

Study on Development and Countermeasure of Medical Circulation Industry in China under New Healthcare Reform Background

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Abstract Based on the status quo and characteristics of pharmaceutical circulation industry in China under the background of new healthcare reform, this article does a profound research about the development countermeasure of pharmaceutical circulation industry for further development, and points out that China has to establish a unified industry standards and a national distribution system to develop modern pharmaceutical logistics. It sets up a province-city secondary distribution system, through comparing it with the other two distribution mode, drawing a conclusion that the secondary distribution system is feasible. Besides, the paper holds that large pharmaceutical wholesale enterprises should increase their level of information and small and medium-sized enterprises rapidly transition to develop third-party logistics (hereinafter short for 3PL) in the next round of competition, which possesses guiding significance for medical circulation enterprises to make plans.

Key words New healthcare reform; Distribution system; Standardization; 3PL

1 Introduction

At current, the existing problems of pharmaceutical distribution industry in china including lack of industry standards, the low concentration ratio, and the backward pharmaceutical logistics level, and so on. With the emergence of China's new healthcare reform policies, the medical circulation enterprises would confront with a series of opportunities and challenges. Therefore, in the new healthcare reform time, improving the logistics management level through establishing reliable and effective pharmaceutical logistics system to promote sustainable development of medical circulation enterprises has become the urgent problem to solve.

2 The Characteristics of Pharmaceutical Distribution Industry in China

2.1 Low standardization

China has not had a unified drug code. A unified standardized drugs code helps establish a tracking system of drug quality and an accountability system. As long there is no unified standardized drugs code, pharmaceutical companies, hospitals and large chain pharmacies face many unnecessary troubles. Moreover, lack of logistic standard, such as the standard of pharmaceutical logistics containers, drug packaging and drug storage tray, has become a major obstacle which constraints the standardization, high efficiency, internationalization development of medical logistics (Zhu Xiaoying et al, 2009).

2.2 Mergers and acquisitions lead to increased industry concentration

During the last year in which the new health care reform has been implemented, China's pharmaceutical market has undergone significant changes, and the pharmaceutical industry concentration has been further enhanced. The state-owned pharmaceutical enterprises relying on their industry status and the resources superiority make large-scale mergers and acquisitions, which improve industrial chain and enhance core competitiveness. After the acquisition of Beijing pharmaceutical CO., Ltd., China Resources Medications Group Limited became the top three pharmaceutical companies in China. The other two companies are China National Medicines Corporation Ltd. and Shanghai Pharmaceuticals Holding Co., Ltd.

2.3 Small and medium-sized enterprise composition strategic alliance

As the pharmaceutical market getting smaller, the business of small and medium-sized enterprise is more difficult. Because of their small size and shortage of resources, it's difficult for them to do mergers or acquisitions like state-owned enterprises, so they generally take composition strategic alliance. Henan Shengguang Group Pharmaceutical Logistics Co., Ltd is the representative. It's a large-scale pharmaceutical circulation enterprise regarding the pharmaceutical wholesale as major, retail chain, hospital custodian business as minor. It took a unified procurement and uniform distribution way to combine 108 pharmaceutical business units as a stock company.

2.4 Significantly expanded the scope of distribution network, countryside needs to be covered

After the past year, accompany with the concentration ratio improvement, pharmaceutical

circulation enterprises significantly expanded the scope of distribution network. According to the Ministry of Public Health, till to February this year, there are 31 provinces that have elected its own regions to implement essential medicine system. The regions add up to 1020 accounting for 35.7% in the whole country. However, while enhancing coverage, the "antennae" of pharmaceutical distribution network yet extend to basic medical units such as village clinics, which are the focus of the market after the implement of essential medicine system. So, increasing the coverage to basic medical units is the development trend of pharmaceutical distribution companies.

2.5 Low levels of logistics, lack of modern logistics and distribution systems

The construction of logistics center is still in the primary stage of China's pharmaceutical circulation industry. Though China National Medicines Corporation Ltd., Jointown Pharmaceutical Group, and so on, have already established several logistics centers, but supporting role between logistics center and logistics center, logistics center and distribution center is not obvious and the benefit of distribution system has not played. Classification of the logistics centers relationship hasn't established. It does not make the large-scale logistics centers, distribution centers and distribution centers a reasonable match. Selection of logistics management information system is also still in its infancy. Logistics management information platform has not established, lacking of modern pharmaceutical logistics distribution system.

