CONFERENCE ABSTRACT

An innovative and integrative m-Health solution for treatment resistant schizophrenia patients

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In the European Union, it is estimated that around 5 million people (0.2-2.6%) suffer from psychotic disorders. Between 30-50% can be considered resistant to treatment, and 10-20% ultra-resistant (Juarez-Reyes et al., 1995; Essock et al., 1996). The standard intervention in patients with resistant schizophrenia is complex, mainly for the presence of persistent positive symptomatology, extensive periods of hospital care and greater risk of multi-morbidity, that leads to a scenario with a high degree of suffering for the patients, family and social environment, and a high proportion of costs to the healthcare system (Kennedy et al., 2014). To date, the standard treatment is not enough to achieve remission in resistant schizophrenia patients. Therefore, an improved understanding of treatment refractory schizophrenia and the development of innovative evidence-based interventions adjunctive to pharmacological and psychosocial treatment are necessary.

ICT-based programmes are a novel possibility to improve the outcomes of schizophrenia since previous studies have indexed the suitability and promising results of interventions based on m-Health techniques (Granholm et al., 2012; Ben-Zeev et al., 2013). However, new proposals adapted to the specific nature of well-identified clinical subgroups, such as resistant patients, are needed.

Intervention in resistant schizophrenia patients should include psychiatric, psychological and medical treatment. Moreover the role of the caregivers in the prognosis of the illness is a key aspect, improving adherence to treatment and identifying early signs of relapse or physical problems.

Bearing all these aspects in mind, we propose m-RESIST, as an innovative, secure and sustainable project, which offers an integrated care addressed to empower patients suffering from resistant schizophrenia.

m-RESIST intervention, although it is still under development, will integrate three main components: 1) a sensor data analysis module, which will provide passive information about the patients in terms of movement activity, social activity and physiological status, processing data coming from smartphone and wearable devices; 2) a predictive modelling engine, which will enable prediction of clinically significant events, such as hospitalization, risk behaviours and social isolation; and 3) a clinical decision support system (CDSS), which will provide users with necessary information to support health-related and clinical decision-making. This CDSS will include psychiatric intervention in three main areas, clinical symptoms management, healthy lifestyle habits and treatment adherence, as well as psychological intervention based in the cognitive behaviour therapy for psychosis.

This project highlights the importance of the involvement and participation of the patients and their caregivers in the therapeutic process, whose will have an active and collaborative role with the medical team in the treatment decision-making procedure.

m-RESIST system, in order to reduce the severity of episodes and further complications, will ensure the continuation of health care services and also will provide a new tool for a better monitorization of the patients through a personalised and optimised integrated therapeutic process.

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The authors listed in this abstract are only a part of the m-RESIST Group.

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