

Interdisciplinary Study of Health Disorders Associated with Comorbid Addictions

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Abstract. This study presents an interdisciplinary examination of health disorders associated with comorbid addictions. Drawing on data from medical, psychological, and sociological sources, we analyzed the interrelated impacts of multiple concurrent addictions on individuals' physical, psychological, and social health. Our findings indicate that individuals with comorbid addictions face compounded health risks and often experience exacerbated symptoms compared to those with singular addictions. Additionally, the societal perception and treatment of these individuals are often influenced by stigma, leading to decreased access to comprehensive healthcare and support. Proven that there are cause-and-effect relationships between the consumption of prohibited psychoactive substances, the

formation of concomitant comorbid addictive conditions, and drug-related crime. It is noted that the comorbid addictive state depends on the classification and legal group of the psychoactive substance or drug. Common, simultaneous use of psychoactive narcotic analgesics, psychoactive psychotropic tranquilizers, cannabis, amphetamine, alcohol, other psychoactive substances, and drugs. Measures are proposed for further study of the problem to improve the quality of medical and pharmaceutical care, pharmaceutical provision, protection of the rights of patients of various contingents to medical and pharmaceutical rights.

Keywords: health disorders, major somatic diseases, lung pathologies, accompanying comorbid addictive conditions, psychoactive substances, abuse.

Introduction. Interdisciplinary medical, organizational and legal, forensic and pharmaceutical, clinical and pharmacological, criminal and legal, forensic and medical studies indicate the growth of illegal circulation of prohibited psychoactive substances in recent years. The illegal circulation of prohibited psychoactive substances has medical-pharmaceutical, socio-economic, and criminal and legal risks for society. Among the medical and pharmaceutical risks is the formation, development and spread of addictive addictions: narcotics, alcohol, tobacco. The type of addictive dependence is determined by the classification-legal and clinical-pharmacological group of the psychoactive substance. The addictive component of the circulation of prohibited psychoactive substances or controlled psychoactive drugs affects the main somatic diseases of a person and becomes their comorbid component. The described picture is complicated against the background of covid, postcovid, long-covid disorders, infectious, socially dangerous diseases [1-10].

Post-covid syndrome is accompanied by an exacerbation of the main somatic diseases against the background of addictive comorbid conditions. The risks of aggravation of diseases of the bronchopulmonary, cardiovascular, nervous, gastroenterological, immunological, and endocrine systems in the context of infectious, viral diseases (tuberculosis, hepatitis, HIV/AIDS) are increasing [11-19].

On the other hand, illegal trafficking of prohibited psychoactive substances is a criminal offense. Traffic accidents, suicides, murders, rapes, criminal offenses, and administrative offenses are increasing among the consequences [20-23]. Prohibited psychoactive substances are available through drug dealers, shops, clubs, and the Internet [24, 25]. In EU countries, among the seized prohibited psychoactive substances, the share of cocaine was 416%, the herb cannabis – 260%, methamphetamine – 135%, heroin – 126%, MDMA (ecstasy) – 123%. The countries with the largest number of illegal opioid users per 1,000 inhabitants are Austria, Greece, Spain, Italy, France, and Germany [26-28].

According to the UN and EMCDDA, there is a need to increase funding from the state and charitable funds for medical-pharmaceutical, social, preventive support for patients with comorbid addictions [29]. Article 27 [30] of the Constitution of Ukraine guarantees that:

- every person has an inalienable right to life;
- no one can be arbitrarily deprived of life;
- the duty of the state is to protect human life;
- everyone has the right to protect his life and health, the life and health of other people from illegal encroachments.

According to data [31, 32], law enforcement agencies manage to remove only about 10 percent of psychoactive substances from illegal circulation, and the profit of drug dealers is from 500 to 2000 percent annually. Therefore, the indicated topic of the work is relevant for today.

