoted on a mild, moderate, and severe scale. These stages are based on an objective cognitive assessment such as the Folstein mini-mental status exam (MMSE). Mild is generally considered a 20 to 25 score out of 30 total. Although the MMSE is not the most sensitive exam in terms of diagnosing a dementia, it is very useful for tracking the progression of the disease. A score between 10 and 20 is generally considered moderate; less than 10 is considered severe. Disease severity impacts costs—the more severe the disease, the more costly (Exhibit 2).³

The main goal in treating AD is to maintain a level of function that allows some independent living. Generally, once a patient scores below 15 on a MMSE and has difficulties with activities of daily living like dressing and grooming, institutionalization occurs. Maintaining the highest level of function possible tends to prevent the adverse outcomes of this disease—falls, infections, and exacerbations of other chronic illnesses that increase costs.

A number of studies have demonstrated that patients



with dementia have higher utilization of most health care services and have higher health care costs. Most of the increased costs are related to home care, skilled nursing facilities, and hospitals (Exhibit 3).⁴

Not only are the direct treatments of Alzheimer’s more costly, but when treatment of co-morbidities is added, the costs increase significantly (Exhibit 4).⁵ The same population of patients who have AD also have heart failure, diabetes, and chronic lung disease. It is harder to manage those illnesses in patients with dementia because of their difficulties in adhering to lifestyle and medication regimens.

Unfortunately, the evidence to date indicates most managed care organizations have not targeted Alzheimer’s disease or other dementias for disease management programs or any kind of organized approach to management. This is most likely because primarily, Medicaid covers the costs for many of these patients, especially once institutionalized. Before the end stages, patients do accumulate medical costs from hospitalizations, office visits, and medications for which the managed care organization would be responsible. Alzheimer’s disease may not be identified as a cost driver for many managed care

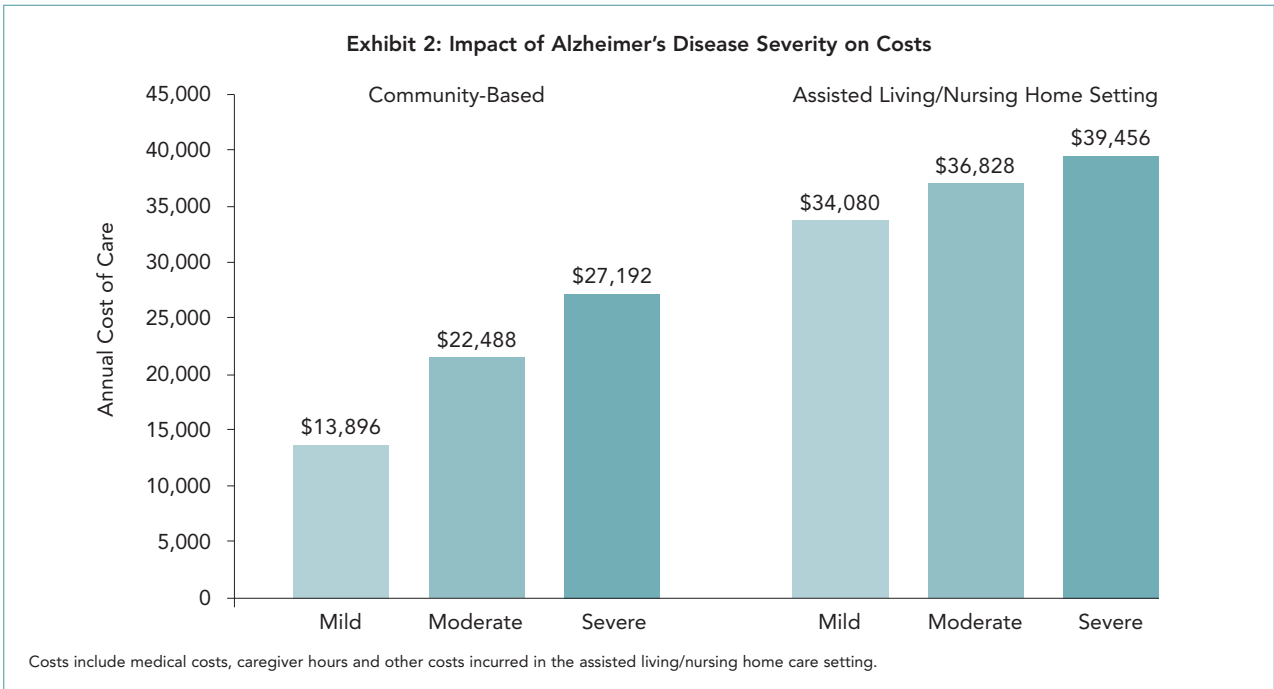
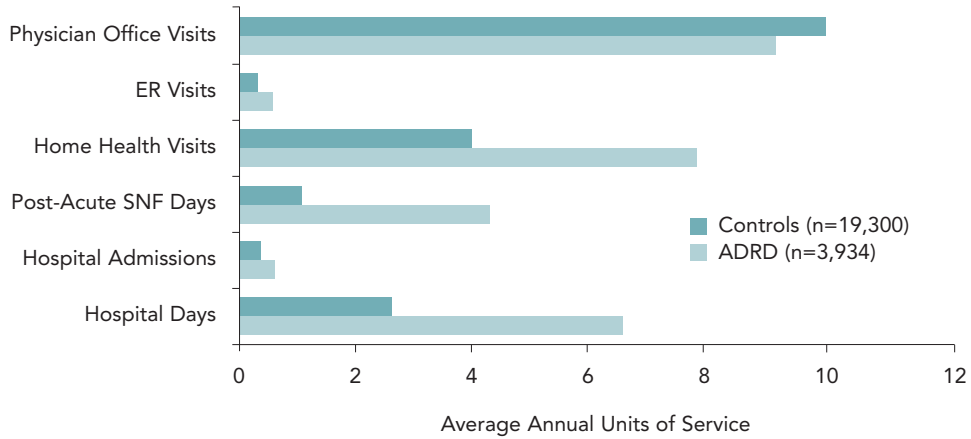


