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# **Exploration on the Development of Telemedicine**

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### **Abstract**

The Development and improvement of telemedicine technology can not only bring more perfect medical conditions to the public, but also greatly promote the development of medical level in China. With the development of information technology and Internet technology in China in recent years, telemedicine technology has also received more powerful technical support. Based on the development of telemedicine technology in recent years, this paper expounds the application status of telemedicine technology in hospital clinic, infers the future development trend of telemedicine, and hopes to open new ideas for related work.

# Keywords

Telemedicine; Development.

#### 1. Introduction

With the continuous development of Internet technology and information technology in recent years, telemedicine has become a widely used medical technology means, that is, telemedicine can be realized through advanced medical technology and auxiliary communication means. The development of telemedicine technology depends on modern Internet communication technology. From the current technical background, telemedicine technology is only proposed as a new medical method, which has not been well known by the public and is in the initial stage. Telemedicine represents a change to the traditional medical model, which can bring more ideal medical treatment for the majority of patients. At the same time, telemedicine has many advantages that traditional medical models do not have, such as convenience, low cost and freedom from time and space constraints. It can bring people a more comfortable medical experience. However, under the current technical and social background, telemedicine still faces many restrictive factors, which lead to the lack of large-scale expansion of the application and popularization of telemedicine. Therefore, it is very necessary to have an in-depth understanding of telemedicine technology and the analysis of its application status, which can help telemedicine technology achieve better application effect in practical application.

# 2. Analysis of the main characteristics of telemedicine under the current technical background

Telemedicine technology can gather medical resources in different regions and at different times through advanced modern communication methods. At the same time, it can also gather many doctors to bring more comfortable medical experience and more detailed diagnosis to patients. At this stage, the main characteristics of telemedicine technology are as follows: 1) convenient and fast. With the support of Internet communication technology, telemedicine can provide more convenient and fast medical channels for patients, so that the connection between doctors and patients can overcome the limitations of time and space. The development of medical means through communication technology

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can enable patients to obtain diagnosis and treatment under more convenient and fast conditions. 2) Reduce medical costs. Through the medical channels provided by telemedicine, medical treatment on the Internet can avoid the trouble of registration and travel caused by the traditional medical treatment mode, and greatly reduce the medical cost of patients. 3) Promote communication and learning among doctors. Telemedicine technology is a platform built through Internet communication technology, which can provide a more convenient environment for the communication between doctors. This can not only promote the communication between doctors, but also facilitate young doctors to learn and inquire from experts, which is conducive to improving the professional quality and medical level of doctors in China. 4) Beyond geographical conditions. Telemedicine can cross the constraints of time and space and bring medical resources support to remote and poor areas. It can not only provide better medical conditions for patients in remote areas, but also promote the improvement of medical education in remote areas. 5) Share medical information. The construction of telemedicine platform can provide a professional platform for the sharing of medical information among hospitals and hospital departments. Through the sharing and diagnosis of patient medical information, we can better provide medical services for patients [1].

# 3. Current situation analysis of telemedicine technology in hospital clinical application

### 3.1 Application status in preliminary construction stage

Because the development and promotion of telemedicine technology mainly depends on the development and improvement of communication technology, the development of telemedicine in China is late, and the initial progress is relatively slow. In the initial construction stage of telemedicine, the earliest telemedicine in China is to diagnose telemedicine by telegraph, which means that telemedicine in China has been restricted by communication technology in the process of development. However, with the continuous development of China's communication technology and the development of Internet information technology in recent years, China's telemedicine has entered a new development period [2].

Although the traditional medical model has adapted to the development of China's national conditions, with the aging of China's population and the official requirements for medical cost control, the traditional medical model is no longer applicable to China's national conditions. China needs to quickly establish a three-dimensional medical service network and change it into a patient-centered service model, so that grass-roots medical institutions can bring more perfect medical services to the majority of patients. In this context, telemedicine will become the connecting link of the new medical service network. Connect the communication channels between large hospitals with higher professional level and grass-roots medical care, improve the level of medical services in China, and promote the transformation of medical model in China [3].

## 3.2 Application status in establishment and improvement stage

With the continuous development of China's communication technology and the preliminary application of computer technology, the country also began to increase the capital investment in telemedicine, and China's telemedicine network was initially established and improved. The establishment and improvement of telemedicine can initially realize the remote communication between doctors and patients. At the same time, a platform for communication and learning has been built between different medical departments within the hospital.

### 3.3 Application Status in popularization stage

So far, telemedicine in China has made great progress. It not only forms a variety of channels for sharing medical resources in China, but also greatly reduces medical costs. It is not only the medical cost of patients, but also reduces the relevant expenses of the hospital. The rapid development of telemedicine in the popularization stage is mainly due to the rapid development of Internet technology since the new century, which connects doctors and patients more closely. At this stage, the domestic

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telemedicine network, which has been relatively perfect, is still developing in the direction of diversification, hoping to realize the breakthrough development of difficult technologies such as remote diagnosis and remote surgery. In addition, during the development of telemedicine, we also hope to promote personalized medical services, provide more personalized medical services for patients and bring better medical experience for patients in the process of remote communication between patients and doctors.

Up to now, from the initial telegraph consultation to the relatively perfect telemedicine network at this stage, the level of telemedicine in China has made great progress. It not only realizes the flexible application of Internet information technology, but also promotes the gradual transformation of medical treatment mode and promotes the stable and benign development of China's medical system. However, due to the diversity of diseases and the uniqueness of the disease, there are still many problems and deficiencies in telemedicine, which need to be solved by more perfect technical means.

# 4. Analysis on the development trend of telemedicine technology in hospital clinical application

Although with the continuous improvement of the level of telemedicine in China and the increasing coverage of telemedicine network, telemedicine still has a series of problems and deficiencies in the process of practical application of telemedicine for diagnosis, which is still in the primary stage. This is mainly because in the process of disease diagnosis and treatment, it is necessary to carry out face-to-face diagnosis and treatment of some conditions of patients, and there are too many uncontrollable factors in telemedicine, so there are more restrictive factors for the effect of telemedicine, which eventually leads to the poor effect of telemedicine compared with traditional medicine. However, with the continuous development of Internet technology and Internet of things technology, it provides a new solution to this problem. We can build a virtual medical community through the use of Internet technology. Within the medical community, a storage place for medical knowledge, a treatment place for patients, an academic exchange platform between doctors and an exchange platform between patients will be built. This can not only greatly improve the accuracy and effectiveness of telemedicine, but also bring better medical treatment and work experience to both doctors and patients.

During the construction of virtual community, we should constantly promote the integration of virtual community and real urban community, make joint efforts online and offline, and give better play to the level of medical services. In this way, online virtual community diagnosis and offline urban community service development can not only promote the average distribution of medical resources, but also greatly improve the real-time and accuracy of telemedicine.

Of course, to achieve the above-mentioned situation requires joint efforts of many parties. First, hospitals should provide more medical resources for the construction of the platform. In addition, the society should strengthen the publicity and promotion of telemedicine, and provide external supervision to strengthen people's trust in telemedicine. In addition, medical colleges and universities should also set up telemedicine projects to cultivate specialized elite talents. Finally, only the official laws and regulations supplement and restrict, can we really regulate and manage telemedicine.

#### 5. Conclusion

To sum up, although the development of telemedicine in China has made some progress and has a good development trend in the future, there are still many restrictive factors in the actual application process. Only with the joint efforts of all social parties and continuously strengthening the investment in telemedicine can we really promote the continuous improvement of the level of telemedicine.

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