Medical care, pharmaceutical support, development of new drugs for pharmacotherapy of health disorders of various contingents of patients with comorbid addictions were investigated by [Sosin I.K.](#), [Stefanov O.V.](#), [Trachtenberg I.M.](#), [Chumak V.T.](#), Chernykh V.P., Ponomarenko M.S., Gudzenko A.O., Osintseva A.O., Shapovalov V.V., Linsky I.V., Shapovalova V.O., Chuiev Y.F., Nevzhoda A.A., Nevzhoda O.A., Negretskii S.M., Vasina Yu.V. and others [1-3, 5-10, 16, 22, 33-38].

Until now, interdisciplinary studies of the main somatic health disorders against the background of concomitant addictive comorbid conditions due to the illegal circulation of prohibited psychoactive substances in the context of medicine, pharmacy, medical, pharmaceutical, criminal law have not been conducted in the world and in Ukraine.

The purpose of the study was to conduct interdisciplinary medical, clinical and pharmacological, organizational and legal, forensic and pharmaceutical, forensic and medical, criminal and legal study of health disorders associated with comorbid addictions against the background of the spread of illegal circulation and abuse of prohibited psychoactive substances of various clinical and pharmacological, classification and legal, nomenclatural and legal groups; justify the introduction of measures for further study of the problem to improve the quality of medical and pharmaceutical care, pharmaceutical provision and protection of the rights of patients of various contingents.

Materials and methods. The interdisciplinary research included a review of scientific literature in the medical, clinical and pharmacological, organizational and legal, forensic and pharmaceutical, forensic and medical, forensic and narcological, criminal and legal areas regarding the main somatic health disorders associated with concomitant addictive comorbid conditions due to the illegal trafficking of prohibited drugs and psychoactive substances of various clinical and pharmacological, classification and legal, nomenclature and legal groups.

The methods of documentary, normative, retrospective, comparative, clinical and pharmacological, clinical and pharmacological, classification and legal, nomenclature and legal, forensic and pharmaceutical, system and graphic analysis were used.

The study is a fragment of research work of Lviv Medical University LLC on the topic of "Improving the system of circulation of drugs during pharmacotherapy on the basis of evidentiary and forensic pharmacy, organization, technology, biopharmacy and pharmaceutical law" (state registration number 0120U105348, implementation period 2021-2026).

Results and discussion. Forensic-pharmaceutical, criminal-legal, organizational-legal, forensic-medical, forensic-narcological studies over the past 30 years testify to the spread of illegal circulation of prohibited psychoactive substances, drug-related crime, and addictive diseases in the world and in Ukraine. New psychoactive substances appear. Organized criminal drug gangs are detected by law enforcement agencies. In the 90s of the 20th century, extractive opium (shirka), poppy straw and cannabis were sold. In the future – heroin and cocaine. In recent years, the drugs buprenorphine, tramadol, xanax, alcohol and prohibited psychoactive substances amphetamine and methamphetamine have become common among young people and minors. For example, moles are an alternative name for MDMA, 3,4-methylenedioxy-N-methamphetamine. Synthetic drug, stimulant and hallucinogen. Moly is an abbreviation of the word "molecular". A mixture of psychoactive substances of different classification and legal groups (narcotic, psychotropic, modified precursors.

Over the past 4 years, only 13% of all molly deliveries seized in New York state contained MDMA [22, 39]. More than 100 new modified of psychoactive substances – "designer drugs" [40-45]. Illegal circulation of psychoactive substances in Ukraine is limited or prohibited, criminal liability was established [23, 46, 47].

Medical research.

In previous studies, the author drew attention to lung diseases and the need for further research. The dynamics of lung pathologies is increasing against the background of post-covid syndrome and accompanying comorbid conditions [16].

