

## Prevention of New Psychoactive Substances Dependence

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### Abstract

The article presents the results of research into the prevention of NPAS dependence development and serious sequelae and disorders following NPAS use require the inclusion of NPAS dependent patients' rehabilitation into the program of mandatory narcological care. We found that NPAS users are in most cases young people, often adolescents, and that raises a serious problem for the narcological and social services both in treatment organization and medical and social rehabilitation of such patients.

**Keywords:** *New Psychoactive Substances; Prevention; Substances Dependence*

### Introduction

Over the past few years, there was a threatening upward trend in radically new psychoactive substances (NPAS) dependence involving the so-called "designer drugs", which are purchased as an alternative to "traditional" drugs [1-3]. The clandestine laboratories demonstrate speed and adaptability in order to avoid the detection of synthesized narcotic substances [4]. A common practice is to quickly modify functional groups, replace variables, and change a fragment of substances that got on the law enforcement radar. Synthetic cannabinoids [15], synthetic cathinones, designer amphetamines, and a number of other narcotic substances are classified as NPAS.

NPAS are an extremely important issue of modern addictology. This group of substances develops dependence faster than the herbal drugs, the synthetic derivatives' mechanism of action and clinical manifestations are unpredictable [1-5].

This indicates a change in the structure of the Russian drug market and the high social significance of mental and behavioral disorders resulting from NPAS use [6,7].

The governments of many countries, including the Russian Federation, realizing the danger of NPAS, included certain NPAS types into the list of prohibited drugs. The federal law N 7-FS dated February 3, 2015, developed a register of new potentially dangerous PAS prohibited in the Russian Federation, which includes substances that cause dangerous narcotic or toxic intoxication and which are covered by drug offence laws. Based on a law enforcement agency request and a medical report, the sale and use of a substance can be suspended, and within two years, the state will be obliged to recognize this substance a narcotic drug, to establish sanitary and epidemiological requirements or to take other control measures [8]. However, despite the unprecedented legislative measures taken in

the Russian Federation regarding NPAS, the active prevention campaigns at schools, professional and higher educational institutions, the number of patients with NPAS dependence is rapidly growing.

Another concern is that due to the patients' young age and in order to anonymize the treatment, the relatives prefer non-profit medical centers, which for the most part focus exclusively on psychotherapy. Without the necessary medical supervision, patients do not get the necessary care that may result in the disease progression, chronic depressive, apathetic and anhedonic conditions and the consecutive use of both NPAS and other PAS.

Despite a comprehensive treatment in a hospital setting, NPAS dependent patients do not demonstrate stable and sustainable remission. Moreover, the routine practice revealed that NPAS dependent patients, including synthetic cannabinoids (SC) dependent patients, who are initially set up for hospitalization, who are aware of the treatment necessity, and who plan to refrain from any PAS, often insist on immediate discharge, violate the hospital regimen, escape from hospitals and almost immediately resume drug use.

At the same time, the high risk of NPAS dependence development and serious sequelae and disorders following NPAS use require the inclusion of NPAS dependent patients' rehabilitation into the program of mandatory narcological care.

One should keep in mind that NPAS users are in most cases young people, often adolescents, and that raises a serious problem for the addictological and social services both in treatment organization and medical and social rehabilitation of such patients. This in turn raises an issue specialized addictological services' preparedness provide effective psychological and social rehabilitation of patients.

However, despite all the detrimental consequences of narcotization, a key aspect of modern addictology is prevention, especially in children and adolescents.

One should research the PAS patients' prevention, remission and rehabilitation on the example of synthetic cannabinoids

The modern addictology tasks include:

1. Identification of necessary preventive measures to avoid the NPAS dependence development.
2. Identification of differentiated characteristics of remission in NPAS dependent patients with clarification of basic clinical dynamics and social function parameters.
3. Analysis of clinical and non-clinical factors affecting the remission in these group of patients.
4. Development of differentiated rehabilitation programs of NPAS dependent patients based on the disease clinical dynamics and psychopathological structure.
5. Identification of clinical phenotype of NPAS dependent patients.

The identified remission clinical and dynamic indicators features will improve the treatment and rehabilitation effectiveness with aim to produce the maximal therapeutic result within the potential capabilities of each patient. The developed treatment and rehabilitation model for patients, including those with combined PAS dependence, will significantly improve the treatment and rehabilitation effectiveness in NPAS dependence.

