

# Qingcheng TCM Medical Treatment and Health Maintenance Model -O2O Based

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## ABSTRACT

The large gaps among incompatible functionalities of hospitals, the senior home and the nursing centers for the elderly have been a very serious problem in our aging society. This paper provides an effective solution by integrating the resources of medical services, community, nursing centers, senior homes and tourism so that the allocation of medical resources can be optimized. Qingcheng Medical Treatment & Health Maintenance Model, an O2O service platform, connects all these institutions so that the pressure of the medical institutions is released and targeted services are provided to local residents and travelers who come here for health maintenance. This model also pushes forward the development of the related medical and service industries in the vicinity. By providing high-end services both at home and abroad based on the data management and research, Mt. Qingcheng is promising to become an international renowned resort of medical treatment and health maintenance.

**Keywords:** Medical Treatment & Health Maintenance industry, O2O model, Health Tourism

## 1. THE BACKGROUND

In recent years, the fast-growing aging population has made it very hard for people to get the needed services for medical treatment and continued care due to the fact that medical resources in China are very limited. Under huge pressure, the limited medical institutions have to shoulder almost all the treatment and continued care of the seriously ill patients. For the same reason and the high cost, people often tend to get the medical treatment only when the illness is far beyond the best opportunity for treatment, which increases the cost and pain for the patients, and the uncountable burden and loss for the country and individuals<sup>[1]</sup>. What's more, the seniors, affected by our culture, are unwilling and unhappy to live in senior homes and nursing centres. It is high in demand that they can get the needed professional medical services at home and in their familiar communities, which can be achieved by combining the medical services and health maintenance. And this reduces the cost and makes it possible for the elderly to recover, keep fit and enjoy high quality life in their own cosy home environment<sup>[2]</sup>.

### 1.1 The Rich Resources of Medical Treatment and Health Maintenance in the Area of Mt. Qingcheng

As a renowned AAAAAA tourist resort, Mt. Qingcheng, at the altitude of 720m with the forest coverage of 59.27%, has the best quality of air containing 22000 negative oxygen ions/cm<sup>3</sup> and water for health maintenance and postoperative rehabilitation. As one of the resorts of longevity named after the national assessment, the local average longevity at 77.1 is 5.7 years higher than that of the nation. Also, with very rich resources of traditional medicine, it is famous for the production of the best *Ligusticum Chuanxiong Hort*, *Eucommia Ulmoides*, *Phellodendron Chinese Schneid* and *Magnolia Officinalis*.

The hospitals in this area are many and at high levels. Dujiangyan Medical Centre, Dujiangyan Health Centre for Women and Children and Dujiangyan Hospital of TCM are at Level III. Dujiangyan No1. People's Hospital is at Level II. There are more than 13 other hospitals and medical institutions, 7 clinics trying to reach the standards of Level II. For the large market demand for the high-quality medical treatment of TCM, there is postdoctoral work station at the foot of Mt. Qingcheng specializing in the treatment of allergies and ocular diseases.

Apart from these resources, it has a culture and a long history for health maintenance. 1400 years ago, a famous doctor in Chinese history Simiao Sun practiced medicine and finished his book of Qianjin Yaofang, which contains one of the best prescription collections that has been practiced throughout the history and today [3]. As the "Garden of Chengdu", back in last century, people in and around Chengdu came here to rent houses for the summer, booming the development of private hostels which in turn attracted even larger amount of people to come to visit, stay for the summer or settle down. Hence many town and communities have been fully developed for this market demand, making Mt. Qingcheng a renowned resort of tourism and health maintenance.

## 2. THE MANAGEMENT AND SERVICE MODEL OF QINGCHENG MEDICAL TREATMENT & HEALTH MAINTENANCE

To comply with the vibrant trend of national development of health maintenance industry, it is the most fundamental step to build a network of medical institutions and a platform of managing the service information about medical treatment and health maintenance (M&H) so as to run the related business [4]. This whole system helps improve the work efficiency, reduce the cost of time and labor by matching the services of the medical institutions to the demands of the local communities. To maximize the balance between the supply and demand, it collects and manages the digital health information of the seniors, the online subscription and feedback of medical services for people at their homes, and even for the timely interference of the chronic diseases.

On this platform built by the Institute of Qingcheng Medicine, it provides packaged services consisted of famous doctors, teams of doctors for providing medical services at people's homes, and customized services. With the interconnected, bigdata-backed smart devices and wearables, this platform is making efforts to establish a 15 min-service-circle under the principle that people ask their family doctors for help in the cases of ailments and the platform helps them find experts in the cases of serious diseases. By this model, the medical treatment and health maintenance, the resources of the elderly care, continued care and medical service are fully integrated around the communities so that it becomes possible to provide the individualized and customized services for those who need post-operative rehabilitation, post-operative TCM recuperation, recovery, or continued care without having to leave their own familiar living environment [5]. In return, these services can become progressively more professionalized and totally change the present state that the elderly care services are very small in their coverage and lack of variety in their mode of services. It solves the current problems of the hospitals being unable to provide maintenance services and the senior homes unable to provide medical treatments [6].

### 2.1. The Connection between Communities and the Medical Institutions

At present, the institutions that provide both medical treatment and services of health maintenance are very few and too expensive to meet the market demand. To solve this problem, it is not about building hospitals and senior homes, but about how to optimize the service efficiency. Like this model, it brings big data, cloud platform and artificial intelligence together to ensure the effectiveness of the smart service mode for the society. By sharing the information on this platform, including the databases of the government and medical institutions, data mining for the connection between the medical treatment and health maintenance becomes possible for the smart integration and real-time inquiry of medical records. There no longer exists the obstacle of getting information from different institutions, but only the opportunities of improving the quality and efficiency of the services [7].

