

# Research on the Application of Artificial Intelligence in the Field of Public Health ---- From the Perspective of the Guarantee Mechanism of Intelligent Drug Rehabilitation

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## **Abstract:**

The proliferation of drugs is one of the important public health crises facing the world. Despite the rapid development of smart drug rehabilitation in my country, decision-makers still have insufficient understanding of the problems in the construction of smart drug rehabilitation. There are still many problems in the concept of construction and the construction of a guarantee mechanism. This makes the research on the guarantee mechanism of smart drug rehabilitation still arduous. The road is far away. The research of this subject is conducive to building a new pattern of the security mechanism for smart drug rehabilitation in the information age, perfecting the grassroots public health construction system, ensuring the smooth progress of smart drug rehabilitation tasks, summarizing the demonstrative experience formed in practice, and optimizing strategies for smart drug rehabilitation, To meet the actual needs of the development of smart detoxification.

**Keywords:** *Intelligent detoxification, security mechanism, artificial intelligence.*

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## I. INTRODUCTION

At present, the anti-drug work is affected by factors such as the proliferation of international drug problems and the diversified trend of drug crime methods, and the task is still arduous. Exploring innovation, transformation and development, demanding police power from science and technology, using intelligence to increase efficiency, and realizing the sustainable development of intelligent drug rehabilitation in the Internet age, it is urgent to establish a corresponding guarantee mechanism. "The guarantee mechanism for the construction of smart drug rehabilitation" has become one of the research hotspots and difficult issues. In recent years, although the construction of smart drug rehabilitation in my country has developed rapidly, policymakers still have insufficient understanding of the problems existing in the construction of intelligent drug rehabilitation, and construction concepts, There are still many

problems in the construction of the security mechanism, which makes the research on the security mechanism of the smart drug treatment construction a long way to go. The research of this topic is conducive to building a new pattern of the security mechanism of the smart drug treatment building in the information age, and ensuring the smooth task of the smart drug treatment construction. Promote, summarize the demonstrative experience formed in practice, optimize strategies for the construction of smart drug rehabilitation, and meet the actual needs of the development of smart drug rehabilitation.

Strengthening the research on the guarantee mechanism of smart drug rehabilitation is of far-reaching significance for the in-depth study and implementation of General Secretary Xi Jinping's strategic thinking on network power, comprehensive implementation of the Ministry of Justice's "digital rule of law and smart justice" informatization construction tasks, and further enhancement of the theoretical construction of smart drug rehabilitation. At present, the construction of "smart drug rehabilitation" in drug rehabilitation centers has problems such as backward concepts, lack of talents, and potential risks in platforms. The research on the guarantee mechanism of the construction of intelligent drug rehabilitation is conducive to improving the intelligent development level of drug rehabilitation sites, improving the ability to prevent and defuse risks, and give full play to the guiding, supporting and driving role of theoretical research in drug rehabilitation. "How to rely on innovative technologies such as artificial intelligence, big data, cloud platforms, and the Internet of Things to promote drug rehabilitation work in the same direction as social governance and national governance to achieve modernization has become a major proposition that needs to be urgently addressed in the new situation." [1] The research on the guarantee mechanism for the construction of "wisdom detoxification" can improve the relevant theories of scientific and professional education and detoxification, and build a complete technical standard system for drug detoxification business and a smart operation system for drug detoxification work.

