

myAVOS

*a Healthy
Brain for
Millions*



"Click to Save: optimising healthy aging with technology"

OptiChroniX is supported by:



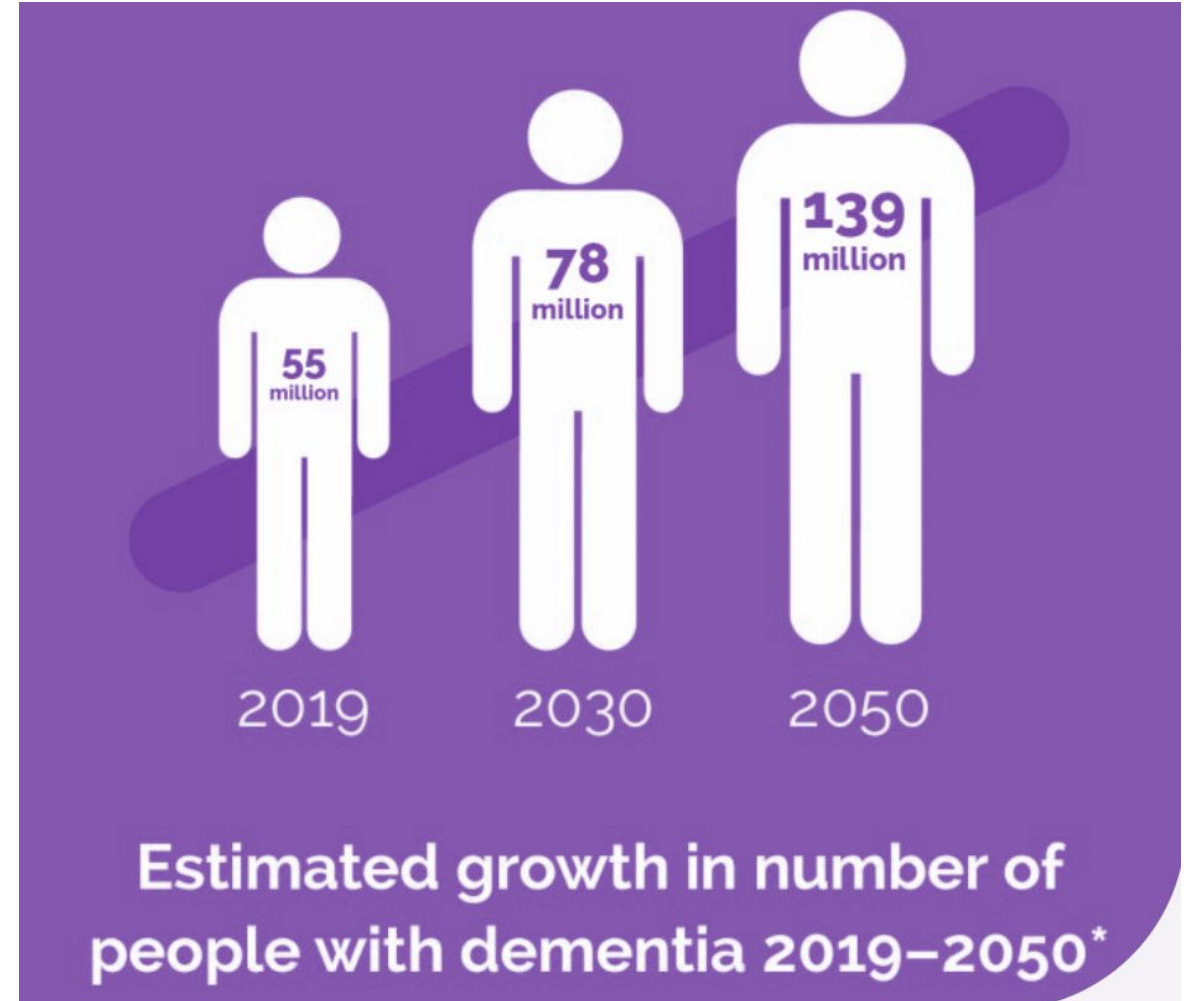
EIT Health is supported by the EIT,
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Let's talk about the silent pandemic in the making ...

