Research Article

Analysis of the Development Trend and Countermeasures of Internet Hospitals Based on SWOT

Guo Zhanxiong[*]

Finance Department, The Affiliated Panyu Central Hospital of Guangzhou Medical University, Guangzhou, China

Abstract

Objective: Through the investigation of the development status and background of Internet hospitals, this paper analyzes the internal and external environment and advantages and disadvantages of Internet hospitals, so as to promote their high-quality and sustainable development under the background of the Healthy China strategy. *Methods*: SWOT analysis was used to analyze the advantages and disadvantages of Internet hospitals, as well as the opportunities and challenges faced by the development, analyze the development trend of Internet hospitals, and put forward countermeasures. *Results*: Internally, Internet hospitals have the advantages of improving patient medical efficiency and promoting the rational allocation of medical resources; and there are disadvantages of unclear service business positioning and the accuracy of telemedicine diagnosis to be improved; the external environment has the opportunity of national policy support and large demand for patient medical treatment; and there is the threat of low capital investment and the restriction of traditional medical concepts. *Conclusions*: It is suggested that the state should increase capital investment and policy norms to guide the orderly development of the Internet market, guide residents to change their medical habits, and medical institution managers should fully seize the development opportunities, grasp the development trend of the post-epidemic era, formulate growth strategies, torsion transformation strategies, defense strategies, and diversified strategies according to internal and external environmental factors, improve the construction of Internet hospital system, and help build a "healthy China".

Keywords

Internet Hospital, SWOT Analysis, Countermeasure Research

1. Introduction

With the accelerated integration of artificial intelligence, big data technology and medical scenarios, Internet medicine has gradually changed the traditional medical service model and become a blue ocean in the medical and health field. However, there is still a gap between Internet hospitals and mature large-scale market-oriented applications. The COVID-19 has a "double-edged sword" effect on Internet hospitals, which is both an opportunity and a challenge. How to improve the medical service capabilities of Internet hospitals in the post epidemic era, Promoting the sustainable, high-quality, and healthy development of internet hospitals has become an urgent problem to be solved. This article analyzes the advantages and disadvantages of internet hospitals, as well as the opportunities and challenges they face in development, from six aspects: politics, economy, society, technology, environment, and law. Using SWOT matrix

analysis, corresponding solutions are proposed.

2. Domestic Research Status of Internet Hospitals

In April 2018, The General Office of the State Council issued the Opinions of The General Office of the State Council on Promoting the Development of "Internet + Medical and Health". With the support of the national policy, public demand and the COVID-19, the Internet + medical and health care ushered in the spring of development [1].

At present, China's Internet medical industry is in a period of rapid development, and both the number of Internet hospitals, the scale of users, the number of consultations, and the market size are growing rapidly. According to data statistics, by the end of 2021, more than 1,700 hospitals have been approved nationwide, but the development of Internet hospitals is still insufficient. Due to the lack of operation team and the fact that patients have not formed the habit of online medical treatment, many Internet hospitals have the problem of "building without using". How to set up the Internet hospital reasonably, improve its use efficiency, realize the dislocation of characteristic development, and avoid idle resources and repeated construction, has become an urgent problem to be solved [2].

3. Research Significance

During the COVID-19 epidemic prevention and control period, the development of Internet diagnosis and treatment has become an important part of medical services, playing an important role in reducing the gathering of people and reducing the risk of cross-infection. However, from the perspective of the development status, there is still a gap between the mature Internet medical model and large-scale market application. The epidemic forces the rapid development of Internet hospitals. How to promote the advantage of the development of Internet hospitals in the post-epidemic era is worth further thinking [3].

4. SWOT Analysis of Internet Hospitals

This article uses literature research and field investigation methods to sort out the current development status of internet hospital construction. The SWOT method is used to systematically analyze the advantages and disadvantages, opportunities and threats that exist both internally and externally during its development process. The design of an internet hospital indicator system is planned, combined with practical research and feedback, to optimize the application of indicators, summarize countermeasures and plans, and provide strategic guidance for the sustainable development of internet hospitals.