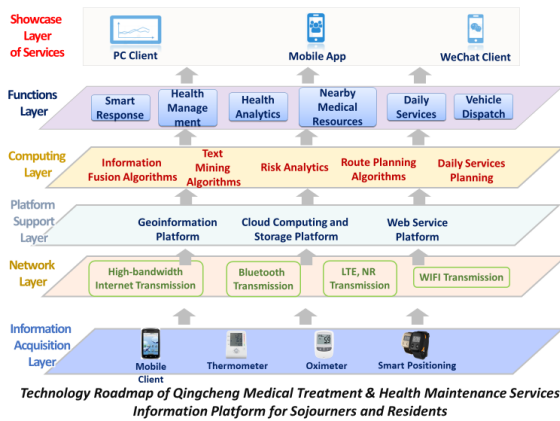
The "combination of medical treatment and health maintenance", as a new model, makes it a reality to take care of the daily life of the seniors, tend their mental health, and provide them with the needed medical protection apart from the professional medical treatment, recovery, continued care and hospice care [8]. This model especially benefits those seniors who suffer from chronicle and senior diseases, and those who have lost their capability of independent living. On the whole, the life quality of the seniors is largely improved and ensured.

### 2.2. Providing Services through the Platform

Integrating multiple layers of resources for the services of medical treatment and health maintenance between different institutions of all the related industries, the platform enables them to share the information so that there is great force to push forward a sustained, fast and stable development [9]. With all the smart devices working together to monitor the exercise, heart, blood pressure and sleep of the individuals to collect the real-time data, the comprehensive data hub of the platform enables different institution to better use the data from all dimensions about client's health conditions and hospital records for more individualized and customized services, which highly improve the effectiveness and efficiency of the work.

With the help of big data analytics and cloud computing, the platform is able to precisely track and supervise the client's health status, customize services including but not limited to doctor's diagnosis, postoperative rehabilitation, health counselling and guidance according to the needs of the client, achieving the goal of applying the O2O model to individualized health maintenance service framework [10]. By bridging the databases of local government and medical institutions, health maintenance service providers can better meet with market needs. As a result, the precise services provided increase the favourability of the clients, reduce the cost of time and labour for those who come here either for the medical treatment or the services for health maintenance.

Naturally the size of the market, the quality and the return are all largely boosted.



**Figure 1:** Tech Roadmap of Qingcheng Medical Treatment & Health Maintenance Services Information Platform for Sojourners and Residents

### 2.3. O2O Model Drives the Development of the Service Industries in the Vicinity

On this O2O platform, the online marketing and consumption can boost sales and operation of offline stores. Modules such as health maintenance services info, service reservation, rehabilitation counselling push the offline orders such as chronic disease diagnosis and adjustment, postoperative rehabilitation and health risk management to the service centres and outlets, which in return direct online clients to consume in brick-and-mortar stores. The strengths of applying the O2O model are plenty. When doing business online, big data and machine learning can help push individualized promotion notifications to attract more consumers and analyse their spending habits to generate user portraits for each of the consumers. Individualized promotion can not only reduce advertising costs but also increase the client favourability to the brands, which is crucial to promoting new services and for stores to rapidly achieve the sales of new products and services.

By implementing the latest network security technologies such as block chain, transactions can be well recorded, protected and non-tamperable. A consumer support system - caring, active, and responsive- can help the industries know their clients better. An online service platform from which consumers can browse, choose and reserve saves the time and efforts of both consumers and service providers. Overall, an online service platform that monitors, supervises the health status of the clients and at the same time provides secured online services that promotes offline stores and service centres, is the cornerstone of the O2O medical treatment and health maintenance service model <sup>[11]</sup>.



**Figure 2:** O2O Model for M&H

## 3. DEVELOPING QINGCHENG INTERNATIONAL CLUSTER OF MEDICAL TREATMENT & MAINTENANCE SERVICE INDUSTRIES

For this purpose, Sichuan province established Tianfu Qingcheng Resort for Medical Treatment and Health Maintenance in May 2019, with the foundation of the international renowned tourist resorts and a target of developing the industries oriented to tourism with “the combination of the medical treatment and health maintenance”. Qingcheng Medical Treatment & Health Maintenance Services Information Platform for Sojourners and Residents, with the experiences drawn on other countries, aims to push forward the development of this area into a high-end resort that not only integrate the medical treatment and research about the complex diseases but also push and promote the development of related industries providing services online and offline based on big data such as post-operative rehabilitation, health maintenance, medical supplies and equipment, and tourism. The successful experience in the treatment and maintenance with TCM, and the experienced doctors connected on this platform will serve as excellent examples to show to and attract people all around the world to this place. In the long run, Mt. Qingcheng is going to be an all-inclusive resort for fun, health maintenance and special effective treatment of complex diseases.

## 4. CONCLUSION

With the ideology of TCM "preventative treatment" fully implemented in Qingcheng Medical Treatment & Health Maintenance Model, it is aimed to develop this platform for accurate and scientific solutions for individuals along with the concerted efforts from the institutions of medicine, senior homes, elderly care centers and communities <sup>[12]</sup>. By O2O, it provides the needed services of medical treatment or maintenance efficiently for local residents and sojourners. With the growing related industries, Mt. Qingcheng is becoming an attractive resort for medical treatment and health maintenance both at home and abroad.

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