

"FAST MEDICINE DELIVERY" PHARMACEUTICAL E-COMMERCE

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ABSTRACT

To further solve the problem of people's difficulty in accessing medical services and lack of necessary medical knowledge, pharmaceutical e-commerce platforms have started to develop. At the same time, as the government continues to speed up the process of public hospital reform and improve and regulate the relevant industry laws and regulations, the external environment for mobile medical APP usage will be optimized and the risk factor will be reduced to gradually dispel patients' doubts about using it. But the more crucial and core thing is that mobile medical apps should practice their own "internal kung fu". Only through continuous reform and innovation of the mobile medical application itself can it give full play to its advantages and potential and truly solve the problems of China's traditional medical industry. This business design outlooks the prospect and development of pharmaceutical e-commerce platform.

Keywords: Pharmaceutical, E-Commerce Platform, Drug Delivery, Electronic Medical Records, Archive Intelligent Medical.

INTRODUCTION

"Fast Medicine Delivery" E-Commerce Co. centered on the direction of drug takeaway, the two main business directions of self-managed health care products, cosmetics and other items as well as direct sales of over-the-counter drugs and some prescription drugs by allied businesses, the information system based on electronic medical record cards and health management files, the comprehensive query of illnesses and online consultation with physicians and pharmacists as auxiliary functions, to create a multi-functional comprehensive medicine app, to effectively find ways to make up for the lack of the current pharmaceutical market and build a smart medical industry chain.

INDUSTRY ANALYSIS

PEST Macro Environmental Analysis

Political and legal environment (Politics)

State control, government guidance, policy guidance has become the right and left force for the development of China's pharmaceutical e-commerce, along with the development of China's pharmaceutical e-commerce all the time.

(1) Changes in relevant laws and regulations

In the past 15 years of development, the state control of pharmaceutical sales on the Internet is mainly divided into three categories: the qualification requirements for online pharmaceutical distribution enterprises, the network sales of prescription drugs and non-prescription drugs, and whether third-party logistics involved in the distribution of drugs. From the beginning of the millennium, with the continuous penetration and influence of Internet application technology and information technology in domestic enterprises, coupled with the traditional pharmaceutical industry revealed layers of price increases, gray profits aggravated the problem, the state began to advocate China's pharmaceutical industry to actively use modern e-commerce information technology, to reduce the cost of drug distribution orientation.

(2) Policy regulations under the current situation

At present, the biggest obstacle for pharmaceutical enterprises to engage in e-commerce is the high entry threshold of e-commerce pharmaceutical platform and the unstable related policies. The Interim Provisions on the Approval of Internet Drug Transaction Services clearly stipulate those enterprises that carry out online drug sales through the Internet must have both certificates, i.e., "Internet Drug Information Service Qualification Certificate" and "Internet Drug Transaction Service Qualification Certificate". However, for e-commerce enterprises that only provide a third-party trading platform, there is no clear provision for the need to hold dual certificates to carry out online drug sales. In addition, pharmaceutical e-commerce companies are required to comply with the GSP certification in addition to being equipped with licensed pharmacists to provide professional advice and solve problems in the process of drug sales.

Economic Environment (Economic)

Under the new normal environment, the tertiary industry has maintained its growth, the electronic information industry has developed steadily, and the software industry has grown rapidly, which makes the macroeconomic environment favorable for the development of cell phone software industry. At the same time, with the aging of the population and the emphasis on health care, it is feasible to launch an app that allows people to get medicine, diagnose and learn about health care at any time.

(1) Macroeconomic situation: China's macro economy has entered a new normal

The National Bureau of Statistics released the national economic operation in 2020, which showed that the gross domestic product (GDP) in 2020 was 636,463 billion yuan, an increase of 7.4%, the tertiary industry grew by 8.1%, the per capita disposable income of residents increased by 8.0% in real terms, and the annual contribution of final consumption expenditure to GDP growth was 51.2%.