## II. AN EMPIRICAL STUDY ON THE CONSTRUCTION OF SMART DETOXIFICATION

After investigation, we found that the drug rehabilitation bureaus in Beijing, Shanghai, Guangxi, Yunnan and other places have begun to introduce artificial intelligence into the field of smart drug rehabilitation, and have made considerable progress. Drug abuse is one of the most serious public health problems currently facing the world, and it is worthy of our in-depth study. In November 2019, four drug rehabilitation centers in Shanghai Qingdong, Songze, Gaojing, and Xiayang all passed the acceptance of the Ministry of Justice, and the Shanghai Drug Rehabilitation Bureau took the lead in becoming the first system-wide "smart drug rehabilitation center" in the country. On May 27, 2020, the Yunnan Drug Rehabilitation Administration held a promotion meeting for the "Smart Drug Rehabilitation" application of the province's drug rehab system and the application of the law enforcement management platform to further enhance the physical operation and actual operation of the smart drug rehabilitation application in order to promote Yunnan The construction of provincial smart drug rehabilitation centers plays an important role in promoting. At the same time, Hangzhou City is also vigorously strengthening the construction of smart drug rehabilitation. Among them, Gudang Street, Xihu District, uses advanced technologies such as the Internet and VR to deeply promote the implementation of measures such as psychological counseling and grid management for drug users. [2] In addition, the Beijing Municipal Prison

(Drug Rehabilitation) Administration Bureau built a global intelligent security platform in 2019. The intelligent security platform is an intelligent security platform and a five-level vertical command and application system constructed based on the principle of combining peacetime and warfare with the rational use of advanced information technology, taking the command center as the entry point, and realizing the intelligent control and wisdom of prisons (drug detoxification). manage. On the basis of promoting the scientific law enforcement, duty and office of the police, the project assists managers in scientific decision-making, efficient command and flexible scheduling of prison safety management.

After empirical research, we found that the main problems existing in the current wisdom of drug rehabilitation are lagging legislation, lack of talents, and lack of data security.

### **III. DIFFICULTIES AND CHALLENGES FACING THE DEVELOPMENT OF SMART DRUG REHABILITATION**

The survey also found that there are obvious shortcomings in advancing the comprehensive application of smart detoxification, and it also faces some common challenges.

3.1 The legal system is lacking, and the construction of wisdom interpretation is facing the confusion of "unable to rely on"

In our country, the formulation of laws has strict legal procedures. As a new thing, the construction of smart drug rehabilitation lacks the protection and restraint of the current effective legislation. Legislation lags behind practical exploration, which is not only an inevitable encounter in the digital age, but also a problem that must be addressed in reform and innovation. For example, most of the basis for smart drug rehabilitation is based on regulatory documents. As a result, the institutional setting, power allocation, and function operation of smart drug rehabilitation cannot conform to the principle of statutory powers. There is an urgent need to increase judicial supply and formulate relevant laws and regulations as soon as possible.

3.2 There are institutional barriers in the construction of smart drug rehabilitation, and effective integration of resources cannot be achieved

Based on factors such as departmental interests, performance evaluation, data security, and other factors, various business lines and functional departments still have institutional barriers in the construction of smart drug rehabilitation, and it is difficult to give full play to the role of smart drug rehabilitation in optimizing grassroots drug rehabilitation.

3.3 The application field of smart drug rehabilitation is limited, and the actual effect of the construction is not obvious enough

The characteristic application scenarios of smart detoxification are not well planned and the application areas are limited. The lack of an overall coordination mechanism has led to a disconnect between

technology and demand, resulting in a discount on the effectiveness of smart drug rehabilitation in terms of system optimization and process reengineering.[3] The daily work of some drug treatment departments still mainly adopts traditional methods, and smart drug treatment facilities are arranged.

#### 3.4 Wisdom detoxification construction emphasizes characteristics and lacks systematic planning

In the construction of the smart drug rehabilitation platform, there is a phenomenon of disconnection of information and inconsistent construction. For example, the smart detoxification facilities constructed by the respective tenders often differ greatly in actual effects due to different technical standards. At present, the technology of smart drug rehabilitation is restricted by enterprises, and there is a lack of real industry talents, resulting in insufficient human resources protection for smart drug rehabilitation.[4]

#### 3.5 Insufficient risk prevention for smart drug detoxification, technical safety construction needs to be strengthened

Wisdom detoxification faces many challenges such as information security, digital ethics, and personal privacy protection. The data collection, storage and utilization of smart drug rehabilitation urgently need legislation and regulations. According to the survey, some drug rehabilitation institutions still rely on the big data platform to ensure the safety of their own business data, which lacks effective protection.[5] At the same time, digital empowerment of intelligent drug rehabilitation requires urgent ethical values to provide guidance and restraint to avoid threats to personal rights and public interests.