5. Advantages of Internet Hospitals

Internet medical services are convenient for patients to manage their health status and timely understanding of their condition and treatment progress. Internet medical services promote the sharing of medical information and improve medical quality and efficiency. It can realize online consultation, appointment registration, inquiry report and other functions. Patients can complete the relevant process without going to the hospital, which greatly saves time and energy. It can realize online consultation, remote consultation and other functions, saving the time and energy of doctors and patients, and improve the medical efficiency. Promote the subsidence and expansion of high-quality medical resources to remote areas, expand the radiation range of high-quality medical resources, save the human and material resources of hospitals to the greatest extent, effectively control the operating costs of hospitals, and reduce the repeated allocation of medical resources [4].

6. Disadvantages of Internet Hospitals

6.1. Inclear Positioning of Service Business

"Measures for the administration of Internet diagnosis (trial)" regulation, the Internet hospital cannot receive first patients, and diagnosis and treatment business scope is limited to some common diseases and chronic diseases, the relevant documents regulation of the state, the doctor must obtain patients' disease information and historical medical records, can online to return patients to provide medical diagnosis, prescription and other services, but the Internet hospital has not yet clear can online revisit of common diseases and chronic disease directory, how to identify the authenticity of patients with medical records, and how long the period of medical record data, lead to online medical business positioning is not clear, unable to provide better services for patients [5].

6.2. The Writing of Electronic Medical Records Is Not Standardized, and the Medical Information Is Only Partially Shared

Internet medical and treatment services need to provide electronic medical records. However, due to the non-standard writing standards of some doctors and the different relevant standards of medical institutions, patient data is more discretized, data utilization is more difficult, and the phenomenon of information island is serious. In addition, the current situation of relevant normative documents and legislation is obviously lagging behind, and it is difficult to adapt to the development of Internet medical treatment. Therefore, the quality of medical records needs to be improved, and Internet hospitals need to rebuild new EHR standards and personal health records framework.

6.3. The Accuracy of Telemedicine Diagnosis Needs to Be Improved

Traditional diagnosis and treatment is a face-to-face experience. The important feature of general medical treatment is "seeing, tapping and listening", and traditional Chinese medicine is "looking, listening, listening, asking and cutting". However, Internet hospitals are limited by their own limitations, doctors can only rely on communication and video between doctors and patients [6], lack of physical examination process, and have limited understanding of patients 'medical history, and more rely on patients' previous medical records and examination reports, which increases the difficulty of doctor-patient communication and poses the risk of inaccurate diagnosis and treatment.

6.4. Unclear Sources of Medical Financing

A stable and long-term source of funding is critical to the sustainable development of any healthcare setting. At present, the main fund source of medical institutions in China is the medical insurance fund. However, due to the different medical insurance settlement policies, standards and guarantee scope of various provinces and cities, the online medical insurance settlement of Internet hospitals has not been popularized, and the subsequent reimbursement of patients in Internet hospitals is difficult [7]. It limits the enthusiasm of the general public to participate in online diagnosis and treatment.

7. Internet Hospital Opportunities

7.1. National Policy Support

The General Office of the State Council issued the Opinions on Promoting the Development of "Internet + Medical and Health Care", and both the central and local governments have issued preferential policies for the development of Internet hospitals with sustainable development. Internet hospital in the current policy, under the support of economic development and technological progress [8], to make important contributions to our current health, not only can ease the current Chinese "difficult and expensive" this problem, to provide new solutions for reform, also conforms to "to strengthen the construction of urban and rural medical and health service system, for the masses to provide safe, effective, convenient, cheap medical and health services" long-term goal.

7.2. The Prevalence of Chronic Diseases Increased, and the Number of Return Visits Increased

The prevalence of chronic diseases in China is increasing year by year. Due to the long course of chronic diseases, long medication time and long tracking and management time, in the traditional treatment of chronic diseases, patients basically end the medical service after taking medicine in the hospital, but the later drug monitoring and rehabilitation follow-up cannot be taken into account. Using Internet hospital for online consultation, rehabilitation, health care, remote consultation for chronic patients not only saves the medical resources of the physical hospital, improve the medical efficiency [9]; but also can one-to-one online review management of patients, can timely track the patients, control the course of chronic diseases, greatly shorten the time of the patients, greatly facilitate the process of the elderly.

