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Preclinical Alzheimer's Disease and the Dawn of the “Pre-Caregiver”

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A couple recently came to our memory center for a research visit. The husband is a participant in a clinical trial evaluating the efficacy of a drug to prevent the onset of dementia in cognitively unimpaired persons with elevated brain amyloid, an Alzheimer's disease (AD) biomarker. In the course of the visit, the man's wife—who is also his study partner—spoke candidly. She stated that her husband was fine but that *she* was not doing well. Further inquiry revealed that, while he was tolerating the study drug and pleased to be involved in research, she was haunted by her knowledge of his brain amyloid status and troubled by the prospect of becoming his caregiver.

Two lines of innovation—one legal and one scientific—will soon converge to change the lived experience of AD for patients and their families. Federal and state laws are improving clinical care for AD by promoting care planning and care partner engagement. At the same time, our understanding of AD as a clinicopathologic state, defined by observable signs and symptoms, is evolving toward a biomarker-based understanding. As a result, AD diagnosis will soon occur in a “preclinical” stage before the onset of symptoms, family members will be engaged much earlier in the course of disease, and conversations like the one described above will become increasingly frequent.

Legal Innovations

A number of laws advancing AD care have been enacted in recent years. These policy accomplishments include unprecedented funding for research, expanded coverage for cognitive impairment care planning, increased support for family caregivers, and multiple state Alzheimer's plans.

For example, Massachusetts Governor Charlie Baker recently signed *An Act Relative To Alzheimer's And Related Dementias in the Commonwealth*, which provides for an integrated state plan to overcome AD.¹ One of the law's most innovative features is the requirement that clinicians—after receiving consent and consistent with privacy laws—

“report the Alzheimer’s diagnosis to a family member or legal personal representative of the patient” and provide that person with information about care planning, treatments, and support services.

The Massachusetts model is a welcomed one, as it is pushing clinical practice toward best practices. There is clinical, legal, and ethical utility in earlier diagnosis and in the deliberate inclusion of family members in AD care. Unfortunately, at present, many patients show signs of dementia but they lack a formal diagnosis or do not receive a diagnosis until the disease has progressed over years. As a result, patients’ care partners may not receive vital information and may be unaware of building problems until they become crises. Improved screening and increased diagnostic rates paired with open communication and timely education may enable family members to better understand, plan for, and address patients’ cognitive and functional impairments using medical, legal, financial, and long-term care interventions.

By explicitly acknowledging a role for family members in the care of patients with AD, the Massachusetts Act also takes an important step toward recognizing the contribution of the many individuals who provide “informal” or unpaid care to AD patients. Massachusetts alone has over 337,000 informal caregivers; across the United States, more than 15 million adults care for 5.5 million persons with dementia.² Informal care is the cornerstone of the nation’s long-term daily care system for those with dementia and accounts for as much as half of the annual AD-related costs to the United States.³

Scientific Innovations

At the same time that legal innovation is occurring to improve the delivery of AD care for patients and their care partners, our very understanding of AD is changing. The discovery of AD biomarkers, particularly markers of β -amyloid, tau protein, and neurodegeneration, has led to a reconceptualization of AD as a continuum that begins in a preclinical stage.⁴ Individuals with preclinical AD—like the husband of the opening story—have pathophysiologic changes identifiable by biomarker assays yet are cognitively unimpaired. Preclinical AD is currently a research construct, but multiple studies are underway to validate it.⁵ Additionally, ongoing secondary prevention trials are evaluating promising therapies that could be widely implemented in the preclinical stage; there is reason to think that intervening earlier rather than later in the course of AD is more likely to prevent or delay cognitive decline.

If a disease-modifying therapy is found, this would improve the lives of millions of patients with AD and their family members by reducing the need for long-term daily care. It would also transform clinical practice by routinizing diagnosis and treatment of AD prior to the onset of disabling cognitive and functional impairments. And, on the Massachusetts model, it would likely mean involvement of family members in the care of patients who are biomarker positive but cognitively unimpaired.

The Emerging “Pre-Caregiver” Role

When these legal and scientific innovations converge, we expect to see a new type of care partner emerge: the “pre-caregiver.” An individual who receives a preclinical AD diagnosis will learn something about his or her risk for progressing to dementia. The individual’s family members will learn something about their own risk, too: they will learn that they are at increased risk of needing to take on informal caregiving responsibilities for a loved one with dementia.

The significance of this information should not be underestimated given our systemic reliance on informal caregiving, noted above. The caregiver literature suggests that, although informal caregiving may be associated with a variety of positive experiences, providing care to a family member with AD is associated with financial costs as well as physical and psychological strain. Of course, not all individuals diagnosed with preclinical AD will develop dementia, and thus, not all individuals diagnosed with preclinical AD will ultimately need a caregiver. But this does not negate the weight of the pre-caregiver identity. Some pre-caregivers will understandably find coping with the uncertainty difficult and experience anxiety and distress.

Moreover, the pre-caregiver role will entail work whether or not the patient with preclinical AD eventually develops cognitive and functional symptoms. Ongoing secondary prevention trials require participants to enroll with a study partner analogous to a pre-caregiver. Study partners—like the wife above—assume novel roles that foretell the future of clinical practice.⁶ For instance, researchers ask study partners to learn participants’ biomarker results, to monitor and report on participants’ cognitive and functional status, and to look out for participants’ welfare in daily life, as incipient changes in cognition can lead to problems managing daily tasks. We expect pre-caregivers will assume similar responsibilities, as such vigilance will help ensure patient well-being. It will, however, also necessitate mental and emotional labor that may impact the patient, the pre-caregiver, and how they relate to one another.

Being a pre-caregiver will not demand the same time or effort as caregiving for a person with dementia. It will nevertheless be intimate and arduous. As we work to translate the preclinical AD construct into care, the experiences and needs of pre-caregivers must be studied as well.

Conclusion

Legal and scientific innovations will soon intersect and change the experience of living with AD for patients and their families. It is essential to undertake research now to understand and address the effect of a preclinical AD diagnosis—not just on patients but on the pre-caregivers we will count on to support them.

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