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**Keywords:** motor assessment; neurodevelopment disorders; Digital phenotyping; autism

### Next chapters in the story of internet-based CBT: Implementation, personalisation and ai-driven decision support tools

#### S0041

#### Individually tailored digital self-care, with and without therapist-guidance

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**Introduction:** Digital mental health services have been a part of routine care at a few locations worldwide since almost 15 years, most often in the form of Internet-based Cognitive Behavioural Therapy (ICBT) with scheduled weekly therapist-guidance. Personalization in the form of individual tailoring of treatment content is promising in ICBT. Digital Self-care, interventions constructed to be self-guided, would need to be constructed carefully to achieve equal levels of adherence and symptom reductions compared to therapist-guided interventions, especially when including individually tailored content.

**Objectives:** To construct an individually tailored self-care intervention including a technical solution, acting as a proof of concept that self-guided digital interventions for mental health can be administered in a safe, effective, personalized and cost-effective way.

**Methods:** In step I, a new digital platform is created based on the experience from previous successful implementations of ICBT together with experts on user experience. A series of digital mental health tools based on ICBT are tested for safety, usability and credibility. In step II these tools are combined into individually

tailored package interventions for different conditions and optimized for greater efficiency. In step III these optimized interventions would be compared to their counterpart therapist-guided interventions in randomized trials.

**Results:** Preliminary results from step I will be presented, including the current development of the digital platform and feasibility data from the first three studies.

**Disclosure:** No significant relationships.

**Keywords:** personalized treatment; Internet; psychological interventions; e-mental health

#### S0042

#### Experiences with tailoring treatment modules in online versus face-to-face CBT

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Guided self-help interventions are effective in treating symptoms of various mental disorders, including depressive, anxiety, and posttraumatic stress disorders. Research also suggests that these interventions may be effective for refugee populations. However, proportion of drop-out and non-response are substantial, especially in this highly vulnerable group of patients. Tailoring treatments to the individual patient may be an important step towards improving patient-treatment fit and may help to increase success rates. While tailoring can be easily realized in face-to-face treatments, it becomes more complex in Internet-based treatments where treatment sequences are usually defined in advance. In this talk, we will present our theoretical considerations and decisions regarding the tailoring process in a randomized-controlled comparison of transdiagnostic CBT for refugee patients in an online versus face-to-face format. The trial will include N=320 Arabic speaking patients suffering from an emotional disorder. The transdiagnostic treatment includes modules for symptoms of depression, anxiety, substance abuse, post-traumatic stress, aggression, and suicidal ideation. Modules are tailored to the specific patient. We will discuss who or what should inform the tailoring decision (patient, therapist, questionnaire data, diagnostic interview) and when tailoring decisions should be made (prior and/or early and/or later in treatment). We will present options of how tailoring decisions can be standardized and be kept comparable in different treatment formats. We will present our first experiences with tailoring treatment modules to severely impaired and highly comorbid patients.

**Disclosure:** No significant relationships.

**Keywords:** tailoring; internet-based; Transdiagnostic; Cognitive-Behaviour Therapy

## S0044

**AI-driven adaptive treatment strategies in internet-delivered CBT**

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**Introduction:** Adaptive Treatment Strategies warns therapists of patients at risk of treatment failure to prompt an adaptation of the intervention. Internet-delivered Cognitive Behavioural Therapy (ICBT) collects a wide range of data before and during treatment and can quickly be adapted by adjusting the level of therapist support.

**Objectives:** To evaluate how accurate machine learning algorithms can predict a single patient's final outcome and evaluate the opportunities for using them within an Adaptive Treatment Strategy.

**Methods:** Over 6000 patients at the Internet Psychiatry Clinic in Stockholm receiving ICBT for major depression, panic disorder or social anxiety disorder composed a training data set for eight different machine learning methods (e.g. k-Nearest Neighbour, random forest, and multilayer perceptrons). Symptom measures, messages between therapist and patient, homework reports, and other data from baseline to treatment week four was used to predict treatment success (either 50% reduction or under clinical cut-off) for each primary symptom outcome.

**Results:** The Balanced Accuracy for predicting failure/success always were significantly better than chance, varied between 56% and 77% and outperformed the predictive precision in a previous Adaptive Treatment Strategy trial. Predictive power increased when data from treatment weeks was cumulatively added to baseline data.

**Conclusions:** The machine learning algorithms outperformed a predictive algorithm previously used in a successful Adaptive Treatment Strategy, even though the latter also received input from a therapist. The next steps are to visualize what factors contributes most to a specific patient's prediction and to enhance predictive power even further by so called Ensemble Learning.

**Disclosure:** No significant relationships.

**Keywords:** Adaptive Treatment Strategy; machine learning; prediction; Internet CBT

**Evidence-based family interventions in perinatal psychiatry**

## S0049

**Development and efficacy of a psychoeducational family intervention for perinatal depression**

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**Abstract Body:** The perinatal period represents an at-risk period for mental health consequences, which has been overlooked for long time. Perinatal mental health problems constitute a relevant threat for long-term mental health, not only for the direct impact on the affected women, but also for the considerable foetal/infant morbidity and mortality. Perinatal mental disorders are associated with negative outcomes in the newborn, including an increased risk of premature delivery and infant mortality, as well as a higher prevalence of mental disorders in the offspring (e.g., attention deficit or anxiety disorders). Depressive disorders represent the most common disorder during the perinatal period. For the adequate, appropriate and complete management of women with perinatal depression, there is the need for integrated interventions, following a comprehensive global assessment of women's mental health. In particular, the management of depression during perinatal period requires special attention, even considering the problems and limitations in prescribing pharmacological drugs. In this context, psychoeducational interventions are effective in reducing affective symptoms and the levels of stress, with low costs for the mental health department.

**Disclosure:** No significant relationships.

## S0050

**Perinatal psychiatry and families' mental health: Evidence from some french graduated and integrated practices**

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**Abstract Body:** The first years of life represent a crucial period for psycho-affective development - the critical first 1000 days - because the events that happen to infants and babies during this period have psychosocial as well as epigenetic repercussions, with potential consequences throughout life and even for generations to come. The interactive circle that will develop between the skills (and/or vulnerabilities) of infants and parents and the interactive features arising from each triad, must be supported by perinatal mental health policies, of which the joint care of parents and infants in perinatal psychiatry is a pivotal element. It is necessary to develop care pathways, with systems integrated into "usual" care that take into account families from the prenatal or even pre-conceptual period to the postnatal period.

Joint care must also be scalable and thus encompass everything from parent-child psychotherapy to joint mother-baby hospitalisation. This intervention will present and discuss an example of a graduated, integrated and coordinated system of care, and will open up the perspective that perinatal clinicians must bear in mind that joint care is above all "a way of doing things", based on the notions of multidisciplinary and prevention.

**Disclosure:** No significant relationships.