(2) The development of tertiary industry: the rapid development of tertiary industry

According to the data of National Bureau of Statistics, in the first quarter of 2020, the added value of tertiary industry was 7,260.5 billion yuan, an increase of 7.9%. in 2019, the composition of three industries - the added value of tertiary industry was 46.9%, the contribution rate of tertiary industry to GDP was 47.6%, and the added value of tertiary industry reached 275,887 billion yuan. in the first quarter of 2019, the added value of tertiary industry (cumulative value) reached 7,260.53 billion yuan. Comprehensive analysis shows that in 2021, China's tertiary industry will further increase its proportion of GDP and develop rapidly.

(3) Electronic information industry policies and trends

① "Internet+" helps development, and the status of information consumption is increasing

The strategic status of information consumption will be further enhanced to strengthen its role in upgrading the consumption structure and transforming the information technology industry, helping China's economic development in the new normal era, and "Internet+" will become a gas pedal to promote industrial integration.

② The potential of the pharmaceutical e-commerce industry is huge

Since the reform and opening up, with the improvement of people's living standards and the growing demand for health care, the pharmaceutical industry has been maintaining a relatively fast development rate, from 1978 to 2000, the pharmaceutical industry output value increased by an average of 16.6% per year, becoming one of the fastest growing industries in the national economy.

Social environment (Social)

(1) The scale of China's Internet users and the penetration rate of the Internet are increasing year by year

With the development of the Internet, online shopping has become one of the common online behaviors of Chinese Internet users, and the penetration rate of online shopping users has been increasing, which is one of the main reasons for the rapid growth of China's online shopping market.

(2) The structure of Internet users is gradually getting older and the demand for medical consumption is increasing

According to international standards, an aging society is reached when the proportion of people over 65 years old exceeds 7%. At this stage, China is already in an aging society, and the trend is accelerating. Due to the decline of physical functions, the elderly have a greater need for medical care. Therefore, the demand for medical care will grow exponentially in the future, and medicine is an important part of it, which will provide inexhaustible development momentum and potential for the development of pharmaceutical e-commerce.

Technology

(1) Development of mobile network

Network is the basis of information transmission, and the development of physical network is the basis of Internet era and mobile Internet era. Starting from the fixed telephone network, the network has undergone tremendous changes. From wired to wireless, from tangible to intangible, behind it is the rapid development of communication technology. The frequency and intensity of people's use of cell phones has increased. This has laid the foundation for online shopping.

(2) Development of intelligent terminals

Through the analysis of the current situation of the smart terminal industry, mobile smart terminals have transformed into the key entrance and main innovation platform for Internet services, the platform for new media, e-commerce and information services, the most important hub for Internet resources, mobile network resources and environmental interaction resources, and their operating systems and processor chips have even become the strategic high point of the entire ICT industry today. The disruptive changes triggered by mobile intelligent terminals have unveiled the development of mobile Internet industry and opened a new

technology industry cycle. Mobile terminals have rich software systems and operating systems such as Windows Mobile, Android, IOS, and so on. Various programs developed on these operating system platforms have emerged, greatly satisfying individual user needs and laying a good foundation for the development of medical apps.

METHODS

APP structure and overall structure

Users can browse drug information through the APP and seek drug consultation services from professional pharmacists at any time, and place orders after users determine the required drugs, and the licensed pharmacists will provide safe drug guidance, and professional delivery personnel will deliver the drugs to their homes for free.

The core business of the project is divided into three modules, including the drug takeaway module, disease consultation module, and personal health file management module.

Drug takeaway module.

When users carry out drug takeaway, it is mainly divided into four steps: drug purchase → order → delivery → receipt of goods.

(1) Drug purchase

Users can browse the drug information through the cell phone client, determine the location of the user through GPS positioning system, and purchase the corresponding products according to the detailed introduction of the drugs, and also directly consult with the customer service personnel before making the purchase. The drug information includes the name, specification, efficacy, dosage, manufacturer, including the basic information of the company and the administrative license. In addition, the batch inventory of the drug can be checked to quickly lock the production and flow of the batch, and the evaluation system of the drug and pharmacy will be opened in the app, so that any user who has purchased a product from a pharmacy can evaluate the corresponding product and pharmacy after confirming the receipt of the product to provide reference for future customers. For unpleasant phenomena that occur during the experience, you can also directly contact the backstage staff, who will promptly approve whether the information is true and communicate with the pharmacy for poor service quality. In serious cases, the company will consider terminating the partnership between the two parties.

