

In theory and practice early intervention has an indisputable role in the treatment of patients with psychotic disorders, however modern psychiatrists face challenges in their clinical work to find the balance between the best practice and available treatment options in their environment. One of the biggest challenges remains the implementation of high-cost treatment approaches in healthcare systems of middle-income countries. Moreover, one very important aspect to consider when implementing early intervention is to prepare your team for resistance against the innovation. In countries where psychiatric treatment is more hospital-oriented and out-patient care is limited to short face-to-face visits with psychiatrists, the system is rigid and unwilling to step up to more expanded treatment option, such as a team approach of more than 6 members to treat one patient. In Latvia we started our early intervention programme in 2019 (LAT-EIP), 34 patients enrolled, and 27 finished the programme. When we compared results between standard treatment and LAT-EIP, psychiatrist out-patient visits were comparable to LAT-EIP, but the rate of rehospitalization and assigned disabilities at 12 months follow-up differ dramatically: in LAT-EIP 7.4% had been readmitted and 7.4% were assigned with disability vs 36.1% and 34.4% of patients in standard treatment group, respectively,  $p < 0.05$ . Nevertheless, the only hospital which continues to provide early intervention is the one which first established it. This presentation will try to explain step-by-step what enhances and what holds back innovation in psychiatry in one middle-income countries.

**Disclosure:** No significant relationships.

**Keywords:** early intervention; Health care systems; psychosis; schizophrénia

### S0030

#### The trough of disillusionment: A critique of the “transition” paradigm

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I will attempt to address the issues surrounding the CHR concept in light of novel data and briefly discuss emerging alternatives. The root problem of the CHR early invention strategy is the exertion of reducing early nonspecific (pluripotent) psychopathology to a unidimensional model restricted only to positive psychotic symptoms, which define the binary categories of CHR and “transition” in help-seeking populations. This major conceptual handicap undermines the validity and clinical utility. The core predictor of the “transition” rate is the degree of the risk-enrichment and not the CHR status. Even with a significant pretest risk enrichment, the prognostic accuracy is mediocre. The incidence and “transition” rates of CHR in the community are very low; therefore, CHR does not represent a cost-effective clinical target—prevention paradox. CHR succeeding early pluripotent psychopathology is already late for intervention. “Transition” is not a categorical progression but a unidimensional shift in psychotic symptoms, and therefore, influenced by the fluctuation of psychotic symptoms, leading to both false positives and underestimation of nonpsychotic psychopathology. There exists no evidence for a specific effect of any intervention in preventing “transition”; therefore, CHR is not an ideal treatment target. Binary “transition” outcome does not represent a valid

phenotype for research as “transition” rates are primarily driven by the sampling heterogeneity. The multidimensional psychopathology and functioning are more clinically relevant, overarching, and service-user-centered measures to define individual risk and outcome. Guided by the public health perspective, a universal early intervention framework, underscoring improved access to care, may represent a better strategy.

**Disclosure:** No significant relationships.

**Keywords:** psychosis; early intervention; public health; clinical high-risk

## E-mental health and the future of psychiatric diagnosis

### S0037

#### Past, present and future of psychiatry

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Over the past few decades, psychiatry and mental health sciences have reached several major goals. The importance of mental health and the huge contribution to the burden of disability produced by mental and neurological disorders has been recognized by all and most recently also by the United Nations. Treatment technology has developed and permits the effective management of most mental disorders. Progress has also been made in the recognition of human rights of people with mental illness and those who care for them. More has to be done in these areas but there are also new tasks that are before psychiatry. These include the addition of primary prevention of mental disorders to previous efforts to ensure secondary and tertiary prevention of mental health problems; the development of appropriate ways of work in order to cope with problems of comorbidity of mental and physical disorders; and a fundamental reorientation of training in psychiatry and related sciences.

