

# Research on the Formulation of Pneumoconiosis Policies—Based on China's Occupational Disease Prevention Policies

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## ABSTRACT

Pneumoconiosis is the largest type of occupational disease in China. Because of its large number of patients, concentrated distribution, high mortality, and obvious characteristics of a collective outbreak trend, this occupational disease has become a major problem affecting economic development and social stability. This article provides recommendations to reduce the occurrence of pneumoconiosis through public policy, and the provision of health assistance to existing patients with pneumoconiosis. Through analysis of the current situation of occupational disease management in China and suggestions to improve the prevention and treatment policy of pneumoconiosis, this paper outlines a policy system for pneumoconiosis that could be established to prevent the occurrence of diseases.

**Keywords:** *Pneumoconiosis, Public policy, Prevention policy, Occupational disease*

## 1. INTRODUCTION

Pneumoconiosis has become the most serious occupational disease in China, representing more than 80% of occupational diseases. China is also the country with the most serious pneumoconiosis in the world, ranking first in the world in terms of the number of people exposed to dust, the cumulative number, and the number of new cases [1]. Pneumoconiosis is a type of chronic disease that causes respiratory and lung damage caused by prolonged exposure to dusty workplaces or close contact with dust. It is irreversible, and patients can only delay the deterioration of their condition through medical treatment and temporarily prolong their lives, which not only brings huge pain to the patients and their families, but also brings huge hidden dangers to the local economy. Most articles mainly focus on the study of the quality of life and psychological conditions of patients with pneumoconiosis or the analysis of the causes of pneumoconiosis. This study will integrate the prevention and treatment methods of pneumoconiosis in the literature, combined with China's occupational disease prevention and control policies, and propose program policies for the prevention and control of pneumoconiosis and improvement of existing pneumoconiosis patients.

## 2. PNEUMOCONIOSIS GROUP

### 2.1. Population Characteristics of Pneumoconiosis

There are many patients with pneumoconiosis, and migrant workers have become a high incidence of pneumoconiosis. The direct reason is that most of the migrant workers come from remote rural areas and are eager to seek jobs. They are often willing to engage in high-intensity, risky, and dangerous jobs. Since the workers all come from the same township, there are often more concentrated "pneumoconiosis villages" in China. The concentrated distribution of pneumoconiosis groups often makes this disease appear a concentrated outbreak, which also makes the fear of mass death and the unstable factors of mass rights protection expand, and brings uncertain risks to social stability [1].

### 2.2. The Working Status of Dust-exposed Workers

Labor protection is not in place. In order to save costs, some companies use machines that do not meet national standards and produce a lot of dust in the production process. In addition, the lack of a corresponding ventilation and dust removal system in the workshop

resulted in a large amount of dust concentration exceeding the standard [1].

About irregular labor and employment, some small and medium-sized private enterprises use the blind spots of migrant workers' labor rights and interests to deliberately reduce the professional rights they should enjoy [1]. They only stay at the level of getting enough money to work. However, work injury insurance, endowment insurance, and labor treatment do not get the same as other labor. Those with symptoms of illness shall be dismissed immediately or be compensated by the distribution of simple protective equipment.

In terms of lack of professional supervision and safety training, the lack of safety management personnel in enterprises to measure the dust concentration in the workshop, the inspection and maintenance of equipment, and the safety education and training of employees, has caused many hidden safety hazards in the workshop.

### **3. PROBLEMS IN THE MANAGEMENT OF OCCUPATIONAL DISEASES IN CHINA**

Occupational disease patients cannot obtain corresponding compensation and labor rights. Some private dust-receiving enterprises fail to regulate the labor rights of employees, resulting in the content of the employees' labor contract clauses being lower than the requirements of the national labor law. Workers in enterprises are highly mobile. They suffering from pneumoconiosis often have no labor contract and cannot prove their labor relationship with the enterprise, so they cannot obtain an occupational disease diagnosis certificate and cannot obtain occupational disease treatment [1].

The number of occupational disease patients reported by the disease control department to the government is lower than the actual cases. Occupational diseases, especially chronic diseases such as pneumoconiosis, have a long incubation period, during which the symptoms are difficult to detect. What's more, the low rate of physical examination of employees has caused many occupational diseases to go unreported. In addition, in some hospitals, doctors have not received occupational medical training and fail to ask the correct questions about the patient's work history, which may lead to misdiagnosis, failing to solve the workers' potential occupational exposure hazards [2].