Exhibit 3: Dementia Significantly Increases Utilizations of Most Services in Community-Dwelling Elderly



SNF=skilled nursing facility.
ADRD=Alzheimer's disease and related dementias.
P<.05

organizations because of flaws in the coding and reimbursement systems which lead practitioners to code visits for dementia patients under higher paying codes such as diabetes, hypertension, or heart failure which the patient may also have.

There are opportunities for managed care to begin targeting the cost of AD care. Slowing or preventing the decline in cognitive function may save costs (see Exhibit 5).⁶ From a study by Ernst and colleagues, prevention of a 2-point decline in the score of a moderately to severely demented home-dwelling patients with a MMSE score of 7 at baseline would

save about \$3700 annually, and a 2-point increase in an MMSE score, rather than a 2-point decline, would save about \$7100.⁶

Cholinesterase inhibitors are used in AD to attempt to preserve cognition and function, and avoid behavioral complications of the disease. The three cholinesterase inhibitors, donepezil (Aricept[®]), galantamine (Razadyne[®]), and rivastigmine (Exelon[®]), are approved for use in mild to moderate AD and are similar in efficacy. Exhibit 6 outlines some benefits of pharmacologic therapy.

An economic study of donepezil examined the

Exhibit 4: Excess Costs Due to Failure to Diagnose and Treat Early Alzheimer's Disease