As can be seen from the above analysis that China's pharmaceutical distribution market is moving in the direction of the high concentration ratio, large state-owned pharmaceutical enterprises have had distinctly advantage, and the coverage of distribution network has expanded significantly. But generally speaking, the concentration ratio of pharmaceutical circulation market in China is still low, according to the figures of Chinese Medicine Trade Association: currently China has more than 13,000 existing wholesale business, 90% of which is small businesses; only 491 enterprises whose sales is more than 50 million Yuan, of which the market share of top 10 is only 36%. While the top three's market share is more than 90% in the U.S. In contrast, the market concentration ratio of China pharmaceutical circulation industry needs to be significantly increased. In addition, the modern logistics technology and information technology should be strengthened too. Although there are enterprises such as Jointown, with a high degree of information and application of logistics technology, the overall level is low. Finally, lack of specification lead to obstacles and the unclear direction to the development of pharmaceutical industry, and industry standards urgently need to be established.

3 Development Countermeasures of Pharmaceutical Circulation Industry

The level of logistics modernization is not only a basis be selected as medicine distribution enterprise, but also as a key factor restricting its further development. At present, there is a big gap between china and advanced countries in pharmaceutical distribution industry. How to promote China's pharmaceutical logistics towards scale, specialization, information, automation, to achieve the modernization of China's pharmaceutical logistics industry, international, and this paper puts the attention to the following aspects:

3.1 Make industry standards as soon as possible

Standard is norm, is the condition of market access. If there were no standardized, pharmaceutical distribution companies would only standstill, or the good development of modern pharmaceutical logistics, that is contrary to the introduction of new medical reform policies and essential medicine system of mind. So it should make industry standards as soon as possible from the following aspects:

(1) Make a clear definition to what are the pharmaceutical wholesale enterprises, pharmaceutical retail chain Enterprises, and pharmaceutical logistics enterprises eliminating some unqualified enterprises.

(2) Make unified national pharmaceutical bar code, radio frequency identification codes, packaging unit, storage unit, storage conditions and the EDI standards reducing obstacles, and improving circulation efficiency.

(3) Make norms in detail about logistics technology and information technology using in pharmaceutical logistics enterprises to ensure the safety of drugs in circulation.

(4) Make the pharmaceutical third party logistics enterprises legalized as soon as possible, regulate access condition, promoting pharmaceutical industry sustainable development.

3.2 Construction of the modern pharmaceutical logistics distribution system

The current implementation of the essential medicine system taking province as a unit, each province makes delivery of essential medicines in the way of self-tender. Essential medicines system has

clear eligibility requirements to the distribution enterprises, and limits circulation link being two in the maximum, but it has no clear requirements to the distribution system, nor the overall planning and arrangement for the national delivery system. Therefore, it has caused market confusion and low efficiency. In order to improve efficiency, implement large-scale distribution, and reduce distribution costs indeed, based on full study, according to the actual situation of China's pharmaceutical industry, it's an ideal choice to form a first grade logistics center and second distribution centers distribution system (Niu Zhengqian, 2003), this paper proposes a reasonable province-city secondary distribution system, as shown below (Wang Zheng, 2010):