DEMENTIA

The **7th leading cause of death** among all diseases and one of the major causes of disability and dependency among older people globally.



Source: Global status report on the public health response to dementia; World Health Organization 2021

...creating major pressure on the healthcare system



139MN

Tripled from the number today and carers and family don't have adequate support to manage their loved ones or themselves



\$266BN

Is wasted on healthcare administrative costs



90K

Shortfall in doctors forecasted by AMA by 2025 and doctors today have not enough time to manage chronic care patients



\$1.3TN

Estimated worldwide cost of dementia today and growing to 2.8TN by 2050

...and drug development remains challenging


June 16, 2022
3:10 PM GMT+2
Last Updated 2 months ago

Healthcare & Pharmaceuticals

Roche's study flop marks yet another Alzheimer's setback

By Natalie Crover

2 minute read



ZURICH/LONDON, June 16 (Reuters) - Roche's experimental Alzheimer's drug crenezumab failed to meaningfully slow or prevent cognitive decline in people at risk of a rare, inherited form of the disease, the Swiss drugmaker said on Thursday.

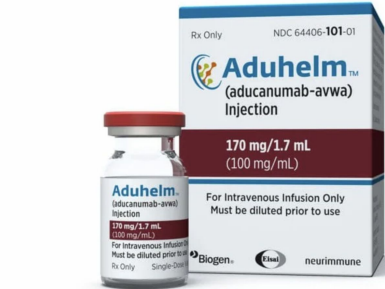
The logo of Swiss drugmaker Roche is seen at its headquarters in Basel, Switzerland January 30, 2020. REUTERS/Arnd Wiegmann/File Photo

PHARMA

Biogen terminates an Aduhelm study no thanks to restricted Medicare coverage

By Angus Liu • Jun 23, 2022 10:13am

Biogen Aduhelm Alzheimer's disease



Rx Only NDC 64406-101-01
Aduhelm™
(aducanumab-avwa)
Injection
170 mg/1.7 mL
(100 mg/mL)
For Intravenous Infusion Only
Must be diluted prior to use
Biogen neurimmune

Given the restrictive Medicare coverage, Biogen expects limited Aduhelm prescription and usage in routine clinical practice for enrollment in the real-world study. (Biogen)

For Biogen's ill-fated Alzheimer's disease drug Aduhelm, a narrow Medicare reimbursement policy is taking a toll beyond sales and on the company's clinical development plan.

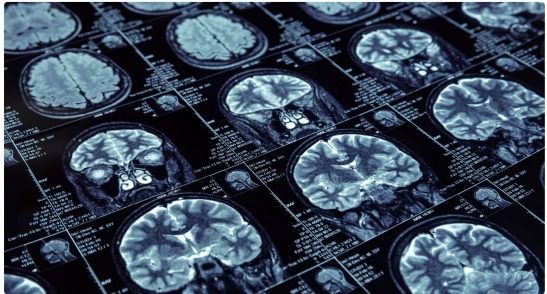
Biogen has pulled the plug on the observational ICARE AD trial, which was meant to collect real-world data on Aduhelm's use in the U.S., according to an update posted Tuesday on ClinicalTrials.gov. A Biogen spokesperson confirmed the status to Fierce Pharma.

DIVE BRIEF

Biohaven adds to a long list of Alzheimer's drug failures

Published Jan. 19, 2021

Jacob Bell
Senior Reporter



Getty Images

Dive Brief:

- Alzheimer's drug research notched yet another setback Monday, as a late-stage clinical trial found that an experimental medicine from Biohaven Pharmaceuticals did not significantly impact brain function in patients with mild to moderate disease.
- Biohaven said that after 48 weeks of treatment, its drug, troriluzole, was statistically no different than placebo, as measured by two scales used to evaluate Alzheimer's disease and dementia. The company

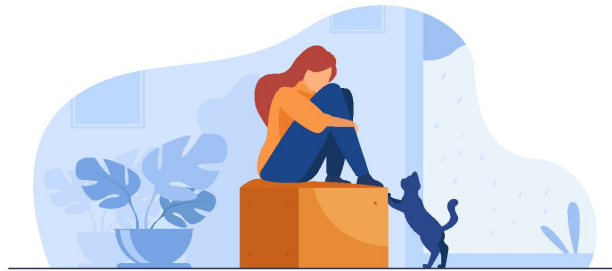
...and we neglect the people that care.



