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In the US, a startling 40-60% of dementia cases go undiagnosed.¹ This is all the more surprising considering research shows that individuals facing dementia overwhelmingly wish to be informed of their diagnosis as early as possible, seeking clarity and understanding of the journey ahead.²

Patients who receive a timely diagnosis reap many benefits. Compared with patients who have dementia but are undiagnosed, diagnosed patients tend to have fewer medical visits and hospitalizations as a result of better management of their condition.³

Furthermore, diagnosed patients can be motivated to invest in interventions they control directly, such as healthier eating and exercise. While well-known, it is underappreciated how powerful these actions are. They can slow cognitive decline and improve memory, mood, and independence by a significant margin.

Diagnosed patients are also more likely to be prescribed medications that improve their cognition.³ Additionally, a diagnosis can reveal that some cases of impairment are actually reversible.⁴

Lifestyle interventions slow cognitive decline

First and foremost, an early and accurate diagnosis of dementia allows for implementation of therapeutic strategies and lifestyle adjustments that can help manage the condition more effectively, even slowing decline. A new diagnosis brings new motivation to create positive change. For example, a concerted focus on nutrition, physical activity, sleep, and social life can have a meaningful impact on cognition and quality of life.

Numerous studies demonstrate the power of these changes, which are even more impactful than people may realize. In one study, simple changes to diet, like increasing folate intake (e.g. leafy greens), resulted in a 44% reduction in the number of dementia patients experiencing cognitive decline and a 67% increase in the number of dementia patients experiencing cognitive improvements.⁵

A randomized controlled trial studying the effects of exercise showed large benefits for dementia patients. Those who were exercising preserved about 50% more of their functional independence compared to a control group.⁶ The benefits also continued to compound over time, increasing through the trial's end at 1 year. Furthermore, exercising made a big difference in the risk of falling accidents— those in the control group that were not exercising experienced over twice as many falls.

With diet, 67% of dementia patients experienced cognitive improvements.

Exercising preserved 50% more independence and created remarkable cognitive improvements.

Exercise doesn't just create positive physical change, it can really move the needle on how well dementia patients preserve their cognitive capacities. A study underlining this dual effect assigned half of a group of dementia patients to twice-a-week exercise.⁷ They found a host of physical improvements to strength, balance, and flexibility, but also found remarkable cognitive improvements. Experimenters used the Mini Mental State Exam (MMSE), the most pervasive cognitive test, to measure the subjects' cognitive abilities across domains such as orientation, registration, attention, calculation, recall, and language. Subjects who were not exercising, as expected, showed an average decline of 2.8 points (out of 30) on the MMSE. Remarkably, those who were exercising actually showed an increase of 0.4 points; those who exercised tended to maintain their cognitive health or even improve it.

Improving cognition with medication

Timely diagnosis opens the door to treatment options sooner. One important treatment option is to manage dementia symptoms with medication.⁸ Once dementia has been identified, patients are often prescribed medications that improve cognition.

Cholinesterase inhibitors such as Aricept and Exelon can improve memory, thinking, language, and judgment. A glutamate regulator, Namenda, provides another route for improving cognition, and the two approaches are also combined in the medication Namzaric.

There are also medications to help ease related symptoms, such as behavioral issues and sleep disorders. Making use of the variety of medications available is a core component of a dementia care plan.

With new Alzheimer's disease modifying medications recently approved (e.g. Leqembi), and even more in the pipeline, the doctor's pharmacological toolkit will continue to grow and become more useful.

Improved medication adherence

Unsurprisingly, one of the problems that comes with cognitive difficulties and dementia is medication adherence.^{9,10} The ability to follow through on medical instructions continues to drop with worsening cognitive health.¹¹ Of course, this has undesirable consequences for patients' health. For example, a dementia patient with hypertension (which is most of our elderly – 75% of people over the age of 65 have hypertension) struggling with medication adherence are 32% more likely to end up hospitalized.¹²

Identifying a dementia patient presents an opportunity to avert medication adherence issues by leveraging new or existing solutions. For example, personal care via telehealth monitoring helps improve compliance in people with dementia, bringing compliance from 66% to 81%.^{11,13}

Some dementia can be reversed

For some, one of the most powerful aspects of receiving a dementia diagnosis is the possibility that their cognitive impairment could be reversible. Conditions such as vitamin deficiencies, thyroid problems, depression, and medication side effects can mimic dementia, and are treatable once identified.