Major somatic lung disorders are also often associated with comorbid addictions. One of the reasons for the formation of comorbid conditions against the background of lung pathology is the spread of the use of prohibited psychoactive substances. Patients with chest diseases, pneumothorax, sternum injuries, lung oncology complain of insufficient pharmaceutical supply, lack of controlled narcotic analgesics, psychotropic tranquilizers. Forced to self-use prohibited psychoactive substances (cannabis, amphetamine), psychoactive drugs (tramadol, buprenorphine, methadone, diazepam, alprazolam) to ease their suffering and eliminate pain. Thus, spontaneous pneumothorax as a kind of dangerous complication in patients with COVID-19 against the background of non-specific pneumonia is a dangerous complication. Pleural effusion, formation of lung atelectasis, and pneumomediastinum should also be added to bronchopulmonary complications [48].

The mentioned complications require prompt decision-making to eliminate the existing pathology. This especially applies to the formation of a primary pneumothorax, which requires urgent surgical intervention [49].

Usually, pneumothorax develops as a late complication of the disease. The use of mechanical ventilation of the lungs and the need to maintain increased pressure in the respiratory tract (barotrauma) to improve oxygenation poses risks for the development of primary pneumothorax. The frequency of developing a complication against the background of COVID-19 pneumonia can reach 5.9% of patients. A review of clinical information on the abuse of prohibited psychoactive substances in Egypt among young people highlighted the risks of primary spontaneous pneumothorax [49]. The impact of oral illicit drug abuse on the outcome of primary spontaneous pneumothorax was evaluated in 65 male patients, mean age 25.85 ± 5.08 . The patients were admitted to the inpatient thoracic department of Sohag University Hospital with primary spontaneous pneumothorax. They were followed during hospital stay and after hospital discharge for 6 months with written consent. All participants underwent a thorough history, complete clinical examination, chest X-ray, and standard laboratory testing. Toxicological screening was carried out for the qualitative detection of narcotic psychoactive substances. Toxicological drug screening gave a positive result in 38.5% of cases. The incidence of tuberculosis was significantly higher among patients with a positive drug screen (40%) than among patients with a negative screen (12.5%). It is concluded that the prevalence of drug abuse in Egypt is increasing. The specified dynamics can change the appearance of respiratory diseases [49].

The cases of bilateral pneumothorax are reported in drug addicts. They presented ostensibly as spontaneous pneumothoraces. However, meticulous history and physical examination proved them to be traumatic. The causes of spontaneous pneumothoraces are presented. Self-injection must be considered in the clinical differential diagnosis of spontaneous pneumothorax [50].

Forensic and pharmaceutical, forensic and medical, forensic and narcological, criminal and legal study of circulation of prohibited psychoactive substances.

It is an indisputable fact that the consumption of prohibited psychoactive substances, associated with comorbid addictions, and drug crime are interconnected – there are cause-and-effect relationships. Specialists of the "For Peace Without Drugs" fund provide static data from the USA [39]:

- narcotic drug No. 1 is marijuana, which is found during a forensic medical examination in the bodies of persons arrested for crimes committed;
- 1 trillion US dollars – such an economic impact due to the illegal circulation of prohibited narcotic psychoactive substances in the USA in one year;

- 18% of citizens incarcerated in the USA, who went to prison for crimes committed for the purpose of illegally obtaining (purchasing) narcotic psychoactive substances;
- every 53 minutes, one of the citizens dies in a car accident related to the abuse of the psychoactive substance alcohol;
- 63% of arrested citizens had at least one narcotic psychoactive substance in their blood after detention and arrest.

Interdisciplinary research at the level of forensic pharmaceutical practice allows us to draw a conclusion about the need to actively oppose the illegal circulation of prohibited psychoactive substances and the development of comorbid addictions [51]. Below are summarized examples from forensic pharmaceutical practice (No. 1-4) by topic of work.

