Dense data enables 21st century clinical trials

Alzheimer’s disease (AD) is one of the most significant challenges of our time. We need a diverse research portfolio. We cannot afford to shut down avenues of research. A century of domination by the amyloid hypothesis stifled AD research. We cannot again afford last century’s opportunity cost. Health care delayed is health care denied. Trials take years. Trials should be done in parallel where possible. If we were to test all possible single-mode interventions before testing any other hypotheses, it would take decades—if not centuries. Given the high expected return on AD research investment, we do not advocate redistributing money among AD trials as a zero-sum game; rather, we should increase funding for all AD research. If there were a need to redistribute global AD funding, we note that pharmaceutical companies may spend billions of dollars bringing to market products that are less validated and less effective than multimodal therapy or its components. A recommendation to reallocate funding for multimodal trials that are several orders of magnitude less expensive than pharmaceuticals is misguided Neurocognition (PREVENTION) through the lens of “merely testing coaching.” It is also reasonable to see PREVENTION through many other lenses. PREVENTION is testing two separate doses of multimodal intervention: low dose and high dose. It is not possible to test zero dose—all people exercise or eat or use their brains to some extent. Many more trials are needed. PREVENTION and its sister trial COCOA (Coaching for Cognition in Alzheimer’s) will provide data to enable better design of such future trials.

We should be driving 21st-century electric cars, not 19th-century horse-drawn carts, and not quibbling about where the horse is placed. There is still plenty of room for horse-drawn research carts. But we must also trailblaze lest we end up stuck in a rut. We envision a world in which economical and individualized interventions are accessible to the millions of people with and at risk for AD and related dementias.

ACKNOWLEDGMENTS

This work was supported by the Alzheimer’s Translational Pillar of Providence St. Joseph Health; Saint John’s Health Center Foundation; Pacific Neuroscience Institute Foundation; and the National Alzheimer’s & Dementia: Translational Research & Clinical Interventions. This is an open access article under the terms of the Creative Commons Attribution-NonCommercial-NoDerivs License, which permits use and distribution in any medium, provided the original work is properly cited, the use is non-commercial and no modifications or adaptations are made.

Institutes of Health (U01AG046139, RF1AG057443, U01AG061359, R01AG062514).

CONFLICTS OF INTEREST
The authors have no conflicts of interest.

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