Occupational health supervision is not in place. Relevant departments responsible for the supervision of enterprise safety production lack compulsory supervision. At present, the scope of supervision and inspection of enterprise production is only a part, lacking comprehensiveness, and the punishment for substandard enterprises is also very small. Many small private enterprises are simply not involved. Within the scope of occupational health supervision, these enterprises often

make enterprises with a high incidence of occupational diseases [1].

The poor correlation between service items affects the efficiency of the system. Emphasizes the principle of combining prevention and treatment and health care, but China's basic public health services and basic medical care are not well connected, and the lack of information sharing between different departments has led to additional time spent by different departments on information extraction. The same piece of data reduces work efficiency. This is not only a waste of human resources, but also a bad social response to the surveyed personnel being asked to provide data multiple times [3].

There is a shortage of trained health professionals. Due to the lack of human resources and insufficient service capabilities, the existing health workers are unable to achieve the set goals of service provision and cannot provide sufficient basic public health services to the population in the community [4].

### **4. SUGGESTED PUBLIC POLICIES FOR PNEUMOCONIOSIS**

#### ***4.1. Tertiary Prevention***

##### ***4.1.1. Primary Prevention***

About health education, companies should provide occupational safety training to employees who work with a large amount of dust in the workshop or those who are in contact with dust, and guide the correct use of protective equipment. By popularizing dust prevention knowledge, safety managers make workers aware of the dangers of pneumoconiosis, encourage them to take action to prevent pneumoconiosis, and standardize production operations independently. By understanding the symptoms of pneumoconiosis in different periods, it can prevent them from not reporting or checking in time when corresponding uncomfortable symptoms occur, and missing the best time for treatment.

Enterprises should unite labor and safety culture, emphasizing the safe operation and behavioral norms of everyone from all levels of the organization. While safety management personnel monitor the workplace, they should also take measures to improve their mental health. At the same time, safety supervisors should consider the safety culture practiced by various departments and organizations, because organizational causes are often more harmful than individual antecedents. Raising awareness of the organization's intervention politics, of organization worker health relationships at work, and of an organizational science of mental health appears necessary [10].

In terms of behavioral intervention, the company should compulsorily require employees to be well protected in the workshop, equipped with dust masks,

dust-proof clothing, and other personal protective equipment.

About work environment management and monitoring, safety management personnel should regularly monitor and manage the dust concentration in the production workshop to ensure that the dust concentration in the air in the workplace meets the national health standards.

In terms of health protection, aiming at the pathogenic factors of pneumoconiosis, follow the eight-character policy of comprehensive dust management. Reform production processes and equipment, promote low-dust production equipment; promote wet operations, spray smashing in the dust production process; use closed production equipment for closed dust production sources; adopt reasonable and effective ventilation and dust removal operations; implement safe and dust-proof operations for employees training; strengthen the maintenance and management of dust-proof equipment; protect employees during work; timely detect the dust concentration in the workshop and conduct regular physical examinations for workers exposed to dust [6].

#### *4.1.2. Secondary Prevention*

Secondary prevention is "early detection, early diagnosis, and early treatment." [5].

For employees, companies should encourage employees to report to the relevant management staff about their uncomfortable reactions in the workplace and related symptoms such as coughing and chest tightness. Most of the early symptoms of chronic diseases such as pneumoconiosis are not obvious, and the cause of the disease is not clear. When there are obvious symptoms, such as the second and third phases of pneumoconiosis, the condition has worsened and is difficult to control. Therefore, from the very beginning, employees should actively respond to their discomfort to managers, and conduct regular physical examinations to achieve "early detection".

Establish hospitals specifically for occupational diseases or set up special channels for occupational diseases in hospitals. The training of doctors in occupational disease clinics enables targeted inquiries about patients' work conditions and preliminary confirmation of the type of pneumoconiosis, enabling early diagnosis and early treatment.

#### *4.1.3. Tertiary Prevention*

Mainly based on the patient's condition, medications, pneumoconiosis targeted drugs, lung lavage treatment, lung transplantation, stem cell transplantation and other treatment methods are given to improve the patient's quality of life and prolong life, providing diet care for patients undergoing rehabilitation.

About respiratory training and health education, from the aspect of diet, the patient's function can be adjusted internally, and the body's physiological adaptability can be enhanced. At the same time, exercise training can enhance respiratory muscle function, reserve, and exert respiratory compensation potential in order to increase lung capacity, improve hypoxia, and relieve symptoms [7].

#### ***4.2. Strengthen the Protection of Patients with Pneumoconiosis***

About enterprise compensation, compensation for occupational diseases should meet the status quo of continuous treatment of pneumoconiosis. When a new employee enters a job, the company should clearly state the degree of danger of the type of work, and sign a legal and formal labor contract with the employee to ensure that all employees enjoy the social benefits of "five types of social insurance and one fund", including endowment insurance, medical insurance, work injury insurance, unemployment insurance, maternity insurance, and housing provident fund. The enterprise and the comprehensive medical structure establish an occupational disease and health complex, and a health service model of "designated diagnosis and treatment, contracted expenses, dynamic intervention, and full-process management" [8].