#### 3.6 The ability of safe operation and maintenance of smart drug detoxification needs to be strengthened urgently

At present, the construction of smart drug rehabilitation urgently needs to be enhanced in terms of risk monitoring, operation and maintenance management, and intelligent risk processing. [6] After investigation, it is found that smart drug rehabilitation management personnel lack the overall and multi-dimensional control of the operating data of smart drug rehabilitation facilities, and lack effective protection of the data related to personal privacy.

#### 3.7 The ability to detect and deal with the safety risks of smart detoxification needs to be strengthened

In our research, we found that there are a lot of inadequate responses when the smart drug rehabilitation facilities find application risks. We can combine dangerous intelligence, perform machine learning, big data analysis, and rule matching to discover existing vulnerability attacks. In addition, in the application of smart drug rehabilitation equipment, there is a lack of an effective safety supervision platform to realize activities such as blocking and isolating risks.

#### IV. THEORY AND SYSTEM ADVANCEMENT OF SMART DRUG REHABILITATION

The construction of smart detoxification needs to adhere to the combination of problem-oriented and demand-oriented. The construction of smart drug treatment requires both a platform and basic application scenarios to achieve the perfect combination of smart drug treatment technology and practice. Based on the current situation of the security mechanism for the construction of smart drug treatment in the information age, the analysis path of problems and countermeasures, and the goal of optimizing strategies, through literature retrieval, questionnaire survey, comparative research and other methods, the focus is on the security mechanism for the construction of smart drug treatment. The status quo, existing problems, influencing factors, and optimized countermeasures have achieved the goal of optimizing the security mechanism for intelligent drug rehabilitation.

##### 4.1 From ethics to governance, build a responsible and intelligent drug treatment innovation system

At present, the National New Generation Artificial Intelligence Professional Committee "New Generation Artificial Intelligence Ethics Code" has been issued, which has a guiding and standardizing role in the construction of intelligent drug rehabilitation. In addition, documents such as the Ministry of Science and Technology "Principles of New Generation Artificial Intelligence Governance-Development of Responsible Artificial Intelligence" and the Information Security Standards Committee "Network Security Standard Practice Guide-Artificial Intelligence Ethical Risk Prevention Guidelines" and other documents are also important for strengthening the construction of intelligent drug rehabilitation. The construction of scientific and technological ethics has been guided, which can promote the construction of scientific and technological ethics of intelligent detoxification.

4.2 Pay attention to legislation to provide legal protection for the construction of intelligent drug rehabilitation.

Attach great importance to the supervision of smart drug rehabilitation and the formulation of implementation standards and technical specifications in terms of information protection and data security to ensure the legal and safe use of various data resources. Establish a data cooperation mechanism for different stakeholders such as government departments, regions, government enterprises, etc., and improve the common action rule system for smart drug rehabilitation through collaborative co-governance

##### 4.3 Strengthen the systematic planning of smart drug rehabilitation and improve the top-level design

While encouraging grassroots intelligent drug rehabilitation to innovate, it will continue to strengthen overall planning to improve the efficiency of resource utilization in the development of intelligent drug rehabilitation. The first is to consolidate the "brain" support for the operation of smart drug treatment, play the role of the whole to promote the part, and promote the communication and intercommunication between the comprehensive application platforms for the construction of smart drug treatment. The second is to strengthen overall planning, break up the data gap in the construction of smart drug rehabilitation,

form a multi-level, multi-department, and multi-efficiency construction system, and consolidate the foundation of grassroots applications. The third is to implement the platform application of grassroots wisdom detoxification, break the traditional information island, realize the integration of all elements, and build a "perception + intelligence" application model to promote the healthy development of smart detoxification.

