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DESIGN OF COMPREHENSIVE ALZHEIMER'S DISEASE CENTERS TO ADDRESS UNMET NATIONAL NEEDS by JQ Trojanowski et al.

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In the current edition of *Alzheimer's and Dementia*, Dr Trojanowski and colleagues state the case for developing Comprehensive Alzheimer's Disease Centers (CADCs) (1). The proposal for the CADC is based on the growing urgency to address the broad needs of the millions of people suffering from AD and their caregivers.

The CADCs would be built around existing NIA funded Alzheimer's disease centers (ADCs) that have been in existence for over 30 years. The ADCs have served their primary purpose; to understand progression; risk factors, contributors, and pathophysiology of Alzheimer's disease while following a huge cohort of subjects with no cognitive impairment (NC), mild cognitive impairment (MCI), AD and other dementias from 29 centers. The data from these cases have become standardized (2) with data housed in a central repository, the National Alzheimer's Coordinating Center (NACC). The ADCs have informally become progenitors of the proposed CADCs as they have become hotbeds of research (e.g. 3,4), application of diagnostic criteria (e.g. 5), and clinical trials (e.g. 6). In fact, most ADCs also serve as Alzheimer's disease neuroimaging (ADNI) and Alzheimer's disease cooperative study (ADCS) sites. Thus the evolution to a more comprehensive approach to AD would not be excessively difficult. This is an advantage from a strategic planning perspective as the infrastructure has been established to a certain extent.

The CADCs should include clinical care, diagnostics, clinical trials, and support for families. They should become centers where information is disseminated as well. A survey of Americans found that while most are aware of AD, few have specific information about it (7). Additionally, the CADCs could bring more uniformity to AD care by standardizing diagnostics and therapeutic approaches. Presently, diagnostic evaluations are fragmented (8) and treatment options are not standardized. Indeed, the consensus guidelines for diagnosis and treatment are in need of updating to reflect current scientific and treatment advancements.

The CADCs could be based on a cancer center model. The NCI designated Cancer Centers have been in existence for more than 30 years. These Cancer Centers have integrated cancer care, diagnostics, and research from their inception. They have been instrumental in improving quality of care delivery in cancer (9) and clinical outcomes (10). Thus, successful strategies taken from the Cancer Center program could be incorporated. This might be achieved by convening a panel of experts from NCI while the CADCs are in the planning stages.

Some challenges are faced in the creation of CADCs, particularly in the current climate. First and obvious is funding. While NIA P30s and P50s are funded with \$1–2 million in direct costs annually, the creation of a CADC would likely be ten-fold greater in cost per center. With

funding restrictions at NIA in place, this would be difficult to achieve even if significant improvements in care could be demonstrated. Second, the geographic distribution of CADCs, if they are based on ADCs, would restrict access potentially to millions since there are large areas of the country where there are no ADCs. This situation was found with NCI Cancer Centers (11). Third, if the CADCs are to succeed within academic settings, cultural changes need to occur within academia where clinical care would need to be valued equal to teaching and research. Also, value needs to be placed on conducting industry trials as well as investigator-initiated or federal trials. To that end, there will need to be an emphasis for integration of industry studies into the CADCs.

In the ideal CADC, patients and caregivers are the customer and receive cutting edge diagnostics, information, treatment and research. The “sponsors” would be NIH, academic institutions along with pharma/ biotech industries, and advocacy groups. The prevent AD 2020 initiative has become the rallying cry to elevate AD to the next level in priority to stem the tide of this impending epidemic. The CADCs as articulated by Trojanowski et al would be a solid step in that direction.

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