84%

of caregivers need more help and trustworthy information

related to keeping their loved ones safe, managing their own stress, and making end-of-life decisions



40-70%

of family caregivers have depression.



22%

may progress to MCI

10-15%
converting to Alzheimer's Disease annually



\$256.7B

worth of care

is provided by family members and other unpaid caregivers.

But Behavioural Change is a promising way forward

Addressing so-called “**modifiable risk factors**” [...] can possibly **prevent or delay up to 40 percent of dementia cases**, which identified and ranked 12 factors associated with lowering one’s risk for cognitive decline.

Wellbeing is the goal of much of dementia care.[...] Interventions should be individualised and consider the person as a whole, as well as their family carers.

The Lancet Commissions

Dementia prevention, intervention, and care: 2020 report of the Lancet Commission



David Ames, Clive Ballard, Sube Banerjee, Carol Brayne, Alistair Burns, Rita C. Fitzpatrick, Nicky Fox, Laura N Gitlin, Robert Howard, Helen C Kales, Mika Kivimäki, Kenneth Rockwood, Elizabeth L Sampson, Quincy Samus, Lon S Schneider,

New Dementia Prevention Method May Be Behavioral, Not Prescribed

As experimental drugs prove ineffective against increasing dementia cases in the U.S., researchers argue that improving eyesight can have an effect.

Give this article    646



In a recent study, researchers estimated that healthy vision could have prevented about 100,000 dementia cases. B.A. Larue/Alamy

living with... declines... has fallen... movements in... life changes... rts the nine... tia modelled... prevention... hypertension... sion, phy... We now add... convincing... m. We have... incorporated... model of... difiable risk... demenias... prevented or... and might... e countries... synthesis has... is never too... for demen...

against dementia. Using hearing aids appears to reduce the excess risk from hearing loss. Sustained exercise in midlife, and possibly later life, protects from dementia, perhaps through decreasing obesity, diabetes, and cardiovascular risk. Depression might be a risk for dementia, but in later life dementia might cause depression. Although behaviour change is difficult and some associations might not be purely causal, individuals have a huge potential to reduce their dementia risk.

In LMIC, not everyone has access to secondary education; high rates of hypertension, obesity, and hearing loss exist, and the prevalence of diabetes and smoking are growing, thus an even greater proportion of dementia is potentially preventable.

Amyloid- β and tau biomarkers indicate risk of progression to Alzheimer’s dementia but most people with normal cognition with only these biomarkers never develop the disease. Although accurate diagnosis is important for patients who have impairments and functional concerns and their families, no evidence exists to support pre-symptomatic diagnosis in everyday practice.

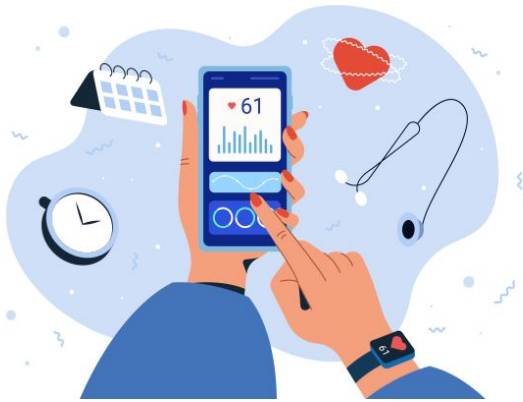
Our understanding of dementia aetiology is shifting, with latest description of new pathological causes. In the oldest adults (older than 90 years), in particular, mixed dementia is more common. Blood biomarkers might hold promise for future diagnostic approaches and are more