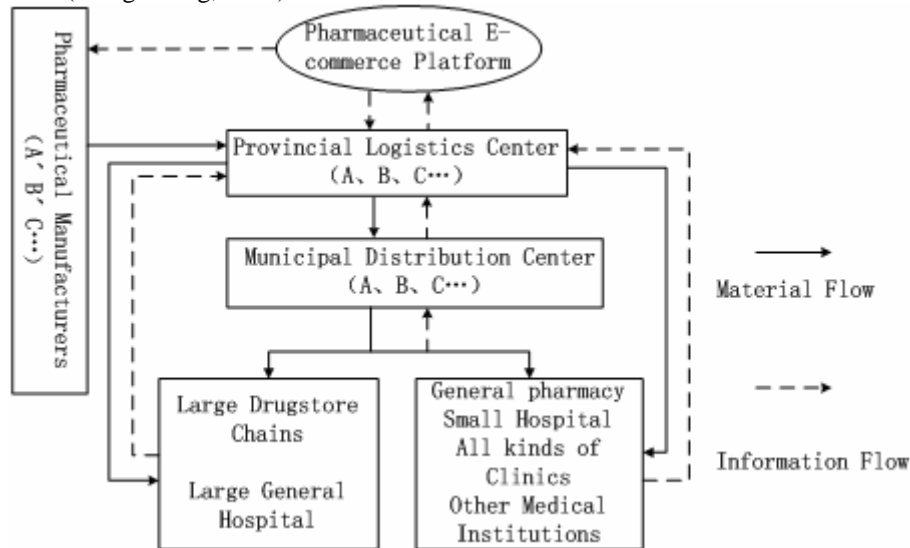


Figure 1 Province-city Secondary Distribution System

The so-called provincial medical logistics center is a large-scale cross-regional medical logistics center playing as the first grade distributors that can be constructed alone or combined by the provincial large pharmaceutical wholesale enterprises, manufacturers, and retail chains which are selected as distributors of essential medicine system. As the first link into the circulation, they play a connecting role, on the one hand they connect the municipal distribution center, on the other hand, through their own distribution network covering the whole country, directly correspond to the hospital, chain stores, community health services such as primary health care institutions. To the municipal distribution centers (second distributors) mainly for those remote regions which not covered by provincial logistics centers, use their own distribution network to transport all kinds of medicines to hospitals and basic medical institutions. As a result, this system will reduce the wholesale level pharmaceutical wholesale enterprises, through the distribution center network directly distribute into the terminal market, and effectively realize the flattening of medicine distribution channels (Song Hua, 2005).

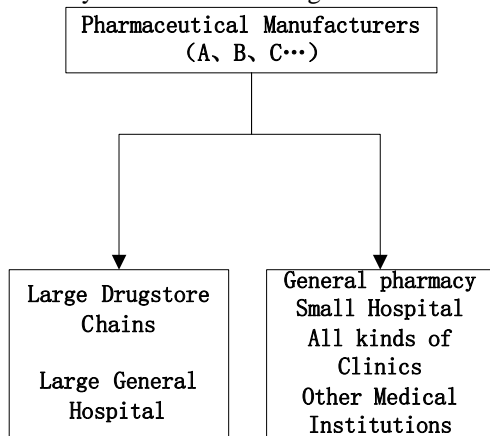


Figure 2 Suppliers Direct Distribute System

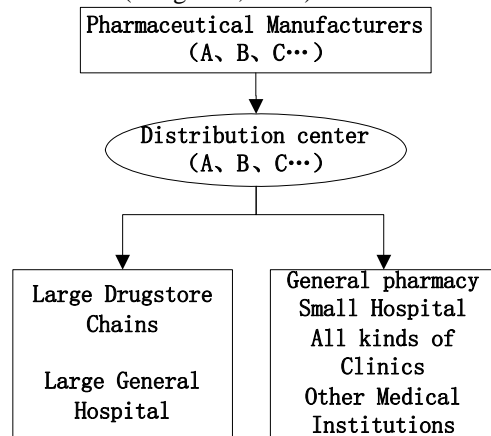


Figure 3 One Middle Distributor Distribution System

Figure 2 and Figure 3 are current distribution system in china's pharmaceutical circulation market.

Compared with these two systems, the province-city secondary distribution system has advantage in some aspects as shown in the following Table 1:

