

cal & public health concern: The European Union's CAMHEE report recommends better information on CAPRI risks and resilience and to enable interventions to target the highest risk. This is important because although large numbers of children are in the riskset, most remain resilient. Research needs to support delivery of the CAMHEE initiative by understanding who is at risk and how we can target them early before their life trajectories are fatally disrupted.

To do this, we aim to create groundbreaking cross-national datasets providing robust data on CAPRI prevalence & life trajectories needed to plan future services.

But epidemiology alone cannot expose how risk creates effects at the individual level. We need to know which CAPRI to target with potentially expensive, time-consuming specialist services

Powerful neuroscience techniques such as functional near infrared spectroscopy are now available with which we can link epidemiological risk to elucidate effects of exposure within individual infant brain. This unique interdisciplinary approach yokes robust epidemiological evidence to cutting-edge optical imaging that can be undertaken in very young infants.

This allows us to target developments in clinical interventions for CAPRI to those in greatest need and potentially to those most vulnerable with the future aim to identify early biomarkers of abnormality for targeting intervention in CAPRI.

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## Symposium: diagnostic tools and medical device technologies in psychiatry

### S104

#### Big data market analysis of e-health in medical neuroscience

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Depression is associated with more than 100,000 patent applications for its diagnosis and prognosis, the highest number among mental disorders. This is followed by schizophrenia with 47,000, bipolar disorder with 32,110 and hypomania with 11,377. Among diagnostic tools, magnetic resonance imaging is associated with more than 31,000 patent applications. Among recent technologies, biomarkers are associated with more than 12,000 epigenetics with about 970 metabolomics with 515 genome-wide association study (GWAS) with 486 and bionics with 497 patent applications. The patent applications related to diagnosis and prognosis of psychiatric diseases peaked in 2008 and was overall decreasing until 2016, with a local peak in 2013. This trend has been observed despite the value addition of recent technologies like machine learning, big data and internet of things. However, more conservative diagnostic tools from the last decade like magnetic resonance imaging, epigenetics, bionics and neuro-psychological testing are improved by the recent technologies. For example, bionics is improved by sensors of internet of things to collect the data from patients around the world and use the big data analytics to efficiently diagnose the psychiatric diseases. The Regents of the University of California and Human Genome Sciences Incorporation are the respective academic and non-academic institutions leading the innovations related to diagnosis and prognosis of psychiatric diseases.

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### S105

#### The ethics of mobile health technology

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*Introduction* Mobile health (m-health) technology has been growing rapidly in the last decades. The use of this technology represents an advantage, especially for reaching patients who otherwise would have no access to healthcare. However, many ethical issues arise from the use of m-health. Health equity, privacy policies, adequate informed consent and a competent, safe and high quality healthcare need to be guaranteed; professional standards and quality of doctor-patient relationship in the digital setting should not be lower than those set for in-person practice.

*Aims* To assess advantages and threats that may arise from the wide use of m-health technologies, in order to guarantee the application of the best medical practices, resulting in the highest quality healthcare.

*Methods* A literature search has been conducted to highlight the most pressing ethical issues emerging from the spreading of m-health technologies.

*Results* Few ethical guidelines on the appropriate use of m-health have been developed to help clinicians adopt a professional conduct within digital settings. They focus on the need for professional associations to define ethical guidelines and for physicians to take care of their education and online behavior when using m-health technologies.

*Conclusions* The rapid spreading of m-health technologies urges us to evaluate all ethical issues related to its use. It would be advisable to produce an ethical code for the use of these new technologies, to guarantee health equity, privacy protection, high quality doctor-patient relationships and to ensure that m-health is not chosen over traditional care for merely economic purposes.

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## Symposium: Social cognition in schizophrenia: pathophysiology, functional implications and treatment options

### S106

#### Disorganization and social cognition: Data from the Italian network of research on psychoses

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Social cognition (SC) refers broadly to the domains of cognitive functions that are employed in socially relevant situations. These disturbances have been found to be strongly related to disorganized and negative symptoms in schizophrenia. Each of the disorganization symptoms suggests a diminishment or absence of organization. There seems to be a loss of the ability to be directed toward or committed to a particular focal topic or goal. Such conditions are likely to impact patients' drives or motivations to initiate goal-directed activities that could yield pleasurable opportunities. Moreover, it has been suggested that disorganized