Lancet 2020; 396: 413–46
Published Online
July 20, 2020
[https://doi.org/10.1016/S0140-6736\(20\)30367-6](https://doi.org/10.1016/S0140-6736(20)30367-6)
Division of Psychiatry (Prof G Livingston MD, J Hurley PhD, A Sommerlad PhD, Prof C Cooper PhD, S G Costafreda PhD, Prof R Howard MD, V Orgetta PhD, Prof F L Sampson MD, N Mukadam PhD), Dementia Research Centre, UK Dementia Research Institute (Prof N Fox MD), and Department of Epidemiology and Public Health (Prof M Kivimäki FMedSci), University College London, London, UK; Camden and Islington NHS Foundation Trust, London, UK (Prof G Livingston, J Hurley, A Sommerlad, Prof C Cooper, S G Costafreda, Prof R Howard, N Mukadam); Barnes, Esfield, and Haringey Mental Health Trust, London, UK (Prof F L Sampson); National Ageing Research Institute and

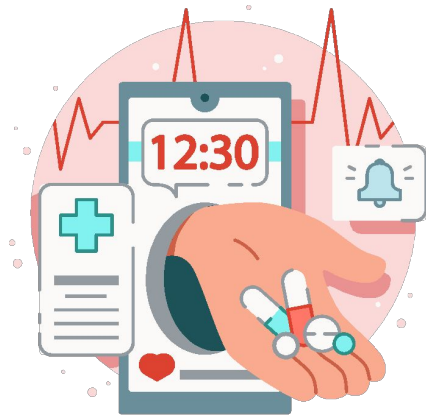
[https://www.thelancet.com/article/S0140-6736\(20\)30367-6/fulltext](https://www.thelancet.com/article/S0140-6736(20)30367-6/fulltext)

<https://www.nytimes.com/2022/07/03/health/dementia-treatment-behavior-eye-care.html>

Imagine a world where Millions of People have Better Brain Health



Where an app predicts late-life dementia and monitors brain function



Where personal data will inform the intervention from your "healthy" mid forties



Where 5 Lifestyle Pillars have impact on the onset or course of Dementia



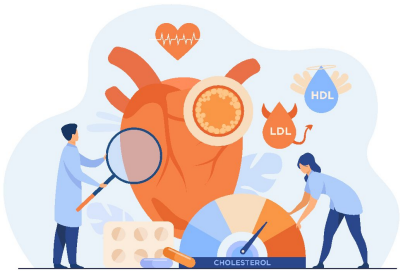
Where Loved Ones are managed and their caregivers supported



Where memories are preserved for longer for Millions of People

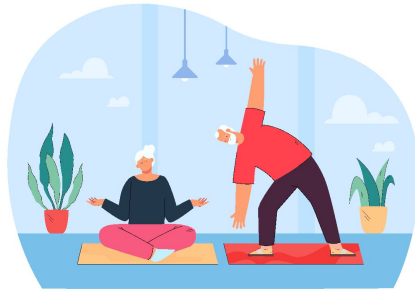
How? Five Pillars of Healthy Aging require the IoT, NLP and AI

to inform the digital therapeutic / coaching content for globally scalable solution



Health

Is predicted,
monitored, coached
and/or referred to HCP



Activity

is measured and
encouraged



Sleep

Is monitored and
enhanced



Nutrition

Is assessed and
advised



Mental wellbeing and Stress

Is measured and
provided coping
techniques

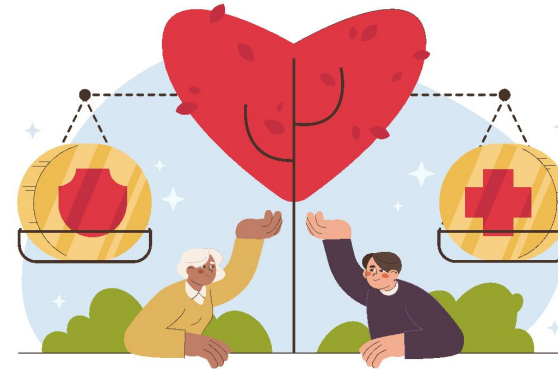
Caregivers have a high willingness to pay to reduce their burden.