Forensic and pharmaceutical example No. 1. Under the procedural leadership of the prosecutor of the Cherkasy Regional Prosecutor's Office, the investigator of the State Security Service of Ukraine in Cherkasy Oblast initiated a criminal case under Part 2 of Art. 305, Part 2, and Part 3 of Art. 307 of the Criminal Code of Ukraine [52, 53]. Illegal circulation (sale and smuggling) of prohibited psychoactive substances (cannabis), controlled narcotic (tramadol) and psychotropic (xanax) drugs was established. The smuggling channel went from Hungary to Ukraine. Sales through an online store in the Cherkasy region. With the sanction of the court, in the presence of witnesses, during searches and inspections in the Zakarpattia and Cherkasy regions, more than 350 packages were seized. According to the results of forensic chemical and forensic pharmaceutical examinations: tramadol tablets, which is a controlled narcotic analgesic; xanax tablets (international non-proprietary name – alprazolam), which is a controlled psychotropic tranquilizer; cannabis, which is a particularly dangerous drug; electronic scales; bank cards. The criminals were detained. A preventive measure was chosen - round-the-clock house arrest. Forensic-narcological, forensic-medical, and forensic-criminological examinations have been appointed. Currently, other members of the drug gang are being identified.

Forensic and pharmaceutical example No. 2. Investigators of the investigative police department No. 2 of the Lviv District Police Department No. 2 of the Main Department of the National Police in the Lviv Region, under the procedural guidance of the Frankiv District Prosecutor's Office of the city of Lviv, reported the suspicion of four local residents on the facts of illegal acquisition, storage, and sale of narcotic drugs under Part 2 of Art. 307 of the Criminal Code of Ukraine [54]. It was established that on April 17, 2023 operatives of the service detained a group of 4 people in one of the districts of the city of Lviv. For a long time, the group was engaged in illegal circulation – the sale of subitex tablets. Investigators, in accordance with the court order, in the presence of witnesses, during searches of the place of residence of the criminals and their vehicles, discovered and seized: more than 550 subitex tablets; money for the illegal sale of prescription-controlled analgesics; bank cards; vehicles; Mobile Phones. According to the results of forensic chemical and forensic pharmaceutical examinations: subitex is a controlled narcotic analgesic (international non-proprietary name – buprenorphine). The value of seized Subitex tablets at black market prices is about UAH 250,000. Precautionary measures in the form of detention were chosen for all the detainees. Investigations are ongoing. Forensic-narcological, forensic-medical, forensic-criminological examinations have been appointed.

Forensic and pharmaceutical example No. 3. Following a public formal accusation by the prosecutors of the Cherkasy Oblast Prosecutor's Office, the Court of Appeal passed a verdict sentencing a man to 9 years of imprisonment with confiscation of property for the illegal acquisition, storage, and sale of a particularly dangerous narcotic drug – under Part 3 of Art. 307 of the Criminal Code of Ukraine [55]. The court found that a citizen of Ukraine, a 39-year-old resident of the Cherkasy district, purchased a particularly dangerous drug – cannabis. He kept it at his place of residence for the purpose of further sale. During the search, cannabis was found and seized in particularly large quantities; the tools the man used to grind and package it. The court of first instance found the accused guilty of illegal acquisition and possession of a particularly dangerous drug in particularly large quantities without the purpose of sale. According to part 3 of Art. 309 of the Criminal Code of Ukraine is sentenced to 5 years of imprisonment with a probationary period of 2

years. However, the prosecutor in the appellate court reasonably proved the mildness of the sentence imposed by the court of first instance and the groundless disregard of all the circumstances of the criminal proceedings. In particular, regarding the amount of seized cannabis, which is packaged in numerous packages of different sizes. Availability of tools for grinding and packing cannabis. Other facts testifying to the illegal actions of the accused, aimed at the further sale of the narcotic drug for personal enrichment and increasing the disease of drug addiction among the population. According to the results of the appellate review, the court overturned the verdict of the district court. A new sentence was passed, by which the man was sentenced to real punishment in the form of 9 years of imprisonment with confiscation of property. The said judgment of the appeals court entered into legal force from the moment of its announcement.