The PAS use prevention is of principal importance [10-13,15,19].

In most cases, the drug use initiation involved cannabinoids.

The prevention is based on a strategy to inhibit the PAS dependence development, involving control in the family and educational institutions, including pre-school and secondary and higher education, with the support of a specialized team, including a psychiatrist, a specialist in the area of addiction problems (narcologist), a psychotherapist and a clinical psychologist.

The prevention is classified into primary, secondary and tertiary [20-23].

### Primary prevention

A key aspect of the PAS use primary prevention is the personality and the three main areas in which human activities take place: the family, educational institutions and leisure in a given microsocial environment.

The primary prevention goal is to form a mentally healthy, personally developed person who is able to cope with difficulties without resorting to the PAS use.

The most appropriate primary prevention strategy is the «deterrence» technique.

#### Primary prevention includes 3 blocks:

1. Consultation and diagnosis, including adolescent questionnaires.
2. Information and education aimed at the knowledge expansion on the detrimental health effects of PAS use.
3. Constructive and positive block involving games and exercises to develop the safe behavior culture in the students.

### Secondary prevention

Secondary prevention seeks maximal limitation of harm and PAS dependence syndrome prevention.

### Tertiary prevention

The tertiary prevention is aimed at prevention of disease relapse in PAS dependent patients.

The preventive measures are mostly medical, individual and are aimed at prevention of further disease development, harmful effects decrease and relapse prevention [24].

#### Tertiary prevention includes 3 main blocks:

1. Consultation and diagnosis;
2. Information and education;
3. Treatment and prevention.

Upon completion of the tertiary prevention program, the subjects undergo a test including the analysis of somatic and mental state, written and oral tasks, as well as an interview. The written task includes answers to questions about what is PAS addiction, medical, psychological, social signs of PAS dependence, the consequences of PAS dependence; the signs of the disease exacerbation; crisis prevention skills; the role of work and study in recovery; the criticism of one's illness, etc.

A friendly oral interview involves the questions from patient's comrades and the rehabilitation team members. The interview covers the story of the patient, one's illness, the recovery dynamics, the positive achievements, the relationship with one's family, and specific plans.

The final certification includes kindhearted wishes from the patient's relatives and a kind of a completion comprehensive rehabilitation program "certificate" handed to the patient.

### The prevention in the manifested dependence syndrome

The manifested dependence syndrome requires tertiary (modification) prevention. The preventive measures are mostly medical, individual, focused on patients with a manifested PAS dependence aimed at prevention of further disease development, harmful effects decrease and relapse prevention.

### Withdrawal syndrome (WS) prevention

WS prevention involves timely and high quality treatment at all stages of PAS dependent patients care.

### Delirium prevention

The severity of the delirium patient condition largely depends on the somatic comorbidities. Delirium may result in any chronic diseases decompensation. Delirium is often accompanied by pneumonia, liver failure, liver cirrhosis, acute renal failure, cerebral edema, impaired acid-base state, impaired vitamin metabolism that can cause the patient's death. In this regard, tertiary medical prevention is of particular importance [19].

### Conclusion

The NPAS dependence treatment standard should involve many issues such as:

1. Prevention
2. Decrease of addiction
3. Patient's health and social function improvement
4. No or decreased risk of relapse.

Only a complete cessation of PAS use, especially NPAS, is required for a drug-dependent patient health and social function improvement. Moreover, the study findings demonstrate that the initial improvement in functional indicators, regardless of the PAS use pattern, can reduce the exacerbation and relapse risk and is not only a clinical, but a predictive indicator of positive dynamics [25,26].

Health improvement decreases the public health system burden and increases employment; the decrease in the conflict potential gains the additional positive support from the patient's relatives; the exclusion of risky injection and sexual practices improves epidemiological situation; and the decrease in criminal activity and risky behaviors directly increases the public safety [27].

Thus, the ideal outcome of NPAS dependence treatment involves the narcotization cessation and the patient's personality and social status restoration [25,26]. However, the treatment is only the beginning of the recovery process. Even the smallest achievements in overcoming addiction i.e. the decrease in the drug use intensity and the improvement of the patient's social function should find comprehensive support. The expansion of the treatment effectiveness criteria beyond the limiting framework of the "relapse - remission" alternative will involve more drug users into the therapy and will facilitate their access to social and medical care programs.

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