\$292

per 3 months

The Willingness to Pay Value for an In-home Program to Reduce Behavioral Symptoms and Caregiver Stress.



\$96 - \$234

per month

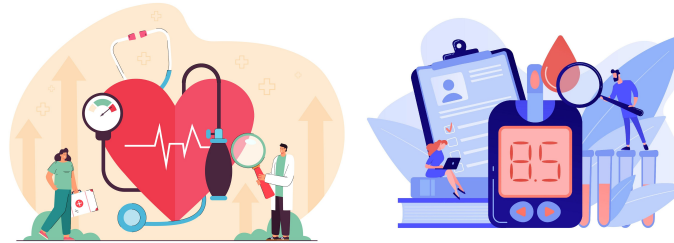
Caregivers in the UK, Spain Sweden and the USA on average would be willing to pay USD 170, 196, 96 and 234 per month, for a one-hour reduction in caregiving per day

Doctors will prescribe digital solutions if...



10 – 30%

Of patients will be prescribed myAVOS if the platform achieves **positive health outcomes**
(ex med adherence, health literacy)



50 – 60%

Of patients will be prescribed myAVOS if the platform achieves **positive clinical outcomes**
(ex BP, a1c)



>60% – 80%

Of patients will be prescribed myAVOS if the platform achieves positive clinical outcomes and **is fully reimbursed**



Requirements evolve as life progresses

Creating improved outcomes and quality of life through real world data informed detection and intervention