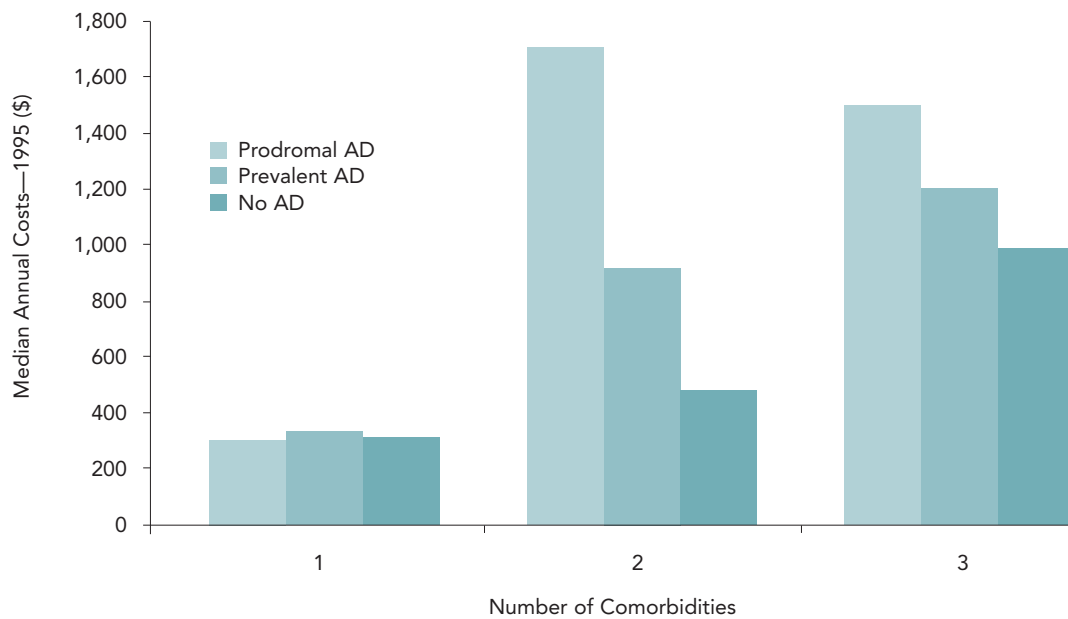
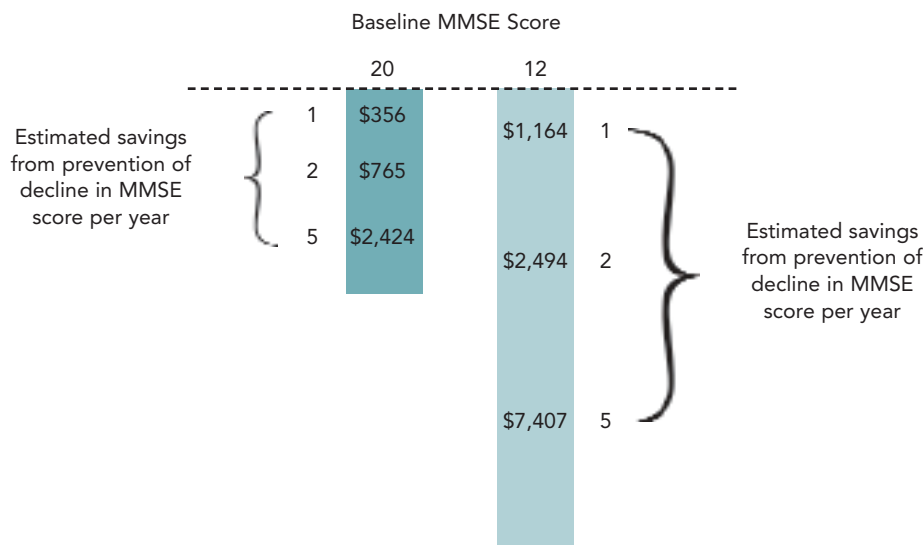


Exhibit 5: Cost savings as a Result of Preventing Cognitive Decline



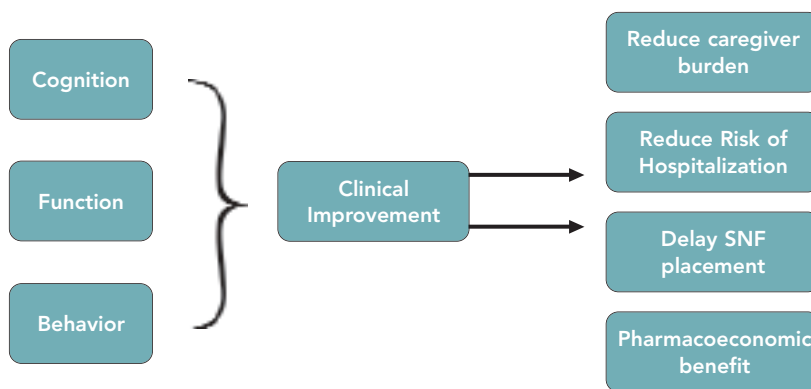
medical costs of 70 AD patients for one year before and one year after starting this agent.⁷ Although medication costs increased significantly, overall costs decreased dramatically. In this study, the most cost effective use was in those patients who stayed on the medication for two years or more. Starting the medication early, when the patient has mild illness, results in the biggest cost savings. Starting medications once patients have progressed to a moderate or severe stage usually does not have as significant an impact. Two other economic studies have shown that persistent donepezil use results in reductions in overall costs.^{8,9}

