

# *Information Technology aided Relapse Prevention in Schizophrenia*

ITAREPS is a project aimed at the **monitoring of early warning signs** in schizophrenia patients which employs modern communication and information technology. It ensures simply what often poses a big problem in clinical practice. It enables the patient and the family member to be in a **regular contact with a psychiatrist** and **report** to him/her **continuously** on his/her condition.

ITAREPS is a program **suitable for psychotic disorders** in general, particularly for schizophrenia. The principle is simple: the patient and the family member participating in the project complete every Thursday a **10-item Early Warning Signs Questionnaire** (Patient Version and Family Member Version). **Reminder** for a completion of the EWSQ is **sent automatically by the ITAREPS to their mobile phones** as a Short Message Service (SMS). **The result, 10 numbers, are sent back by both of them through SMS.** Questionnaire completion requires approximately 2–5 minutes.

Ten **items of the Early Warning Signs Questionnaire cover full spectrum of symptoms that are most frequently regarded as early warning signs of psychosis relapse.** Patient Version and Family Member Version were developed based on the data from research in the field of psychosis relapse prevention conducted over the past two decades.

The questionnaire basically inquires just about one issue: whether there has been, both subjectively and objectively, **a new onset or a worsening of symptoms since the last week evaluation.** Individual **items are scored on a five-point scale.**

*0: No change or improvement*

*1: Mild worsening*

*2: Moderate worsening*

*3: Severe worsening*

*4: Extreme worsening*



This way **an eventual change in condition over the past 7 days can be detected and measured.** **The psychiatrist** of the patient can view, a longitudinal score values (both from the patient and his/her carer) that are available in a graphic form (line graphs) and in a detailed written description which is converted from the completed questionnaires returned as SMS messages from patient and his/her carer. That way he/she **can easily review the dynamics of development of eventual prodromes.**

**If the score in the questionnaire of the individual patient exceeds arbitrary chosen value, the psychiatrist is automatically sent an ALERT message to his/her e-mail address. The message includes a patient's code, warning about worsening of his/her condition and an Early Intervention Algorithm (EIA).**

**Patients' data are maintained in the system completely anonymously.** Any possibility of their misuse is ruled out. E-mail address provided by the doctor and mobile phone numbers of all participants will not be under any circumstances used for commercial or other purposes outside the ITAREPS project or will not be given to the third party.

**The key feature of the program is early intervention.** If ITAREPS signals presence of early warning signs in the patient, following treatment algorithm (EIA) is recommended:

1. As soon as possible **the psychiatrist contact the patient by phone.**
2. Based on the results of a study of long-term ITAREPS efficacy, an immediate **increase of the current medication at least up to 20% is recommended.**
3. If there is a subsequent ALERT sent by the system after the following questionnaire completion (i.e. in case of further worsening despite intervention under step 2) and the worsening is objectively confirmed, further increase of the medication up to 20% is recommended. If necessary, in case of the subsequent ALERTS, the procedure is repeated (steps 1+3), if needed until the maximum dosage for the respective drug is reached.
4. If there is no further ALERT following the intervention, **the attained dose of antipsychotic medication should be maintained until the normalization of condition** (normalization = at least six consecutive questionnaire completions without ALERT message; i.e., 3 weeks without worsening). Normalization will be announced by ITAREPS automatically as an e-mail message.
5. During each step the psychiatrist consider an option to hospitalize a patient.
6. In case of change in the patient's condition, **ITAREPS** does not replace a personal contact with the patient.

The program is not intended to reduce the number of visits, it **should allow for early detection and crisis management.**

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**ITAREPS shows 70% decrease in the number of hospitalizations  
in patients with psychotic disorder.**

If you want to find out  
how your patients, clients or beloved ones  
could benefit from ITAREPS  
or if you simply want to know more e.g. about the clinical studies  
that have verified its significant impact on preventing relapses,  
then please do not hesitate and contact:

**MUDr. Filip Španiel, Ph.D.  
the author of ITAREPS**

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The implementation of the program to a new geographic area  
takes approximately 6 weeks,  
*...which is by the way nearly the same time  
that separates an onset of early warning signs from a full blown relapse...*

We invite you to visit our website:

[www.itareps.com](http://www.itareps.com)

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