pharmacists, journalists) (level 3), and support for self-help of patients with depression and for their relatives (level 4). In order to deepen the understanding of factors influencing the effectiveness of the intervention, a systematic implementation research and process analysis was performed within the EUfunded study "Optimizing Suicide Prevention Programs and Their Implementation in Europe" (http://www.ospi-europe.com/; 7th Framework Programme) [5]. These analyses were based on data from four intervention and four control regions from four European countries. In addition to intervention effects on suicidal behaviour, a variety of intermediate outcomes (e.g. changes in attitude or knowledge in different populations) were considered. Strong synergistic as well as catalytic effects were identified as a result of being active simultaneously at four different levels. Predictable and unpredictable obstacles to a successful implementation of such community-based programs will be discussed. Via the EAAD, the intervention concept and materials (available in eight different languages) are offered to interested region in and outside of Europe. Disclosure of interest The authors have not supplied their declaration of competing interest.

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#### Hallucinations and delusions in schizophrenia: From phenomenology to neurobiology

#### **S43**

#### Hallucinations without delusions in patients with first-episode psychosis: Clinical correlates and implications for pathophysiological models

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Introduction The symptomatic distribution in schizophrenia spectrum disorder is heterogeneous. Patients may experience hallucinations, delusions and combinations thereof, in addition to disorganized and negative symptoms. We have previously found that patients with monosymptomatic hallucinations exhibited a different clinical profile than patients with monosymptomatic delusions or combinations of the two; with an earlier age at onset and more suicidal symptoms.

Aims To replicate findings in a new group of patients with schizophrenia spectrum disorders.

Methods A total of 421 consecutive patients with schizophrenia spectrum disorders were included into the study. They were comprehensively assessed by specifically trained psychiatrists or clinical psychologists; using the SCID for DSM-IV for diagnostic purposes, the PANSS to assess current clinical symptoms and CDSS to assess current depression. Lifetime presence of different symptom types was ascertained during the diagnostic interview.

Results A total of 346 (82%) had experienced both hallucinations and delusion, 63 (15%) had experienced delusions without hallucinations, 10 (2.5%) had experienced hallucinations without delusions and 2 patients (0.5%) had neither but experienced negative and severely disorganized symptoms. Contrary to hypothesis,

we did not find any statistically significant differences in age at onset and in clinical symptoms (including suicidality) between these groups. We also did not find any differences in the type of hallucinatory experiences between hallucinating groups.

Conclusions In a new sample of patients, we did not replicate previous findings of a different clinical profile in patients with monosymptomatic hallucinations. This type of psychotic disorder is relatively rare, which might pose a problem concerning statistical strength.

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#### **S44**

# Abnormal time experience, bizarre delusions and verbal-acoustic hallucinations in schizophrenia

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The integrity of time consciousness is the condition of possibility of the identity through time of an object of perception as well as of the person who perceives it. I will present our findings about abnormal time experience (ATE) in people with schizophrenia. These data may support the following hypothesis: if the continuity of temporal experience disintegrates (of which ATE are experiential manifestations), overarching meaningful units are no longer available, thereby creating temporal gaps, e.g., in one's stream of consciousness. In some cases, thoughts that are no longer experienced as embedded in one's stream of thoughts are experienced as, e.g., thought interferences, blockages, insertion or withdrawal. These symptoms cannot be explained as a mere disturbance of attention or comprehension at the level of semantic combinations. Rather, the disturbance could be searched for at a more basic level where the temporal coherence of conscious awareness is constituted. A failure of the constitutive temporal synthesis may create microgaps of conscious experience. In the most severe cases, thoughts or other mental phenomena that are no longer embedded in the continuity of basic self-experience may appear in consciousness as "erratic blocks" and experienced as being inserted, or, if further externalized, as auditory hallucinations ("voices"). This coheres with the hypothesis that a breakdown of temporality may be bound up with the breakdown of prereflexive self-awareness.

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# Improving clinical outcomes through technology: An innovative approach proposal

#### **S45**

# Smartphone based treatment in bipolar disorder

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E-mental health technologies are under great development and the use is of these technologies is increasing rapidly.

During this symposium, results from a randomized controlled trial investigating the effect of smartphone based electronic self-monitoring on the severity of depressive and manic symptoms will be presented and discussed.