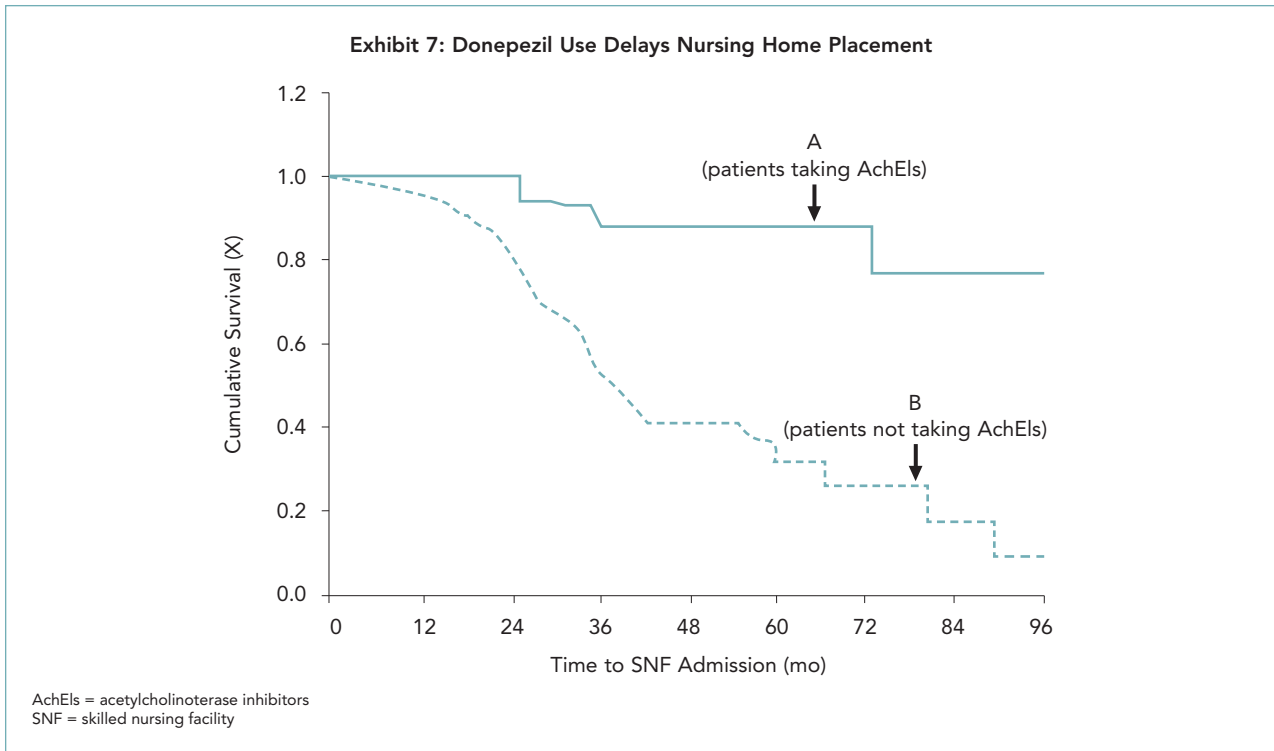
Caregiver burden from AD is estimated to cost U.S. businesses \$30 to 60 billion per year.¹⁰ Excessive caregiver burden is a risk factor for hospitalization and institutionalization of the patient, and results in increased costs. From a societal standpoint, if medica-

tions can relieve the burden on caregivers, costs of managing this illness will be reduced. In one study, caregivers of patients on donepezil had significantly lower levels of difficulty in providing care and fewer costs.¹¹ In another study, galantamine significantly reduced the amount of time spent by caregivers assisting patients with activities of daily living.¹²