7.3. Application of New Technologies

With the steady development of economy, the continuous expansion of the Internet medical market, and people's demand for medical services. As an important platform for medical services, Internet hospitals will undertake the responsibility of providing medical services in the future. The proliferation of Internet users and the development of wireless network technology provide opportunities for the development of medical informatization. It not only provides strong market user support for Internet hospitals, but also provides communication technical support for the online diagnosis and treatment of Internet hospitals.

7.4. Medical and Technical Support of Physical Hospitals

According to the Measures for the Management of Chinese Network Hospitals (Trial), the development of Internet hospitals in China can have two different operation modes, but no matter which kind of Internet hospitals, they must obtain the permission of offline entity hospitals to provide diagnosis and technical support. Take an online hospital in Guangzhou as an example: relying on a hospital in Guangzhou, it connects with the hospital pharmacy to provide professional medical consultation and treatment services for patients. At present, most of the offline hospitals are tertiary hospitals, ranking in a leading position in medical technology and medical service capacity, and providing professional medical technical support for Internet hospital safety consultation.

8. The Threat of Internet Hospitals

8.1. The Health Investment Is Not High, the Medical Treatment Allocation is Not Balanced

The distribution of medical resources in the eastern, central and western regions of China is unbalanced. Most of the high-quality medical resources are concentrated in big cities and large hospitals, leading to the overload operation of large hospitals, but the primary medical resources cannot be effec-

tively utilized [10]. Internet hospitals can solve the problem of unreasonable allocation of resources through the online dissemination of diagnostic technology, so as to improve the health level of patients in remote areas and alleviate the imbalance of medical resources.

8.2. It Is Difficult to Popularize Online Diagnosis and Treatment Because of the Traditional Medical Concept

As a new thing, the Internet hospital is bound by the traditional concepts. Physical hospitals are not highly responsive to the Internet hospitals, and the cooperation between them is more difficult. At present, most patients hold a wait-and-see attitude towards the online diagnosis and treatment in Internet hospitals, and there is a cognitive bias. Patients tend to visit physical hospitals, and it is difficult to change their medical intentions in a short time.

8.3. The Law Applicability of Internet Hospitals Is Poor, and the Implementation of Policies is Difficult to Supervise

The Internet hospital is a relatively special existence. On the one hand, the state has given a lot of policy support, such as online prescription, online medical insurance payment and other functions, and implemented the multi-point practice system to break down the barriers for doctors to register and practice in Internet hospitals. However, the three management measures of Internet Diagnosis and Treatment Measures, Telemedicine Measures and Internet Hospital Management Measures are all departmental regulations and have limited scope of application. National and local governments have not yet made clear provisions, and have not put forward guiding suggestions and solutions to specific problems. The relevant management system and regulations of Internet hospitals need to be improved [11].

9. Strategy Recommendations Based on SWOT Matrix Analysis

According to SWOT matrix analysis, the advantages, weaknesses, opportunities and threats in the above analysis can be combined: WO (disadvantage and opportunity combination), SO (advantage and opportunity combination), WT (disadvantage and threat combination), and ST (advantage and threat combination) to form four strategies.

9.1. WO Combination: Torsional Strategy

9.1.1. Seize the Market Opportunities and Give Full Play to the Competitive Advantages

Internet hospitals should seize the opportunity of "Internet

+ medical treatment" advocated by the state, take patient needs as the guidance, use remote diagnosis and treatment technology, break the previous spatial distance between doctors and patients, and conduct cross-regional consultation and treatment. It provides different online medical services for initial and re-up patients, transfers high-quality medical resources to patients with scarce resources, shortens the time for patients to have repeated examinations and queuing, and saves manpower and financial resources. Secondly, it is necessary to improve the overall payment system of medical insurance funds, clarify the list of Internet diagnosis and treatment services included in the scope of medical insurance payment, establish a cost-sharing mechanism, improve the Internet diagnosis and treatment charging policy, and attract more potential patients.