**Disclosure:** No significant relationships.

**Keywords:** The future of psychiatry; primary prevention of mental disorders

### S0038

#### Reconceptualising the DSM: Neuroanalysis and digital brain profiling

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Recent years have seen a great advancement in the emerging field of Neural Computation, a study of the brain using neuronal network models. As a consequence, another field of science is being developed titled 'Computational Psychiatry' where neuronal network models of psychopathology help understand the possible etiology for mental disorders. With Computational Psychiatry we can begin and reformulate mental disorders as brain disorders. Etiological diagnosis in psychiatry will be the next

breakthrough which will allow to effectively treat mental disorders and will bring psychiatry back to the realm of medicine Computational Psychiatry together with advances in technology, will transform psychiatry beyond recognition: With the development of the connecting internet and sensor technology (e.g., face speech recognition) mental status examination can be easily extracted and delivered over distance (tele-psychiatry). With the help of AI the extracted psychiatric phenomenology can be interpreted to match most of the diagnostic process of a skilled psychiatrist. Once achieved a continual psychiatric monitoring coupled with new technology of wireless dry-electrode electrophysiological brain imaging can begin and collect big-data. Big-data analysis stand a good chance to reveal the etiological correlations between mental disorders and their brain-related origins. Thus, etiology for mental disorders can begin to unravel. Neural modulation technology will be the answer for effective therapeutic interventions (i.e., future brain pacers).

**Disclosure:** I am in a preliminary effort to develop a Digital application in the field of Psychiatry

**Keywords:** psychiatry; diagnosis; digital; Brain

### S0039

#### Digital phenotyping in psychiatry

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Digital phenotyping represents a new approach aimed at measuring the human behavior by using smartphones and personal device sensors, smartphone apps, keyboard interaction, and various features of subject's voice and speech. Data collected by a digital phenotyping smartphone application are divided into two categories: a) active data (i.e., those usually collected by using a survey modality) which require an 'active participation' from the subject to be generated; and, b) passive data (for instance, those data collected by using Global Positioning System (GPS) traces), usually collected without any participation or action from the subject. Digital phenotyping may theoretically enhance clinicians' ability to early identify, diagnose and manage any mental health conditions and favoured a more personalized diagnostic and therapeutic approach to several mental conditions. The innovative and insightful approach applied by the digital phenotyping appears to find an interesting and useful application in the field of psychiatry. The digital phenotyping is in line with the new paradigm of the precision psychiatry, i.e. the new approach performed to help clinicians in customizing a psychiatric treatment for each patient, by integrating information about individual phenotypes and genotypes with biographical, clinical and biological data. A precision psychiatry approach would ideally allow clinicians to tailor clinical decision-making and stratify patients to each available treatment according to each one's likelihood of treatment response and prognosis. Our aims are at providing a comprehensive panorama on evidence-based applications of digital phenotyping in psychiatry.

**Disclosure:** No significant relationships.

**Keywords:** digital diagnosis; digital psychiatry; digital phenotyping

### S0040

#### Diagnostic automated algorithms in neurodevelopmental disorders: Focus on automatic motor assessment

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Difficulties in motor development are frequent and impairing. However, the assessment of these motor learning skills is difficult and limits early stage rehabilitation. Electronic sensors and algorithms can help to measure motor difficulties more easily and objectively. We will present a systematic review detailing these methods and challenges in Autism Spectrum Disorders (ASD). Electronic tablets, give access to handwriting features that are not usually evaluated in classical assessments. We describe how such digital features (in static, dynamic, pressure, and tilt domains) allow diagnosing dysgraphia and how they evolve during children development. From a finer analysis, three different clusters of dysgraphia emerge, longitudinal studies will allow to underline different patterns of development that seemingly require tailored remediation strategies. However, those digital features are not used in the context of conventional pen and paper therapies. It is possible to engage children with typical development in handwriting exercises by asking them to teach a robot to write. We implemented a long-term case study (20 sessions, 500 minutes in total) observing a child with severe Developmental Co-ordination Disorder who did not progress anymore with a classic pen and paper approach by enriching this setup with various training activities using real-time feedback loops (on tilt, pressure, dynamic, pauses). We show how this new method tackles previous child's behaviour avoidances, boosting his motivation, and improving his motor and writing skills. This talk demonstrates how new motor digital features allow the implementation of innovative motor remediation interventions, which rely on fostering children's personal characteristics and adaptation skills.