Further, we will present and discuss the use of automatically generated objective smartphone data on behavioral activities (e.g. social activities, mobility and physical activity) as electronic biomarkers of illness activity in bipolar disorder.

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#### **S46**

### Value-based healthcare delivery in the digital era

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Introduction Mental disorders are a major cause of disability in Europe [1]. However, organizational structures and information systems are focused on delivery of care, rather than providing value [2]. In the digital era, we have the capacity to change priorities through the analysis of heterogeneous databases that could support patients' and professionals' decisions.

*Objectives* to analyse the contradictions between the design and the theoretical structure of mental health services and the possibilities to evaluate the actual value of the delivered care.

*Aims* To reflect on changing the trend using a different conceptualization of objectives and evaluating methods.

Methods We used a tool provided to clinicians by the Madrid's Regional Health Service SERMAS ('ConsultaWeb') combining primary care, pharmacy and hospital data (n = 395,073 patients for the catchment area), and a set of hospital-based data (patients attended by psychiatrists at the ER, n = 13,877, and patients admitted to the Psychiatric Inpatient unit n = 3318), to explore some of the present professional information resources.

Results Currently used healthcare databases only describe the diagnostic or therapeutic categories of patients and might be used to detect abnormal behaviours. However, they are neither able to show the functional status of patients nor designed to predict their clinical course.

Conclusions A clearer definition of value in patient outcomes is needed. This might help to organize the healthcare delivery and to create a new information system that would allow to asses health outcomes.

Disclosure of interest The authors have not supplied their declaration of competing interest.

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#### **S47**

## New platform of data analytics for mental health

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Introduction Mental disorder is a key public health challenge and a leading cause of disability-adjusted life years (DALYs) due to its high level of disability and mortality. Therefore, a slight improve-

ment on mental care provision and management could generate solid benefits on relieving the social burden of mental diseases.

Objectives This paper presents a long-term vision of strategic collaboration between Fujitsu Laboratories, Fujitsu Spain, and Hospital Clinico San Carlos to generate value through predictive and preventive medicine improving healthcare outcomes for every clinical area, benefiting managers, clinicians, and patients.

Aims The aim is to enable a data analytic approach towards a value-based healthcare system via health informatics. The project generates knowledge from heterogeneous data sources to obtain patterns assisting clinical decision-making.

Methods This project leverages a data analytic platform named HIKARI ("light" in Japanese) to deliver the "right" information, to the "right" people, at the "right" time. HIKARI consists of a data-driven and evidence-based Decision Support and Recommendation System (DSRS), facilitating identification of patterns in large-scale hospital and open data sets and linking data from different sources and types.

Results Using multiple, heterogeneous data sets, HIKARI detects correlations from retrospective data and would facilitate early intervention when signs and symptoms prompt immediate actions. HIKARI also analyses resource consumption patterns and suggests better resource allocation, using real-world data.

Conclusions With the advance of ICT, especially data-intensive computing paradigm, approaches mixing individual risk assessment and environmental conditions become increasingly available. As a key tool, HIKARI DSRS can assist clinicians in the daily management of mental disorders.

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#### Is schizophrenia a disorder of brain connectivity?

#### **S48**

# Disintegration of sensorimotor brain networks in schizophrenia

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A large body of literature reported widespread structural and functional abnormalities throughout the brain in schizophrenia spectrum disorders (SZ). Corresponding with the typical symptomatology in SZ where sensory dysfunctions contribute to the core social and cognitive impairment, converging evidence suggests a disturbed interplay between higher-order (cognitive) and lower-order (sensory) regions. This talk will discuss the results of several recent studies, investigating brain connectivity in SZ using functional magnetic resonance imaging data from large samples. Within-network sensorimotor as well as sensorimotor-thalamic aberrations in SZ robustly appear among the core findings across studies, both during performance of cognitive tasks and during rest. We utilized machine learning to distinguish SZ from healthy controls based on connectivity profiles. When classifying on sensorimotor connections alone, not only can we reach accuracies largely above chance but also, these accuracies are as good as when incorporating whole brain connectivity in the classification. Whereas the overall accuracy levels in distinguishing SZ from controls are not useful in a clinical context, these results underline the robustness of the sensorimotor findings on the individual subject level. Targeting the sensory and perceptual domains may thus be key for