← Optimizing the user / carer / patient journey →

Pre-Diagnosis
Prevention &
Patient Finding



Risk Prediction
Screening
Monitoring
Information Sharing
Lifestyle Coaching

Diagnosis



Screening
Monitoring
Lifestyle Coaching
Medication Adherence
Carer Support

Treatment

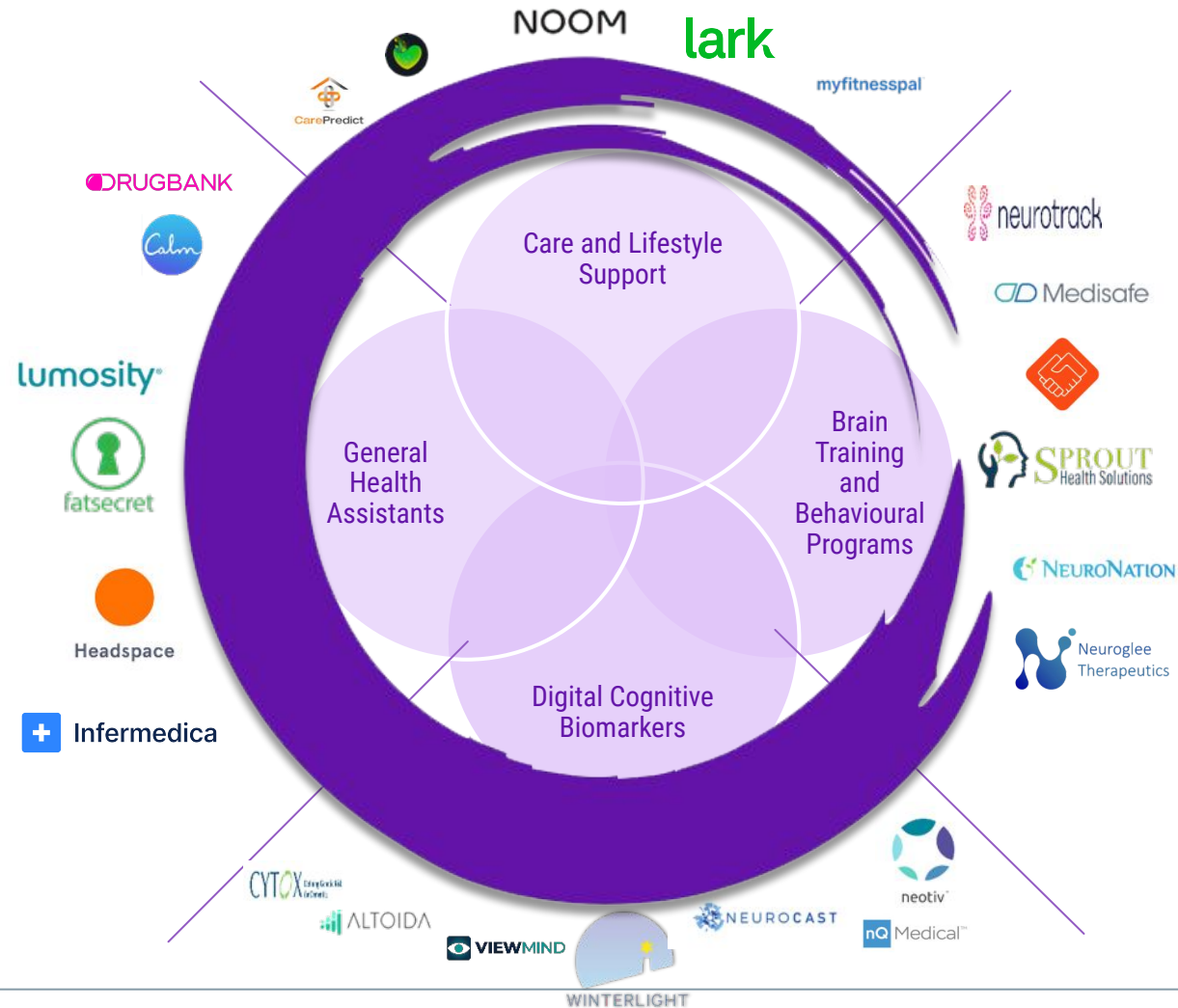
Continuing of Treatment
and Care



Screening
Monitoring
Lifestyle Coaching
Information Sharing
Medication Adherence
Carer Support