9.1.2. Change the Traditional Diagnosis and Treatment Methods, and Promote the Integration of Online and Offline Treatment

Medical institutions are encouraged to use Internet technology to break the limitation of space and time, share patient electronic medical records online and offline, and build an integrated online and offline medical service model covering pre-diagnosis, during and after diagnosis. Doctors are encouraged to participate in network services in their spare time, and to give material rewards to doctors with high satisfaction evaluation. We will actively develop various online diagnosis and treatment functions, such as online appointment and registration, online drug purchase, online return visit, and satisfaction evaluation. By changing the diagnosis and treatment mode, more doctors and patients can participate in the Internet medical treatment, and fully enjoy the convenience and benefits brought by the Internet medical treatment. At the same time, measures are taken to ensure patient privacy [12].

9.2. The SO Combination: A Growth Strategy

9.2.1. Increase Government Macro Guidance and Standardize the Behavior of Internet Hospitals

On the one hand, extensive research is conducted to standardize the Internet hospital industry standards. On the other hand, raise the entry threshold of Internet hospitals to ensure the construction of Internet medical standards and improve the credibility of service quality; on the other hand, improve medical insurance policies to make Internet hospitals enjoy the same medical insurance policies as public hospitals and guarantee the legal status of Internet hospitals [13]. Finally, the supervision system of Internet hospitals should be formulated to ensure that the legitimate interests of patients and doctors are not infringed upon.

9.2.2. The Government Should Increase the Investment in "Internet + Medical Care"

Internet hospital is an important measure to promote the development of "Internet + medical and health care". As an emerging thing, in order to achieve long-term development, it still needs the strong support of the state and governments at all levels. First, strengthen the construction of cross-regional medical infrastructure. Second, improve the computer application level and information management knowledge of medical personnel. Third, we should encourage the combination of government investment with private capital and optimize resource allocation to achieve sustainable development.

9.3. WT Combination: Defensive Strategy

9.3.1. Daily Services and Improve User Coverage

Adhere to the people-oriented service concept, to carry out the whole life, the whole disease cycle of daily medical services. According to personal electronic health records and user needs, we will provide health knowledge popularization, disease screening and health consultation services in different life cycles. Internet hospitals mainly provide medical services mainly for chronic diseases such as hypertension and diabetes, and can provide patients with daily online monitoring, follow-up and drug inquiry services. Online prescriptions for common diseases and chronic diseases can be issued by qualified third-party institutions after review by pharmacists, which is convenient for patients and their families to obtain. To a certain extent, the closed-loop medical mode of "medical insurance" can be opened, and the coverage service will improve the adhesion of users to Internet hospitals.

9.3.2. Build an Internet Hospital Brand and Improve the Accessibility of Quality Services

While improving their own medical technology level and optimizing medical equipment, Internet hospitals should further do a good job in the popularization and promotion of Internet hospitals. First of all, Internet hospitals should improve their service awareness, publicize the use and convenience of Internet hospitals to the public, further improve their brand awareness, and create a quality image [14]. Second, build the competitiveness evaluation system of China's Internet hospitals. The evaluation is mainly based on the number of online patients and the post-treatment evaluation of patients, and aims to establish the benchmark of the Internet hospital industry, which is conducive to strengthening the communication between patients and doctors, increasing the trust of patients in doctors, and promoting the comprehensive development of the Internet hospital industry in multiple dimensions.

9.4. ST Combination: Diversification Strategy

9.4.1. Increase the Diversity of Service Content

At the present stage, the integrated application of "Internet +" AI services with clinical diagnosis and treatment and scientific research data is the top priority. By updating the production equipment of medical technology, and collecting the data of human body and uploading it to the cloud, Internet hospitals have changed the traditional consultation mode of "visual and auditory" in traditional medical treatment, such as intelligent medical image recognition, telemedicine, multidisciplinary consultation to improve the efficiency of medical service; wearable devices can also be used to obtain vital sign data and provide health detection and management for pregnant women.

9.4.2. Improve the Accessibility of Service Modes

We will actively develop online family doctor contract services, and provide residents with appointment referral, online health consultation, chronic disease follow-up, health management and other medical services, so that patients can enjoy high-quality medical services without leaving their homes. The number of designated pharmacies in Internet hospitals will be increased to improve the convenience of the masses to obtain medicines [15]. The Internet platform is used to push daily health care guidelines, healthy diet and other life tips to residents 'mobile phones to promote a healthy lifestyle and improve residents' health literacy. It provides easier and more rapid access to health guidance and much greater accessibility to health services.