If the user still has doubts about the drug profile or wants to be able to suggest medication for his or her condition, he or she can contact the online physician professional for consultation and get the needed advice and information before making a purchase. The company will assemble a group of physicians with rich clinical experience and seniority to provide guidance and comprehensive analysis to help users choose the right medicine for their conditions.

There are many kinds of drugs in the app, so that users can find the information they need quickly and efficiently. The main categories are: cold and flu medicine, fever detoxification, hypertension, hyperlipidemia, diabetes, gastrointestinal discomfort, tonic, health food, children's medicine, gynecological medicine, male medicine, sex life, external skin use, rheumatism and bone injury, health care equipment, and household supplies. It includes all aspects of life medication and enriches the variety of drugs.

For the same medicine, the system will automatically compare the price of medicine in nearby pharmacies to help users choose the most affordable medicine. At the same time, it is also a monitoring process for the price of drugs to avoid some pharmacies from raising the price of drugs privately for profit.

When users select drugs, they can perform the operation of favorites, and some of the drugs will be unified in the favorites. At the same time, the system will automatically record the user's browsing history, so that the second search. Of course, users can delete the browsing history at any time to protect their privacy.

(2) Place an order

After the user has purchased the medicine, the medicine will be placed in the "shopping cart" waiting for the user to pay. Users can pay online through various channels, such as WeChat, Alipay, bank card, etc. In addition, the product also provides cash on delivery service to meet the different needs of users in all aspects.

If an invoice is required, it should be specified before payment.

(3) Delivery

① Good safety and security

The distribution process uses professional constant temperature and humidity holding boxes to ensure the quality of drugs, guarantee the professionalism and safety of the whole process, and maximize the proper delivery rate.

② Fast delivery speed

After the user places an order, we will immediately send someone to deliver the medicine to the user, rain or shine, within 1 hour in the service coverage area. After confirming receipt, users can also evaluate the service quality of the delivery person and the speed of drug delivery to increase the monitoring of each link and increase service quality.

③ Protecting customer privacy

In terms of privacy protection, a four-fold protection initiative is adopted.

Delivery

The first blackout bag packaging (drugs are sealed in environmentally friendly blackout bags, waterproof, moisture-proof, light-proof, anti-voyeurism); the second thick paper bag packaging (using completely opaque thick paper bags to ensure that drug information will not be found); the third self-adhesive seal (thick paper bags are densely closed at the seams, tight protection); the fourth delivery information protection (all display outside information are not displayed ordering information, privacy Absolute security);

Receipt of goods

After the goods are delivered, customers can inspect and accept the goods on site, and for goods that are unsatisfactory or do not match the description, they can return and exchange the goods free of charge until they meet the customer's requirements.

After the customer has inspected and accepted the medicine, he or she signs the pick-up slip as proof of the transaction.

Disease consultation module.

A cooperative relationship is established through a mutual choice of both parties. For example, the company will take the initiative to communicate with famous doctors from all sides and invite them to the physician advisory board. At the same time, doctors can also register themselves, attaching their medical experience and references, and the staff will decide

whether to approve the doctor's entry into the panel after a rigorous review.

Users can see all doctors' basic information, biographies, research propositions, etc. in the corresponding functional area, and choose more authoritative professionals to provide consultation services for them.

The system automatically matches the information of doctors with different medical conditions to give users more authoritative advice and answers to their questions. Doctors can separate their work and private time through the "Fast Medicine Delivery" APP to establish a deeper and closer relationship with their patients, and provide special follow-up, tracking, communication and retrieval functions to better manage their patient base. Patients can establish long-term and stable contact with doctors they know and trust through cell phone clients, and have sufficient time and opportunities to communicate with doctors, directly solving the communication shortcomings of traditional outpatient clinics; at the same time, avoiding all kinds of problems caused by the lack of actual contact and diagnosis in online light consultation.

At the same time, doctors can also publish patient resources through the personal page of doctors in the "Fast Medicine Delivery" APP, and patients can directly view the relevant notes after adding doctors, avoiding doctors repeating the same information with different patients.

Personal Health Record Management Module.