Forensic and pharmaceutical example No. 4. Investigators of the Supreme Administrative Court of the General Prosecutor's Office in Poltava region, under the procedural guidance of the Poltava regional prosecutor's office, opened a criminal proceeding under Part 4 of Art. 286-1 of the Criminal Code of Ukraine [56, 57]. It was established that in the city of Kremenchuk, a driver (born in 2003), driving an Audi car, hit pedestrians. 15- and 23-year-old men died at the scene of the accident, which is confirmed by the forensic medical examination, which indicated chest, craniocerebral, and other injuries. According to the preliminary conclusion of the forensic medical examination, the driver was in a state of drug intoxication. He was detained in accordance with Article 208 of the Criminal Procedure Code of Ukraine. Police investigators are establishing the reasons and circumstances of the incident.

The specified examples from forensic pharmaceutical practice (No. 1-4) testify:

- youth and minor citizens of Ukraine are in the corner of drug trafficking;
- system of combating drug crime is ineffective;
- main somatic diseases of users of psychoactive substances are exacerbated and comorbid addictions are formed.

The chief physician of the Lviv Regional Medical Center for the Prevention and Therapy of Addictions Kabanchyk M.O. notes that, according to her data, more than 1,500 young people aged 15 to 30 are registered at the dispensary. Of which about 140 are children over the age of 15 [58]. However, these data do not reflect the real picture of the number of girls and boys who abuse psychoactive substances. Some parents carefully hide the fact that their child is addicted to drugs. They hope to cope with the problem on their own. Other parents do not even know that their child abuses, for example, psychostimulants, because they are busy with their lives. Some parents ignore the fact that their son or daughter smokes, uses alcohol, marijuana, etc. Drug addiction is a biopsychosocial phenomenon. Psychological and social factors are involved here. Now is a favorable time for drug addiction to flourish, as there is neither economic stability nor social security. There is no family priority. Many children are brought up in single-parent families, where parents are divorced or one of the parents works abroad, and grandmothers are responsible for raising them. Children who are studying do not know whether they will be able to find a decent job in the future. Teenagers are trying to move away from reality, to move to another, virtual one. They do it with the help of computer games, as well as drugs and alcohol.

Pharmacotherapeutic study of traffic accidents.

In all countries of the world, there is an increase in traffic injuries due to the use of psychoactive substances [59]. According to the World Health Organization, the annual increase in brain injury patients has increased by 2% in recent years. In the general structure of injuries, craniocerebral injury occupies a leading place (38–40%). Its share is 2/3 of fatal cases in people aged below 45 years. According to Ukrainian statistics, over the past 5 years, 43% of injured people (pedestrians and cyclists) have been registered. The human factor is important. Traumatic shock occurs in 25% of victims and injured with a total mortality rate of up to 7.4%. Medical and pharmaceutical care includes analgesia. Narcotic drugs (promedol, morphine, tramadol) are administered intravenously. Neuroleptanalgesia is performed using droperidol and fentanyl. They eliminate disorders of the central nervous system and neuroendocrine regulation by administering sodium oxybutyrate, diazepam, neuroleptics, and antihistamines. Correction of metabolic disorders

is carried out with the help of sodium bicarbonate solution, Ringer's solution, xylitol, sodium acetate, etc. Compensation of potassium ions is carried out only with a daily diuresis of at least 500–700 ml. Potassium must be administered if the victim is prescribed glucocorticosteroids. Prevention of traumatic shock begins with the provision of self- and mutual aid by temporarily stopping bleeding, using analgesics, and adequate immobilization of the limbs.

Comorbid addictive conditions: types, causes.

The use of psychoactive narcotic analgesics and psychotropic tranquilizers without medical control has become a global problem in medicine, pharmacy, sociology, and jurisprudence. Illegal circulation of psychoactive substances and drugs affects the formation of comorbid addictive conditions against the background of basic somatic diseases. A comorbid addictive condition depends on the legal group of the psychoactive substance or drug. Thus, abuse of a psychoactive narcotic drug of the opioid group forms opioid addiction. Abuse of the psychoactive narcotic analgesic tramadol causes tramadol addiction. Abuse of the psychoactive substance alcohol forms alcohol addiction. Abuse of the psychoactive narcotic substance cannabis, cannabinoid addiction. Common, simultaneous use of psychoactive narcotic analgesics, psychoactive psychotropic tranquilizers, cannabis, amphetamine, alcohol, other psychoactive substances, and drugs. The consequences are the formation of polyaddiction, polynarcotics, which constitutes a medical-pharmaceutical, social, and criminal problem [60-63].