Company managers organize support and supportive work, and actively communicate with employees suffering from pneumoconiosis, so that they can talk about their illness and seek support or accommodation when needed, so that they can stay in the work [11][14]. The job creates the right environment.

About social health management, local governments should cooperate with occupational health departments and hospitals to jointly train occupational health management personnel and form occupational health investigation teams to track and follow-up investigations on the health conditions of patients with pneumoconiosis.

For social health services for patients with pneumoconiosis, a three-line network composed of hospitals, communities, and occupational health departments will be established to improve the quality of life of patients with pneumoconiosis. The hospital opens a special outpatient channel for patients with, and provides daily monitoring health information such as treatment plans, personalized health risk assessment and health status to the patients with this illness who are undergoing treatment to feedback to the occupational health department in time, and establish patient health file information. The community, through the patient health files provided by the occupational health department, conducts follow-up management, dietary guidance, and health exercises for the patient's undergoing rehabilitation, and timely submits health feedback

information to the hospital and health department to carry out three aspects of continuous health care, which provides psychological counseling to patients and their families to alleviate the negative emotions caused by the disease.

## 5. DISCUSSION

From the perspective of patients with pneumoconiosis, this article finds that most workers with occupational illness are born in rural areas, and most of them came from the same village, which directly leads to the emergence of many "pneumoconiosis villages" in China. This phenomenon occurs because some small and medium-sized enterprises, in order to save costs, take advantage of the eagerness of migrant workers to make money and the blind spots of the labor protection law to exploit their labor force and stay only at basic wage income, lacking the "five social insurance and one housing fund". Once these migrant workers suffer from pneumoconiosis, their diagnosis and compensation for work-related injuries cannot be implemented. Many families spend a lot of money on treatment, which leads to poverty. For patients with pneumoconiosis, not only have they to endure the torment of illness, but also the pressure from their families. Family fragmentation is a tragedy encountered by many patients with pneumoconiosis.

The root cause of pneumoconiosis becoming the most serious occupational disease in China is that the government has not strengthened the management of enterprises, lack of compulsory and comprehensive supervision and management of relevant supervision departments, and some small illegal enterprises can even evade supervision. The supervision of enterprises is only partial. Even if there are unqualified enterprises, the punishment is very small, and the lack of compulsory strength makes it impossible to solve the problems of enterprise safety management and employee occupational health from the root cause. What's more, occupational disease prevention and occupational safety are managed by the National Health Management Committee and the State Administration of Work Safety. The comprehensive coordination between these different government departments is not in place. In addition, occupational health legislation is the basic principle and guideline for occupational disease prevention from any angle. However, China's legislative system is unable to cope with China's rapid development, because a series of occupational health-related diseases, such as work-related mental illnesses, has not been absorbed by the system [9].

## 6. CONCLUSION

Pneumoconiosis is the most serious occupational disease in China. There are multiple stakeholders and

institutions affected, from pneumoconiosis workers, enterprises, medical institutions, occupational health-related departments, and social phenomena. The plan outlined in this paper proposes and improves the prevention and treatment policies of pneumoconiosis to ensure the health of workers exposed to dust, prevent the occurrence of pneumoconiosis. This includes strengthening protection for existing patients with pneumoconiosis, carrying out rehabilitation treatment, reducing the torture of the disease, and prolonging life. In addition, it is recommended to continuously improve the prevention and treatment policies to lay the foundation for the fundamental pneumoconiosis prevention work in the future.

One limitation of these recommendations is that the proposed pneumoconiosis prevention and control policy is still in the theoretical stage and lacks practical research. In addition, this article lacks the study of the relevant official documents on pneumoconiosis treatment and related administrative regulations issued by China. For future prevention and treatment of pneumoconiosis, public policies need to be improved according to the national conditions.

The status quo at the grassroots level can reflect how practical the implementation of the policy is for the population. In future research, the health department can focus on community health management, conduct visits and surveys and follow-up of patients with pneumoconiosis, establish a database based on the patient's physical and psychological feedback from various aspects, and implement big data analysis. Some problems existed in the "three-line network" policy and improved policies. The community should be addressed as a unit, distribute dust prevention knowledge questionnaires to the existing workers who are more exposed to dust to understand their scope of knowledge about dust hazards, and further improve the "primary prevention" policy through the results of the questionnaire.

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