10. Conclusion

Internet medical care is an area of China's medical reform during the 14th Five-year Plan period. With the support of mobile Internet, Internet of Things, cloud computing and big data technologies, Internet hospitals have changed the traditional medical service mode and become the blue ocean in the medical and health field. Medical management departments should speed up the introduction of relevant laws and regulations to create an environment for sustainable development. Internet hospitals should adjust their own industry standards, improve the industry norms, and guide the residents' concept of medical treatment.

As a supplement to medical resources, Internet hospitals can effectively change the current problems of difficult, expensive and "three long and one short", conform to the development trend of The Times, do a good job in the construction of Internet hospital system, provide better medical services, and help the strategy of "healthy China".

Funding

nomics Association in 2023: Research on analyzing the Development Trend and Countermeasures of Internet Hospitals based on SWOT (2023-WJMF-35).

Conflicts of Interest

The author declares that there is no conflict of interest.

References

[1] SWOT analysis of the development of Internet hospitals under the background of Healthy China Strategy [J] Song Yujuan; Wu Linsheng. The management of China's health services. 2021, 38(07).

[2] Establishment and Practice exploration of Internet hospital navigation nursing posts [J] Shen Mingyan; Feng Zhixian; Chen Xiang; Hu Yingyu; Sun Bingxue. The Chinese Journal of Nursing Management. 2022, 22(03).

[3] The Analysis and Countermeasures of Internet Hospital Development Environment Based on PESTEL Model [J] Wang Lei; Xie Yuhang; Yang Hailong; Ge Zhiqiang; Liu Rujia. Health quality management in China. 2021, 28(09).

[4] Internet hospital development situation analysis and countermeasure research —— Wuzhen Internet hospital analysis [J] Ji Lei; Liu Zhiyong; Yuan Yutang; Li Jiang; Li Xiaosong. The Chinese Journal of Health Information Management. 2018, 15(01).

[5] Analysis of influencing factors of Internet hospital development in China based on PEST model [J] Xia Shiyao; Hu Yinhuan; Deng Lu; Cheng Siyu. Chinese hospital. 2019, 23(09).

[6] Problem identification and countermeasures for the development of Internet hospitals [J]. Du Xuepeng; Wu Xiaodan; Jia Hongming. Health Economy Research, 2021(01).

[7] PEST analysis and countermeasures research on the development of Internet medicine in China [J]. Hua Huihui; Wei Shu; Wu Di; Li Zhiguang; Wei Chen. Health Service Management in China, 2020(11).

[8] Framework research on risk management in Internet hospitals [J]. An Jian; Liu Guodong; Liu Yong; Chen Xiaona; Yang Rui. Chinese Hospital Management, 2020(09).

[9] Risk analysis and control strategy of Internet hospitals [J]. Wei Mingyue; Cui Wenbin; Wang Shu; Yu Guangjun. China Health Resources, 2020(02).

[10] PEST-SWOT analysis of Cloud Hospital in China [J]. Li Yuchen; Liu Zhiyong. Chinese Hospital Management, 2019(04).

[11] Suggestions on the regulatory system innovation of the new model of "Internet +" [J]. Ma Jun; Ma Yuan. Administrative Management Reform, 2019(03).

[12] The current situation and regulation of Internet hospital development in China [J]. Wang Xiaobo; Li Fan. Health Economy Research, 2020(11).

[13] Application and development of "Internet +" reconstructing the new medical service model in research hospitals [J]. Li Mei; Jin Hongyan. Chinese Research Hospital, 2020(05).

[14] Advantages of Internet hospitals in patients' medical treatment: a systematic review [J]. Zhu Miping; Deng Chaohua. Health Service Management in China, 2020(06).

[15] Operation status and development ideas of Internet hospitals [J]. Zhou Li; Wu Qinqin; Liao Banghua; Wang Xueyan; Su Na; Yue Rongzhen; Lu Jia Jie; Liuyuan; Liu Ling; Shi Qing Ke; Wu Yongkang. Hospital Management in China, 2019(11).