#### 4.4 Promote collaborative construction to form a joint force for smart drug rehabilitation

Clarify core smart drug treatment business needs, sort out core functions, and optimize process reengineering. The first is to break through the barriers of the system and mechanism, and establish an effective coordination mechanism for the construction of smart drug rehabilitation centering on key issues such as "efficient treatment of drug treatment business" and "efficient and coordinated prevention of major risks". The second is to increase overall planning. While doing a good job in the development of "new scenarios" in the field of smart drug treatment, continue to do a good job in the integration and application of "stock scenarios", increase overall planning for the construction of smart drug treatment, and achieve the best application effects. The third is to refine the assessment to avoid the phenomenon that the main body responsible for the intelligent drug rehabilitation construction lacks demand for investigation due to the assessment requirements and blindly enters the project.[7]

#### 4.5 Encourage multi-party participation and stimulate collaborative supply capabilities

The construction of intelligent drug rehabilitation in the intelligent era is inevitably a process of multi-agent participation. Behind the multi-dimensional and diversified deep integration of data and the full involvement of intelligence, everyone participates and everyone is responsible. The first is to encourage social participation, focus on breakthroughs and power points such as smart drug rehabilitation infrastructure construction, core technology research, application scenarios creation, and actively build a construction mechanism for market forces, government forces, and social forces to advance together.[8] The second is to treat by classification, combining with the classification of smart drug rehabilitation to promote the construction of smart drug rehabilitation facilities in relevant characteristic scenes at the grassroots level. For example, the PPP model of "private office assistance" can be adopted to solve the problem of insufficient funding for smart drug rehabilitation and sustainable development. Increase the supply of public services for smart drug rehabilitation.

#### 4.6 Strengthen personnel training and improve the quality of personnel for smart drug rehabilitation

To strengthen the construction of professional teams, it is necessary to play the role of professionals with both computer science, artificial intelligence and big data education background and understanding of the drug rehabilitation industry, and to attract professionals with relevant professional backgrounds into the drug rehabilitation system. At the same time, establish a long-term training mechanism to strengthen the professional training of existing smart drug treatment staff, improve the professionalism of smart drug treatment, learn technology trends and standards, master the latest technologies such as big data, artificial

intelligence, and virtual reality, and grasp their basic applicability . The third is to develop auxiliary tools to empower grassroots wisdom in drug rehabilitation. [9]

#### 4.7 Create a unified and comprehensive supervision platform for the entire network

The construction of smart drug rehabilitation centers on business applications, is driven by smart facility construction, and is based on security strategies. It continuously improves its vulnerability discovery capabilities, event analysis and smart tracking capabilities, and risk early warning capabilities. In the event of a security incident in smart drug rehabilitation facilities, it can Carry out timely disposal to prevent and resolve the risks of artificial intelligence in the field of intelligent drug rehabilitation. Building a dynamic defense system that is credible, controllable and preventable for smart drug rehabilitation is of great value and significance for the healthy development of smart drug rehabilitation.

### V. SUMMARY

In the era of artificial intelligence, strengthening the construction of the grassroots public health system requires the use of high-tech means at the same time to strengthen the construction of related safeguard mechanisms. At present, we lack a comprehensive investigation and exploration of the guarantee mechanism for the construction of intelligent drug rehabilitation. This subject comprehensively uses various methods to conduct a comprehensive analysis and discussion on the status quo, problems, and influencing factors of the security mechanism for smart drug rehabilitation in the information age, including how to carry out standardized top-level design and construction, and how to develop and implement through technical guarantee, material guarantee, The rule of law guarantees the sustainable development of intelligent drug rehabilitation, and provides the most authentic basis for police safety law enforcement.

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