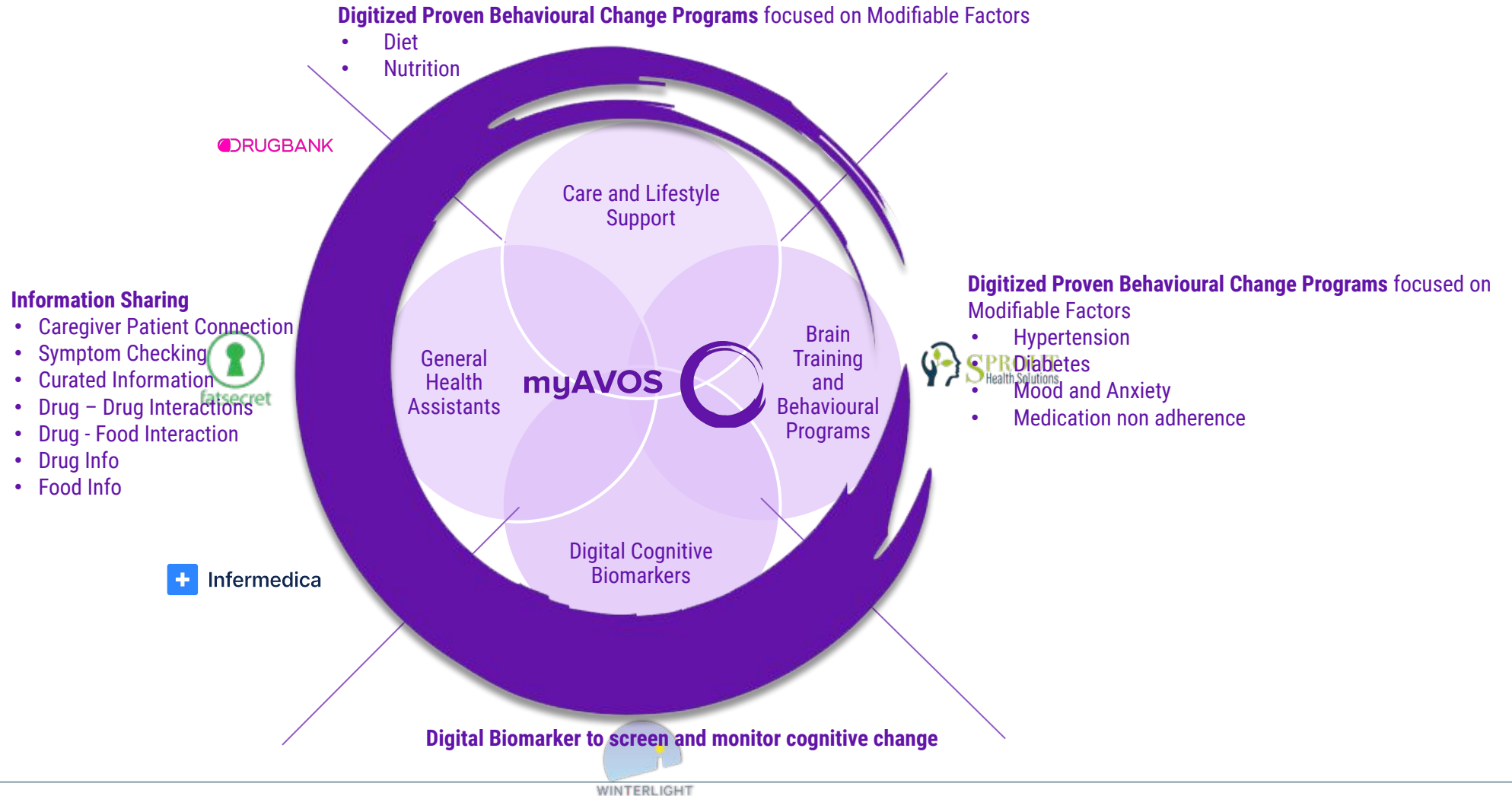
The dementia solution landscape remains fragmented and siloed

The end users want simplification and unification



The dementia solution landscape is fragmented and siloed application

OptiChroniX is digitizing and integrating data labels into one application



...and where patients retain ownership of their own data, and get rewarded for improved health outcomes and/or sharing data.

Distributed Ledger Technology

- Web 3.0 enabled
- A token to facilitate secure transactions between patients, service providers and research organizations
- Driving engagement:
 - **Behavior change leading to better outcomes will be rewarded**
 - **Access to medical and lifestyle data will be rewarded**