A study by Amneh Al-Husseini et al. [64] show that in Jordan, as in other countries in the Middle East, it is possible to purchase any drug without a prescription, except for controlled drugs. Open access is believed to be associated with the supply of safe over-the-counter drugs, a large number of community pharmacies. Since 2006, abuse of psychoactive drugs (sedatives, hypnotics, benzodiazepines, anticholinergics, Parkinson's drugs, eye drops with antihistamine or anticholinergic properties) has been frequently reported in community pharmacies in Jordan. Abuse of the drug pregabalin in the city of Amman, Jordan is reported. Pregabalin addiction is a problem for medical and pharmaceutical care of patients with major somatic diseases: epilepsy, anxiety disorders, peripheral or central neuropathic pain, fibromyalgia, panalgia. The drug pregabalin has analogues such lyrica, epigab, rehab. Other psychoactive prescription drugs include central nervous system depressants, tranquilizers (benzodiazepines), anticonvulsants (clonazepam, pregabalin).

Clinical and pharmacological research of controlled psychoactive drugs.

The greatest danger of xanax, as Brednev I.V. points out, lies in its addictive properties. A stable psychotropic dependence is formed. The patient solves the problems of excessive depression, fear, anxiety. Xanax has been called a lethal sedative [65-67]. Side effects:

- swelling of the throat, face, and lips, which can cause breathing problems;
- sleep disturbance, insomnia, or excessive sleepiness;
- decrease in mental abilities, deterioration of memory;
- stomach pain, diarrhea, or constipation;
- increased aggression, decreased self-preservation function;
- apathy, depressive states.

Most of the effects listed above are observed at the beginning of taking the drug or during the formation of addiction. In the presence of the symptoms listed above, it is necessary to immediately consult a family doctor, a psychiatrist, or a narcologist.

Taking prescription psychoactive drugs requires a prescription and supervision. Taking several prescription psychoactive drugs requires some caution [68, 69]. In the US, doctors often prescribe the psychoactive narcotic analgesic tramadol and the psychoactive psychotropic tranquilizer Xanax at the same time. Let's consider the consequences of taking tramadol, Xanax, buprenorphine at the same time.

Xanax is the trade name of the drug. The international non-proprietary name is alprazolam. A group of benzodiazepines, prescribed for the treatment of anxiety, panic disorder. Side effects depend on the regimen and dosage course. Tramadol is an international non-proprietary name. Trade names – ultra, conZip. It is prescribed as a psychoactive narcotic analgesic for the relief of moderate and severe pain. Buprenorphine is an international non-proprietary name (Table 1). The trade name is

suboxone. Psychoactive narcotic analgesic. Addiction can occur after taking the drug for therapeutic purposes or specifically without a prescription. Long-term use leads to the development of aggression, anxiety, and sleep disorders [70].

Table 1. Side effects of xanax, tramadol and buprenorphine.