Fewer medical visits needed

Furthermore, compared to individuals with undiagnosed dementia, patients who have received a diagnosis, tend to have fewer primary care visits.³ This reduction is because

these patients receive targeted care plans that address their specific needs, minimizing the necessity for frequent, unplanned medical appointments.

In addition to fewer primary care visits, diagnosed dementia patients also are admitted to the hospital less frequently and have shorter stays.³ This benefit can be attributed to reduced complications given earlier intervention, effective disease management, and treatment plans.

Preventative measures, put in place as part of dementia care, can avoid triggers that commonly result in hospitalization, including falls, infections, dehydration, and poor medication adherence. Enhanced support services, education, and planning can also help manage the condition at home, reducing the need for in-patient care.

More proactive care doesn't just improve quality of life for dementia patients, it also generates substantial savings to the healthcare industry, allowing dollars to be allocated more effectively.

Clarity for families

A clear diagnosis can bring a sense of clarity and relief to families. Without a diagnosis, dementia symptoms can be confusing and distressing, can lead to unproductive speculation, and denial of the problem can create conflict.

Understanding the diagnosis and symptoms can help demystify the patient's experience. It can also lead to better informed decisions about care, support, and planning for the future. Furthermore, the clarity that comes with a dementia diagnosis can galvanize patients, their families, and providers to get proactive and develop advance care plans that get them prepared for the coming changes in their lives.¹⁴

Better Advanced Care Planning

With the new understanding in hand that a diagnosis brings, patients and their families can effectively prepare for the future by creating an advance care plan (ACP), one part of a broader dementia care plan. In advance care planning, patients meet with their families,

caregivers, and doctors to discuss and drive decisions about their own medical care.¹⁵

ACPs ensure that the patient receives the care that they want in the future, sparing them unnecessary, inappropriate, or unwanted medical interventions. The ACP doesn't just allow patients to take control of their own lives, people with dementia who have created an ACP spend only half the time in the hospital, and they are far less likely to receive uncomfortable enteric (tube) feeding or artificial respiration.¹⁶

Advance care planning also improves emotional well-being. Remarkably, patients with an advance directive or do-not-resuscitate order showed three times less fear and anxiety than those who had neither.¹⁷

The benefits to the patient are shared by payers: creating an ACP creates tremendous cost savings as well, with ACP patients' costs only 64-67% of the costs for those that haven't created an ACP.¹⁶

Conclusion

A timely dementia diagnosis can lead to improved health outcomes and reduced healthcare costs through lifestyle modifications, treatment of any reversible causes, reduced medical care visits, and advanced care planning.

Patients can take control and start taking concrete actions that impact their cognitive health, such as changes in their lifestyle, accessing medications that improve cognition, discontinuing medications that can have a negative impact, and developing advanced care plans.

Each of these steps, even in isolation, can meaningfully improve health outcomes and emotional wellbeing. Fresh hope is on the horizon with new disease-modifying treatments (e.g. amyloid-targeting monoclonal antibodies) becoming available^{18,19} meaning the substantial benefits that come with timely and accurate diagnosis will only continue to grow.

1. Lang L, Clifford A, Wei L, et al. Prevalence and determinants of undetected dementia in the community: a systematic literature review and a meta-analysis. *BMJ Open*. 2017;7(2):e011146. doi:10.1136/bmjopen-2016-011146

2. Wehrmann H, Michalowsky B, Lepper S, Mohr W, Raedke A, Hoffmann W. Priorities and Preferences of People Living with Dementia or Cognitive Impairment – A Systematic Review. *Patient Prefer Adherence*. 2021;15:2793-2807. doi:10.2147/PPA.S333923