Table 1 Comparison of the Three Distribution System

Delivery mode	First	Second	Third
	Suppliers directly distribute system	One middle distributor distribution system	Province-city secondary distribution system
Characteristic	All bid-winning suppliers make distribution directly	All medicine first through suppliers to about 40 selected distributors, then to all basic medical units	Manufacturers send medicine to several provincial distributors, then the first grade distributors send medicine directly or through secondary distributors to the basic medical units, the two jointly and severally liable
Efficiency	suppliers generally do not have logistics conditions, so the efficiency is very low	Most enterprises do not have modern logistics, and efficiency is low	Big scale distributors normally have modern logistics capability, so its efficiency is high.
Timeliness	Difficult to timely supply	Difficult to timely supply	Can do timely supply
Cost	small Varieties, small dosage, dispersed medical institutions, and the cost is highest	No scale effect, contrary to concept of market channel integration , and higher logistics cost	Scale effect, high concentration, and low cost
Coverage	Can not cover all regions	The distribution cost is very high in Remote Areas, so wholesalers may not choose this areas and the coverage is small	Distributors who assume all the responsibilities of distribution can guarantee all the coverage; secondary distribution can ensure the coverage of remote areas
Safety Supervision	Suppliers' distribution is not professional or difficult to supervise	Most of the distributors do not have the logistics condition; profession is irregularity, difficult to supervise.	Specialized, good conditions and easier to supervise.

Select a certain number of distributors in each province, both provincial and municipal distributors must meet the related conditions. The number of them should be suitable, too small will not conducive to the formation of competition or improve service quality, while too big will not conducive to the formation of centralized, large-scale distribution, or increase the distribution costs. Through a clear duty and positioning: provincial (region, city) level distributor distribute medicine to medical institutions in the whole province (region, city), and municipal level distributor in its own region, to ensure the whole coverage in the province , avoid vicious competition and build a good sustainable development of pharmaceutical logistics distribution system.

3.3 Raising the information level of large wholesale company

For the large pharmaceutical wholesale enterprises having the survival license, the level of information is becoming a key factor whether they can successes in expansion and reducing the management cost. As a line links the upper and lower reaches, pharmaceutical wholesale enterprises need to build modern logistics, in which information is indispensable. Relying on its powerful information system large pharmaceutical wholesale enterprises can share information with hospitals, retail outlets, vendors, to supply them with stock, sale information and so on. Logistics information processing has become an important means to improve competitiveness. Therefore, the large pharmaceutical wholesale enterprises should accelerate to establish the e-commerce-based information platform to ensure the supply chain information flow, logistics, business flow, and funds flow smoothly.

3.4 Small and medium enterprises make transformation positively

The development of 3PL enterprises helps to improve the social pharmaceutical deliver system, promote professional division, and enhance the pharmaceutical industry's modernization. It not only greatly reduces the circulation link and circulation cost, but also improves the service level (Wang Yacan, Ru Yihong, 2007). 3PL is a relatively new business model in pharmaceutical industry in China, correspondingly lacking of logistics information platform, professional management method, which

brings an opportunity for these enterprises to transition to make 3PL business. There are three reasons as follows:

First of all, these enterprises are in an inferior position status at distribution of essential medicines. Because of its small size, limited distribution network coverage, it is difficult for them to get a further development. Without differentiation competition like 3PL mode, they would even be eliminated in the future, although they have got the license now.

Secondly, the essential medicines system gives strict rules that all selected distributors must be able to provide services for rural areas, but now most of companies don't have the ability to cover the whole countryside market, for the high cost, limited conditions. While the basic medical units are the key point of the new healthcare reform, market calls for professional companies to accomplish the mission. 3PL enterprises can just fill the vacancy.

Finally, "Shanxi vaccine incident" aroused people's wide concern at the quality and safety of drug. In this accident, the drugs went bad at the circulating link. This accident reminded public that there must have perfect modern logistics technology which only the professional 3PL enterprises provide just like temperature and humidity monitor technology during the storage and transport of drugs. To meet this demand, the professional 3PL enterprises are needed. So, it's a good opportunity for Pharmaceutical Circulation enterprises making the enterprise transition to Third-party pharmaceutical Logistics enterprise.

To sum up, medium-sized and small Pharmaceutical Circulation enterprises should seize the opportunity and transform to develop 3PL positively.

4 Conclusion

Under the background of the new healthcare reform, pharmaceutical distribution industry has undergone major changes. With the gradual implementation of new medical reform, it's still the general trend to improve the concentration ratio of the industry. The reorganization and integration of large enterprises, small and medium enterprises strategic alliances will continue. Finally will leads to several super largest pharmaceutical circulation enterprises appear. Under the environment of the new healthcare reform, all kinds of circulation enterprises not only knew about the background and development trend of the new healthcare reform, positioning, quickly to switching, seeking development, but also need to seize the opportunity to develop and be the winners in the competition.

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