Another beneficial aspect of cholinesterase inhibitors is their ability to impact the behavioral problems of Alzheimer's disease. As Alzheimer's disease progresses, patients start to experience significant psychiatric problems. The most troubling to caregivers are hallucinations, delusions, paranoia, and inappropriate sexual behavior. The traditional way to manage these problems has been either psychotherapy or behavioral therapy, which is very labor intensive and difficult to implement outside of an institutional

Exhibit 6: Anti-Dementia Therapy: Domains of Efficacy and Effectiveness





- Exhibit 8: Opportunities to Improve Alzheimer's Disease Quality of Care**
- Improve early diagnosis
 - More effective use of AD therapeutics
 - Enhance coordination of care
 - Improve management of comorbidities and complications
 - Caregiver education and support
 - Counseling on prevention

setting. Antipsychotic agents such as haloperidol and newer generation agents also have been frequently used, but these agents have significant adverse effects with long-term use. None of the antipsychotic agents have an FDA indication for the management of behavioral problems in dementia. Additionally, the newer antipsychotic agents appear to increase mortality when used over a long period of time in this patient population. At least one study has demonstrated that rivastigmine reduces behavior problems such as agitation, anxiety, and disinhibition.¹³

The biggest potential cost and quality benefit of cholinesterase inhibitors is a delay in skilled nursing facility placement. Some studies have shown significant delays in the institutionalization of patients taking cholinesterase inhibitors versus those not taking these agents (Exhibit 7).¹⁴

Currently, there is only one agent, memantine (Namenda®), that is FDA approved for moderate to

severe AD. This agent works differently than the cholinesterase inhibitors. In a short term, pharmacoeconomics study, those patients who were treated with memantine had reductions in their overall medical and caregiver costs.¹⁵

A disease management approach to dementia would be beneficial for a managed care organization because Alzheimer's disease results in significant total costs of care at the middle and late stages, affects a rapidly growing population, and causes a high rate of preventable complications.^{16,17} Preventable complications include falls, infections, aspiration, and issues with urinary incontinence. Alzheimer's disease is also an appropriate target for disease management programs because there are issues with appropriate coding, treatment is relatively easy but there is wide practice variation, and there is a high rate of patient nonadherence, which can be altered by education.^{16,17} Additionally, a high rate of referrals for specialty consultation occurs because many primary care providers feel inadequate about caring for these patients.^{16,17} Appropriately educated primary care doctors, without a lot of specialty consultation, can provide much of the care for these patients. Consensus for defining quality care, practice guidelines, and dementia specific outcome measures are also possible with this disease. Lastly, there are opportunities for better coordination of community services, particularly those not covered by Medicare.

There are many opportunities to improve the care of Alzheimer's disease patients within the managed

care environment (Exhibit 8).¹⁷ Early diagnosis through office based population screening, and improved diagnostic assessment would help improve care. Incentives and education for primary care providers to identify and manage these patients would shift away from the significant use of neurologists for management. Improved practice guidelines for medication management, more community resources, and a more global approach to case management in this population would all improve the overall management of this disease. Validated measures of quality are needed. More educational resources need to be available and widely used. Efficient use of adult day care, long term care, and end of life care is needed.

Dementia care management has been shown to produce positive outcomes. Patients and caregivers receiving care consultation, education, and counseling had fewer emergency room visits and hospitalizations.^{18,19} In another example, telephonic care management counseling for AD caregivers delayed time to nursing home placement by almost one year.²⁰

Conclusion

Emerging pharmacotherapy data indicates potential savings in health care costs associated with early intervention and treatment, and the potential cost effectiveness of cholinesterase inhibitors. Managed care organizations have a greater opportunity to implement a disease management model for Alzheimer's disease than other health care delivery systems. *JMCM*

Paul Stander, MD, is the medical director of the Good Samaritan Regional Medical Center in Phoenix, Ariz.