3. Michalowsky B, Eichler T, Thyrian JR, et al. Healthcare resource utilization and cost in dementia: are there differences between patients screened positive for dementia with and those without a formal diagnosis of dementia in primary care in Germany? *Int Psychogeriatr*. 2016;28(3):359-369. doi:10.1017/S1041610215001453
4. Alzheimer's Association. Ensuring Early Detection and Diagnosis - A Healthy Brain Initiative Issue Map. Published 2023. Accessed March 20, 2024. https://www.alz.org/media/Documents/healthy-brain-initiative-road-map_early-detection-issue-map.pdf
5. Scheltens P, Kamphuis PJGH, Verhey FRJ, et al. Efficacy of a medical food in mild Alzheimer's disease: A randomized, controlled trial. *Alzheimers Dement*. 2010;6(1):1-10.e1. doi:10.1016/j.jalz.2009.10.003
6. Pitkälä KH, Pöysti MM, Laakkonen ML, et al. Effects of the Finnish Alzheimer Disease Exercise Trial (FINALEX): A Randomized Controlled Trial. *JAMA Intern Med*. 2013;173(10):894. doi:10.1001/jamainternmed.2013.359
7. Kim MJ, Han CW, Min KY, et al. Physical Exercise with Multicomponent Cognitive Intervention for Older Adults with Alzheimer's Disease: A 6-Month Randomized Controlled Trial. *Dement Geriatr Cogn Disord Extra*. 2016;6(2):222-232. doi:10.1159/000446508
8. Medications for Memory, Cognition and Dementia-Related Behaviors. Alzheimer's Disease and Dementia. Accessed April 15, 2024. <https://alz.org/alzheimers-dementia/treatments/medications-for-memory>
9. Smith D, Lovell J, Weller C, et al. A systematic review of medication non-adherence in persons with dementia or cognitive impairment. *PLOS ONE*. 2017;12(2):e0170651. doi:10.1371/journal.pone.0170651
10. Rattinger GB, Dutcher SK, Chhabra PT, et al. The Effect of Dementia on Medication Use and Adherence Among Medicare Beneficiaries With Chronic Heart Failure. *Am J Geriatr Pharmacother*. 2012;10(1):69-80. doi:10.1016/j.amjopharm.2011.11.003
11. Smith GE, Lunde AM, Hathaway JC, Vickers KS. Telehealth Home Monitoring of Solitary Persons With Mild Dementia. *Am J Alzheimers Dis Dementias*. 2007;22(1):20-26. doi:10.1177/1533317506295888
12. Han E, Suh DC, Lee SM, Jang S. The impact of medication adherence on health outcomes for chronic metabolic diseases: A retrospective cohort study. *Res Soc Adm Pharm*. 2014;10(6):e87-e98. doi:10.1016/j.sapharm.2014.02.001
13. El-Saifi N, Moyle W, Jones C, Tuffaha H. Medication Adherence in Older Patients With Dementia: A Systematic Literature Review. *J Pharm Pract*. 2018;31(3):322-334. doi:10.1177/0897190017710524
14. Alzheimer's Association. Early Detection and Diagnosis of Alzheimer's. Published 2020. Accessed March 20, 2024. <https://www.alz.org/media/Documents/alzheimers-early-detection-diagnosis-ph-fs.pdf>
15. National Institute on Aging. Advance Care Planning: Advance Directives for Health Care. Advance Care Planning: Advance Directives for Health Care. Published October 31, 2022. Accessed March 21, 2024. <https://www.nia.nih.gov/health/advance-care-planning/advance-care-planning-advance-directives-health-care>
16. Dixon J, Karagiannidou M, Knapp M. The Effectiveness of Advance Care Planning in Improving End-of-Life Outcomes for People With Dementia and Their Carers: A Systematic Review and Critical Discussion. *J Pain Symptom Manage*. 2018;55(1):132-150.e1. doi:10.1016/j.jpainsymman.2017.04.009
17. Vandervoort A, Houttekier D, Vander Stichele R, van der Steen JT, van den Block L. Quality of Dying in Nursing Home Residents Dying with Dementia: Does Advanced Care Planning Matter? A Nationwide Postmortem Study. *PLOS ONE*. 2014;9(3):e91130. doi:10.1371/journal.pone.0091130
18. Belder CRS, Schott JM, Fox NC. Preparing for disease-modifying therapies in Alzheimer's disease. *Lancet Neurol*. 2023;22(9):782-783. doi:10.1016/S1474-4422(23)00274-0
19. Zetterberg H, Bendlin BB. Biomarkers for Alzheimer's disease—preparing for a new era of disease-modifying therapies. *Mol Psychiatry*. 2021;26(1):296-308. doi:10.1038/s41380-020-0721-9