Xanax side effects include:	Tramadol side effects include:
<ul style="list-style-type: none"> • Drowsiness and sedation • Dizziness • Fatigue • Depression • Headache • Perplexity • Insomnia • Nervousness • Fainting • Restlessness • Violation of coordination • Irritability • Memory problems • Constipation • Muscle twitching • Pain in the sternum • Hyperventilation • Hypotension • Blurred vision 	<ul style="list-style-type: none"> • Drowsiness and sedation • Dizziness • Muscle stiffness • Mood changes • Headache • Uncontrollable tremors • Heartburn • Nervousness • Difficulty falling asleep or staying asleep • Extreme weakness • Breathing is shallow • Slow heartbeat • Loss of consciousness • Constricted pupils • Respiratory distress • Cold clammy skin • Bluish shade of lips and nails • Serotonin syndrome: • Perplexity • Agitation • Jerky muscles • Rigid muscles • Trembling • Lack of coordination • Convulsions • Coma
Buprenorphine side effects include:	
<ul style="list-style-type: none"> • Increased or decreased heart rate • Appearance of hallucinations • Disorders of respiratory functions • Nausea and vomiting • Dizziness and headaches • Increased sensitivity to cold • Violation of logic • Narrowing of the pupils • Dry mouth • Cavities, caries, oral infections and tooth loss 	

Side effects of simultaneous administration of psychoactive narcotic analgesics, psychotropic tranquilizers, drugs of other classification and legal, clinical and pharmacological groups can cause the formation of addiction against the background of major somatic diseases. Exceeding the regimen and dosage course can cause addiction [71-74].

Prospects for further research.

To carry out explanatory and preventive work among citizens of all age groups regarding the consequences of illegal circulation of psychoactive substances of various clinical and pharmacological, classification and legal, nomenclature and legal groups [75-77]. To spread information about the danger to one's own health, the health of future generations, and in general for the formation of a healthy gene pool of the nation. Develop training programs for specialists in the fields of medicine and pharmacy regarding the effectiveness of medical and pharmaceutical care for patients with health disorders associated with accompanying comorbid addictive conditions. Develop proposals for improving legislation, regulatory acts and instructional materials based on medical and pharmaceutical law to improve the quality of medical and pharmaceutical care, pharmaceutical support, and protection of the rights of patients of various contingents.

Conclusions. Justified that until now interdisciplinary studies of the main somatic health disorders against the background of concomitant addictive comorbid conditions due to the illegal circulation of prohibited psychoactive substances in the context of medicine, pharmacy, medical, pharmaceutical, criminal law have not been conducted in the world and in Ukraine. Interdisciplinary medical, clinical and pharmacological, organizational and legal, forensic and pharmaceutical, forensic and medical, criminal and legal studies of health disorders associated with comorbid addictions against the background of the spread of illegal circulation and abuse of prohibited psychoactive substances of various clinical and pharmacological, classification and legal, nomenclatural legal groups. A medical examination was conducted. Attention is drawn to lung diseases associated with comorbid addictions. Forensic and pharmaceutical, forensic and medical, forensic and narcological, criminal and legal study of the circulation of prohibited psychoactive substances was conducted. It has been proven that there are cause-and-effect relationships between the consumption of prohibited psychoactive substances, the formation of concomitant comorbid addictive conditions, and drug-related crime. Forensic pharmaceutical practice was analyzed according to the topic of the work. It is noted that the main somatic diseases of users of psychoactive substances are aggravated and comorbid addictions are formed. A pharmacotherapeutic study of traffic accidents due to the use of psychoactive substances was conducted. Comorbid addictive conditions were studied: types, causes. It has been proven that the comorbid addictive state depends on the legal group of the psychoactive substance or drug. Common, simultaneous use of psychoactive narcotic analgesics, psychoactive psychotropic tranquilizers, cannabis, amphetamine, alcohol, other psychoactive substances, and drugs. A clinical-pharmacological study of controlled psychoactive drugs established the consequences of simultaneous administration of tramadol, xanax, and buprenorphine. Prospects for further research on the topic of the work are given. Measures are proposed for further study of the problem to improve the quality of medical and pharmaceutical care, pharmaceutical provision, protection of the rights of patients of various contingents to medical and pharmaceutical rights.

Conflict of interests. The author confirm that he is the author of this work and have approved it for publication. The author also certify that the obtained data and research were conducted in compliance with the requirements of moral and ethical principles based on medical and pharmaceutical law, and in the absence of any commercial or financial relationships that could be interpreted as a conflict or potential conflict of interest.

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