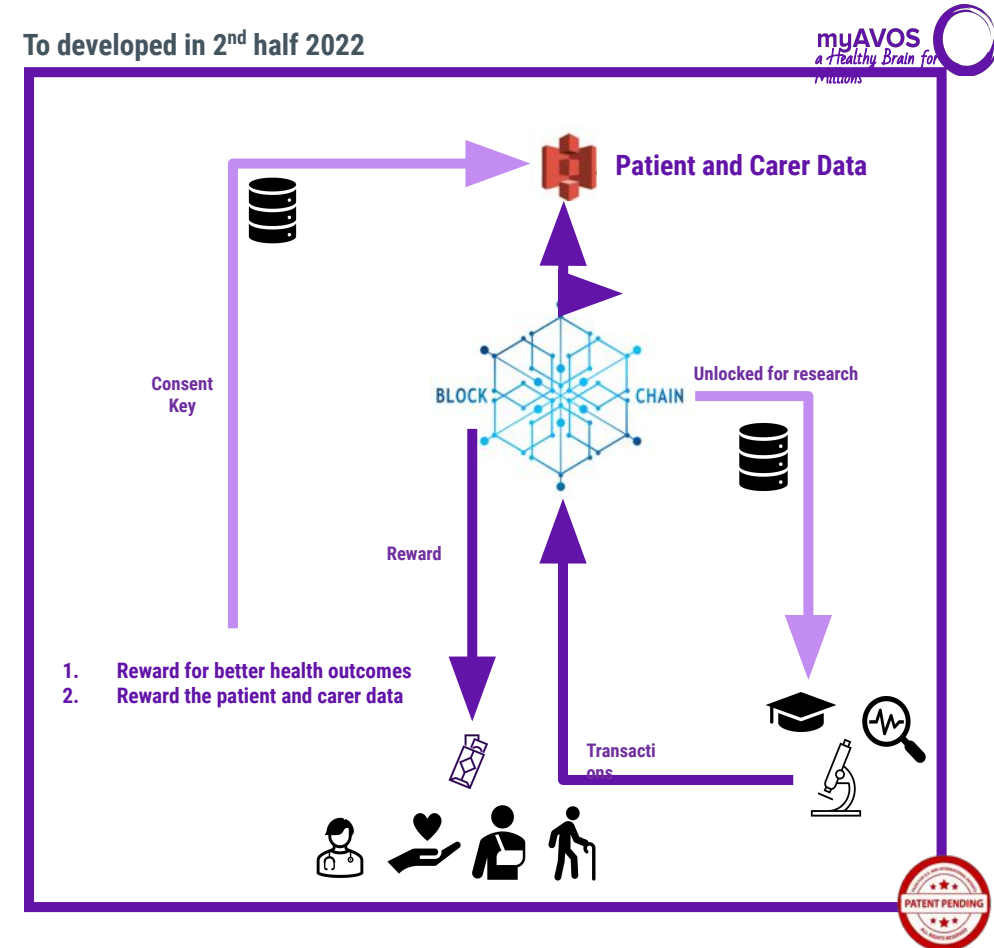
Consent management

- Patient Smart Contracts
- Carer Smart Contracts
- Clinicians Smart Contracts
- Provider Smart Contracts

Transaction management

- Reward Payment
- Patient / Carers up / download of medical records
- Clinicians' up / download of de-identified medical data on the token
- Provider / Research / Pharma extract deidentified medical records

To developed in 2nd half 2022

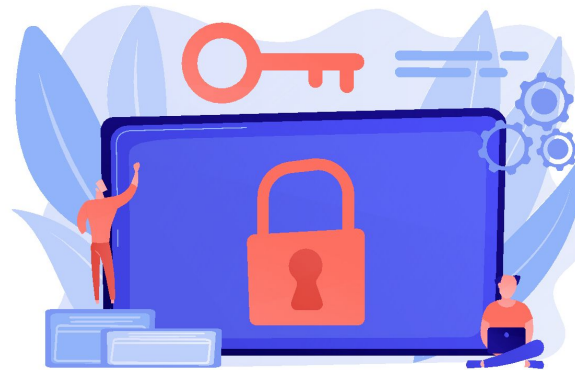


In summary

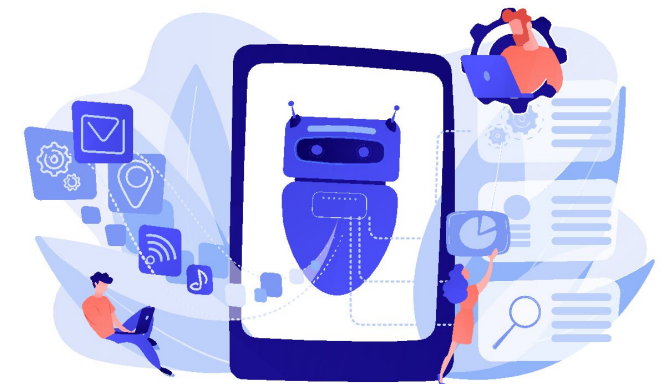
New Technology: AI, ML, NLP and Blockchain will make it possible that



Doctors have timely interventions and achieve better outcomes



NT supports the current health system infrastructure and saves costs



Have people own their health and (brain) age gracefully

Thank you for listening – time for questions and comments

Happy to show demonstrate **myAVOS**



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OptiChroniX is looking for Strategic Investors