One of the major challenges to the successful development of therapies for Alzheimer’s disease (AD) is the poor translation of preclinical efficacy from animal models to the clinic. Several key factors have been identified as contributors to the unsuccessful translation of therapeutic efficacy, these include:

- the failure of the models to fully recapitulate human AD;
- poor rigor, study design and data analysis, insufficient attention given to using a standard set of “best practices”,
- failure to match outcome measures used in preclinical animal studies and clinical studies,
- poor reproducibility of published data, and
- publication bias in favor of reporting positive findings.

To address this challenge and ameliorate some of the factors contributing to the preclinical to clinical gap in the development of AD therapies, several advisory meetings and workshops including the National Institutes of Health (NIH) AD Summits in 2012 and 2015 were held. In response to expert recommendations from these meetings, the National Institute on Aging (NIA) and the NIH Library have created an open science knowledge portal – the Alzheimer’s Preclinical Efficacy Database or AlzPED. Through the following capabilities, AlzPED is intended to guide the development and implementation of strategies and recommendations for standardized best practices for the rigorous preclinical testing of AD candidate therapeutics:

1. Knowledge platform for data discovery, mining and visualization.
2. Core design element reporting, including data from preclinical studies published between 1996 and 2019.
3. Has the following capabilities:
   - 9 core design elements, most reporting only 2-4 core design elements.
   - Poor reporting of critical elements of methodology is demonstrated in high impact factor journals as well as low-impact journals.
   - There is considerable variation in the frequency of reporting the 24 recommended elements of experimental design that improve the reproducibility and translational value of preclinical efficacy research. Data are presented as percentages calculated from 917 published preclinical efficacy studies published between 1996 and 2019 and curated in AlzPED.

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