Altering disease course before symptom onset: the European Prevention of Alzheimer’s Dementia Longitudinal Cohort Study (EPAD LCS)

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Facts & Figures
Start date: 1 January 2015
End date: 31 December 2019
Contributions
IMI funding: 25,880,000 €
EFPIA in kind: 27,160,286 €
Other: 6,431,736 €
Total cost: 59,472,022 €
Project website: www.ep-ad.org
Social media: @IMI_EPAD

Challenge
In 2015, it was estimated that 46.8 million people lived with dementia worldwide. By 2030, this number was evaluated to increase to 75.7 million and reach a global cost of care of $2 trillion. Alzheimer’s disease (AD) is the leading cause of dementia globally, accounting for as many as 60 – 70% of cases.

Today, our understanding of the cognitive and pathophysiological biomarkers of AD allows us to identify pathological changes after disease onset, but decades before the onset of symptoms. This creates the opportunity to (1) intervene early and on (2) further our understanding of the risk factors that contribute to the probability of developing dementia.

Despite these advances, no disease-modifying drug has been approved for the secondary prevention or symptomatic treatment of Alzheimer’s dementia in the last two decades.

Approach & Methodology
The EPAD Longitudinal Cohort Study (EPAD LCS) in alignment with the EPAD Proof of Concept (EPAD PoC) trial are the two strategies employed to address this challenge.

The EPAD LCS aims to provide:
- A well-characterized probability spectrum population for disease modelling.
- A readiness cohort and run-in data for pre-authorization purposes for the PoC.

EPAD LCS Data Collection:
Cognitive outcomes (RBANS, Dot Counting, Tower, Parsons, figur, Mountains and Virtual Reality Supermarket Trolley tasks)
Clinical outcomes (GDS, STAI, PSQI, AIAOL)
CSF Biomarker outcomes
Neuroimaging outcomes (Core and Advanced MRI)
Genetic assessments
Biological samples (blood, urine, saliva)

Other Measures: Socio-demographics (e.g. age, education); Family history of AD; Height, weight; hip waist circumference; Medical history (e.g. BRIAD); Current medication; Lifestyle factors (e.g. NATHC, SNAC); Dementia diagnosed by the participant’s physician; Mini-Mental State Exam; Clinical Dementia Rating; Physical exam (e.g. blood pressure)

Value of IMI collaboration
As an Early Career Researcher, it is a unique opportunity to be involved in the coordination of such a complex project, working alongside scientists, clinicians, statisticians, nurses and research assistants. It is through such collaborative work, that future PIs are faced with the opportunity to shape new ideas and advance today’s work.

Current progress
As of September 12th 2018, 21 Trial Delivery Centres have screened a total of 965 participants, of which 844 participants are successfully screened.

Facts & Figures

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Impact & take home message
The EPAD LCS will generate the most comprehensive dataset for disease modelling, aiming to facilitate the development of new drug treatments for secondary prevention of Alzheimer’s dementia.

See the Status of Enrollment in EPAD (SEEPAD) for recruitment updates: https://lcsgraphs.pr.epad.org/?api_key=81ef0cf19e8406c8c3900c5bd95ab75c
Contact: Delia.Gheorghe@psych.ox.ac.uk

References:

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