Health management is to establish a health file based on the results of the health starting point, give an assessment of the health status, propose a personalized health management plan, and provide one-to-one tracking management and services by professional health managers, so that customers can get comprehensive health maintenance and protection services from multiple perspectives, such as psychology, environment, nutrition and exercise, etc., and obtain the maximum health benefits with minimum investment; its basic process is to The 21st century is a century of rapid technological development, and the introduction of information technology into health management has brought profound changes to health management services. Health management informatization construction has been necessary to realize the demand for health management services and management innovation.

Users can upload the results of examinations, prescriptions prescribed by doctors, results of physical examinations, etc. in real time on this app, and create an exclusive electronic medical record or health file on the app, which can better explain their health status and medication history to doctors during future visits and provide help for treatment.

The collection of data can be handled by treating one illness at a time with a diagnosis. For example, a cold may be followed up several times, and the medical records, prescriptions, and test results of these times are collected and grouped into a single unit for storage. Each unit is stored according to the time - disease name.

And for some chronic diseases, use charts to record key data. For example, for hypertension, a blood pressure-time medication chart can be used for recording. For example, for diabetes, you can use the blood glucose-time-medication chart to make a record.

When you go to the hospital or medical checkup center to do a comprehensive medical checkup, you can also upload the data to the mobile client in time. If some data is abnormal, you can check again to exclude the influence of chance factors.

The system will summarize the valid data and establish a file, so that the user can have the previous indicators for reference in future regular special examinations, and judge the progress, to revise the intervention measures (for example, some people have high blood sugar, we will recommend that they control their diet. Reduce the intake of sugary starchy foods and increase the amount of exercise, if their long-term blood glucose level is lowered, but it is not healthy to drop too low, then the expert physician will recommend to increase the daily sugar intake as appropriate). The profile is scientifically analyzed and personalized health recommendations are made at the face of the profile. The specialist will consider several perspectives, including clinical medicine, preventive medicine, physiology, and psychology. Through the physical examination may diagnose certain diseases, in addition to clinical treatment may also need to change the diet and work and rest to cooperate, the effect will be better; or may be blood tests, urine tests are not abnormal, there is no disease, but the height and body mass index is far from the normal value, is fat or thin on the long-term impact on health are different; or women have breast enlargement, or uterine fibroids, and so on, a variety of abnormal long-term down What are the possible hidden dangers and hazards, will be considered comprehensively.

Health management is not a short-term thing, but to make a longer-term assessment of the current general situation, and then propose interventions to improve it. Health management for each user includes the following: firstly, health information collection, i.e. collecting personal health and lifestyle-related information, discovering health problems, and providing basic data for evaluation and intervention management; secondly, health risk factor evaluation, i.e. making predictions on personal health status and development trend to achieve health warning, and providing a basis for intervention management and evaluation of intervention effects; finally, health This is the most substantial and important part, and the core of the whole health management process. This is the most substantial and important part of the whole health management process. Through the above process, we aim to improve health status, prevent the occurrence and development of chronic non-communicable diseases, improve the quality of life and reduce medical costs.

CONCLUSION AND FUTURE WORK

"Ltd. will build a pharmaceutical e-commerce company centered on the direction of drug takeaway, with the two main business directions of self-managed health products, cosmetics and other items and allied merchants selling over-the-counter drugs and some prescription drugs directly, with electronic medical record cards and health management files as the basis of the information system, and comprehensive inquiries about diseases and pharmacists consulting online. It will realize the virtuous cycle of pharmaceutical e-commerce, enhance its own brand influence, expand industrial coverage, not only improve 90% of the income of offline pharmacies, cut the city into 10*20 or 10*10 grids, covering 100-200 pharmacies in a city according to the actual situation, while promising "one-hour drug delivery". In addition, on the basis of building a telemedicine platform, on the one hand, we should provide rich and high-quality medical resources that are clearly certified, and improve the information on the qualification and curriculum vitae of doctors to gradually win the trust of patients, and on the other hand, we should strengthen the technical means to support and ensure that patients have the right to receive

medical care. Strictly manage database resources, ensure patient privacy and avoid patient privacy leaks, so as to truly realize the leapfrog development of medical mobile apps.

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