References

- Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, 2000.
- Evans DA. Estimated prevalence of Alzheimer's disease in the United States. *Milbank Q*. 1990;68:267-289.
- Leon J, Cheng CK, Neumann PJ. Alzheimer's disease care: costs and potential savings. *Health Aff (Millwood)*. 1998;17:206-216.
- Hill JW, Futterman R, Dutttagupta S, et al. Alzheimer's disease and related dementias increase costs of comorbidities in managed Medicare. *Neurology*. 2002;58:62-70.
- Albert SM, Glied S, Andrews H, et al. Primary care expenditures before the onset of Alzheimer's disease. *Neurology*. 2002;59:573-578.
- Ernst RL, Hay JW, Fenn C, et al. Cognitive function and the costs of Alzheimer disease. An exploratory study. *Arch Neurol*. 1997;54:687-693.
- Fillit H, Gutterman EM, Lewis B. Donepezil use in managed Medicare: effect on health care costs and utilization. *Clin Ther*. 1999;21:2173-85.
- Neumann PJ, Hermann RC, Kuntz KM, et al. Cost-effectiveness of donepezil in the treatment of mild or moderate Alzheimer's disease. *Neurology*. 1999;52:1138-1145.
- Hill JW, Futterman R, Mastey V, Fillit H. The effect of donepezil therapy on health costs in a Medicare managed care plan. *Managed Care Interface*. 2002;15:63-70.
- Small GW, McDonnell DD, Brooks RL, Papadopoulos G. The impact of symptom severity on the cost of Alzheimer's disease. *J Am Geriatr Soc*. 2002;50:321-7.
- Wimo A, Winblad B, Engedal K, et al. An economic evaluation of donepezil in mild to moderate Alzheimer's disease: results of a 1-year, double-blind, randomized trial. *Dement Geriatr Cogn Disord*. 2003;15:44-54.
- Wilcock, Lilienfeld. Poster presented at: 7th International World Alzheimer Congress; July 9-18, 2000; Washington, DC.
- Edwards KR et al. Presented at: 13th Annual Meeting of the American Association for Geriatric Psychiatry; March 12-15, 2000; Miami, Fla.
- Lopez OL, Becker JT, Wisniewski S, et al. Cholinesterase inhibitor treatment alters the natural history of Alzheimer's disease. *J Neurol Neurosurg Psych*. 2002;72:310-314.
- Wimo A, Winblad B, Stöfler A, et al. Resource utilization and cost analysis of memantine in patients with moderate to severe Alzheimer's disease. *Pharmacoeconomics*. 2003;21:327-340.
- Fillit H, Knopman D, Cummings J, Appel F. Opportunities for improving managed care for individuals with dementia: Part 1—The issues. *Am J Manag Care*. 1999;5:309-15.
- Fillit H, Knopman D, Cummings J, Appel F. Opportunities for improving managed care for individuals with dementia: Part 2—A framework for care. *Am J Manag Care*. 1999;5:317-24.
- Shelton P, Schraeder C, Dworak D, et al. Caregivers' utilization of health services: results from the Medicare Alzheimer's Disease Demonstration, Illinois site. *J Am Geriatr Soc*. 2001;49:1600-5.
- Clark PA, Bass DM, Looman WJ, et al. Outcomes for patients with dementia from the Cleveland Alzheimer's Managed Care Demonstration. *Aging Ment Health*. 2004;8:40-51.
- Mittelman MS, Ferris SH, Shulman E, et al. A family intervention to delay nursing home placement of patients with Alzheimer disease. A randomized controlled trial. *JAMA*. 1996;276: 1725-31.

Spring Managed Care Forum 2008

presented by the

American Association of Integrated Healthcare Delivery Systems (AAIHDS)
American Association of Managed Care Nurses (AAMCN)
National Association of Managed Care Physicians (NAMCP)

May 1-2, 2008

Hilton Atlanta, Atlanta, GA

- Discover New Managed Care Strategies, Forecasts and Trends
- Find the Ideas and Tools You Need to Achieve Results in Your Organization
- Attend This Conference and Create Valuable Alliances with Your Colleagues

For more information, go to www.namcp.org