

NIHR Invention for Innovation (i4i) Programme Challenge Awards Call 8

Mental Health

Mental illness inflicts a heavy toll on affected individuals, carers and society as a whole. It is the largest single cause of disability and represents 28% of the national disease burden in the UK. Annually this leads to an estimated 70 million working days lost, costing the economy £70 billion a year (OECD 2014).

The NIHR Invention for Innovation (i4i) Challenge Awards are themed calls for funding in areas of unmet clinical need. Applications are invited for the development of innovative technological solutions which can influence the patient care pathway and improve patient outcomes for mental health problems, supporting aspirations as set out in the [Five Year Forward View For Mental Health](#) and the [Framework for Mental Health Research in the United Kingdom](#).

Applications may address one or more of the following areas:

- Integration of physical and mental health services across the NHS
 - Tools promoting access to physical health services for patients with severe and prolonged mental illness
 - Tools promoting access to mental health services for patients with long term physical illnesses
- Accurate, cost-effective and faster screening and diagnosis of mental health conditions
 - Novel and effective approaches to screening and diagnosing mental health conditions
 - Personalised approaches that consider overlapping symptoms and multiple disorders
- Treatment and management of mental health conditions, including effective prevention, early intervention, tailored treatments and active disease monitoring
 - Novel technologies and innovative combinations of existing techniques, demonstrating clinical utility and cost-effectiveness
 - Tools which promote patient engagement, treatment adherence and clinic attendance
 - Tools which can predict disease progression and outcomes to treatment
 - Tools that can identify individuals at risk of relapse
 - Technologies for patient and/or self-management

Proposals may focus on the development and evaluation of neuroimaging techniques, point-of-care biomarker tests/devices, virtual reality assessment, neurostimulation, neurofeedback, digital technologies including apps and sensors, virtual reality and computer-based therapies, real-time personalised monitoring through wearable technology, active implantable devices, smartphone apps and sensors. Technologies which utilise artificial intelligence (AI) or machine learning to analyse routine datasets may form part of the project.

Applications focusing on biomarker discovery will not be considered. The re-purposing of existing technologies and interventions or incremental changes to technologies in current clinical use will not be considered unless they include significant innovation. Proposals which focus on the development

of apps will only be considered if they are for use by or are to be prescribed by clinicians or carers. The proposal must include a clinical evaluation, with a 'first in man' study being a minimum requirement.

Proposals consisting of collaborative partnerships across multiple geographical regions are encouraged but the lead applicant must be based in England.

We will not consider applications focused on neurodegenerative conditions including Parkinson's, Dementia, Alzheimer's and Huntington's.