
Original Research Article

The current situation and development trends of China's chronic disease insurance market

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Abstract: This article focuses on the chronic disease insurance market in China, analyzing the main challenges it faces, such as risk assessment, long-term claims settlement, and regulatory policies. It explores the development trends of the market, including the integration of health management and insurance, personalized program design, and the application of technological innovations. The study delves into innovative service models, covering comprehensive lifecycle health management, remote medical intelligent monitoring, rehabilitation, and long-term care services. The research highlights that through multi-faceted efforts, chronic disease insurance will play an important role in economic security and health promotion, helping to advance the healthcare security system in China to a higher level.

Keywords: Chronic disease insurance; Integration of health management; Application of technological innovation

1. Introduction

Chronic diseases have become a major challenge to public health worldwide, with their incidence and prevalence continuously rising in China, placing a heavy burden on individuals, families, and society. Against this backdrop, chronic disease insurance, as an important component of the healthcare security system, is receiving increasing attention. This study focuses on the current situation and development trends of the chronic disease insurance market in China, aiming to comprehensively analyze the market landscape, product characteristics, and profiles of participants.

The article first discusses the main challenges faced by the chronic disease insurance market, including difficulties in risk assessment and pricing, long-term claims pressure, and regulatory policy constraints. It then delves into the future development trends of the market, with particular emphasis on the integration of health management and insurance, the design of personalized insurance plans, and the application of technological innovations in products. This study will also explore innovative directions for the service models of chronic disease insurance, including comprehensive lifecycle health management, telemedicine and intelligent monitoring, rehabilitation, and long-term care services. Through systematic review and in-depth analysis, this study aims to provide valuable insights for insurance companies, policymakers, and researchers, promoting the healthy and sustainable development of the chronic disease insurance market in China and contributing to the establishment of a more comprehensive healthcare security system.

2. Current Situation of the Chronic Disease Insurance Market in China

2.1. Market size and coverage rate

The chronic disease insurance market in China has shown a trend of rapid growth in recent years. With the intensification of population aging and the increasing number of chronic disease patients, the demand for chronic disease insurance continues to rise. According to statistics, the total expenditure in China's chronic disease

market reached 4,678.8 billion yuan in 2021, and it is expected to reach 5,380.6 billion yuan in 2022. In terms of coverage rate, the proportion of chronic disease prescriptions among all medical industry prescriptions has been steadily increasing, with an estimated share of 61.1% in 2022. This indicates that the coverage rate of the chronic disease insurance market is gradually improving, but there is still significant room for growth.

2.2. Analysis of major product types

The main product types in China's chronic disease insurance market include basic medical insurance, commercial medical insurance, out-of-pocket health expenses, and other types of expenses. Among these, basic medical insurance and out-of-pocket health expenses constitute a large proportion, accounting for 34.90% and 33.28% of the total medical expenditure on chronic diseases in 2020, respectively, while commercial medical insurance has a relatively low share of only 4.58%. This reflects that the development of commercial insurance products in the market is still immature and needs further enrichment and improvement.

2.3. Overview of participants

The participants in China's chronic disease insurance market mainly include health management institutions, health check-up centers, medical institutions, offline pharmacies, insurance companies, and online medical service platforms. These participants provide services at different stages of chronic disease management, forming a diversified service system. Major competitors in the market include Ali Health, Ping An Good Doctor, and Meinian Health, which have strong competitiveness and market share in the field of chronic disease management. With the widespread adoption of internet technology, online chronic disease management platforms are gradually becoming an important part of the market, providing more convenient services for chronic disease patients.

3. Challenges facing the chronic disease insurance market in China

3.1. Challenges in risk assessment and pricing

Risk assessment and pricing for chronic disease insurance are the primary challenges faced by insurance companies. The complexity and long-term nature of chronic diseases make risk assessment exceptionally difficult. The pathogenesis of chronic diseases is complicated and involves multiple factors, including genetics, environment, and lifestyle, making it hard to accurately predict the risk of individual onset. The prolonged course of chronic diseases and the variability in disease progression increase the uncertainty in risk assessment. Furthermore, the rapid advancement of medical technology may lead to changes in treatment protocols and costs, further complicating risk assessment.

In terms of pricing, insurance companies face a dilemma of insufficient data. As chronic disease insurance remains an emerging field in China, there is a lack of long-term and comprehensive historical data to support accurate actuarial modeling. The significant differences in medical levels and costs across different regions also add to the complexity of pricing. Variations in patient behavior and compliance with treatment among chronic disease patients lead to substantial discrepancies between actual claims costs and expectations.

3.2. Long-term claims pressure

Chronic disease insurance faces the pressure of long-term claims. The characteristics of chronic diseases necessitate that related insurance products typically provide long-term or even lifetime coverage, placing continuous financial pressure and operational challenges on insurance companies. Chronic disease patients

require long-term medication and regular medical services, resulting in high frequency and prolonged cycles of claims. This increases the operational costs for insurance companies and raises demands for liquidity. Advances in medical technology and the development of new drugs lead to rising treatment costs that exceed initial pricing expectations. For example, the high price of targeted therapies for certain chronic diseases can cause a sharp increase in claims amounts for individual patients. This inflation effect in medical expenses poses a challenge to the long-term solvency of insurance companies. The trend of population aging exacerbates the pressure of long-term claims. As the insured individuals age, the incidence and severity of chronic diseases increase, leading to higher claims amounts and frequency. Some chronic diseases may trigger complications or lead to other diseases, further complicating claims processing.

3.3. Regulatory policy constraints

The development of the chronic disease insurance market also faces numerous constraints from regulatory policies. China has strict approval processes for health insurance products, resulting in long development cycles for new products, which limits the ability of insurance companies to rapidly respond to market demands. While this approval mechanism is beneficial in protecting consumer rights, it also suppresses product innovation to a certain extent, making it difficult for insurance companies to timely launch coverage solutions for emerging chronic disease risks. Regulations surrounding insurance companies' access to and use of personal health data are also stringent. Although these regulations aim to protect individual privacy, they restrict the ability of insurance companies to conduct precise risk assessments and design personalized products. In an era where big data and artificial intelligence are increasingly important, such restrictions may hinder the innovation of chronic disease insurance products.

The current regulatory framework also has some limitations regarding cross-sector collaboration. The effective operation of chronic disease insurance often requires cooperation between insurance companies, medical institutions, health management companies, and other parties; however, existing policies provide insufficient support and oversight for these collaborative models, increasing operational complexity and uncertainty. Tax policies are another important factor. Compared to some developed countries, China's tax incentives for individuals purchasing commercial health insurance are still lacking, which somewhat affects the attractiveness of chronic disease insurance products.

4. Development trends in the chronic disease insurance market

4.1. Integration of health management and insurance

The deep integration of health management and insurance is becoming a major development trend in the chronic disease insurance market. Insurance companies are gradually realizing that merely providing economic compensation no longer meets market demands. They are shifting their focus to actively managing health to reduce claims risks while enhancing customer value. This trend is reflected in several aspects. Insurance products are beginning to incorporate health management services, such as regular health check-ups, health consultations, and chronic disease management, creating a new model of "insurance + service." This approach helps to identify and intervene in health risks early, thereby increasing customer retention. Insurance companies are constructing health ecosystems by collaborating with medical institutions, health management companies, fitness platforms, and others to offer comprehensive health support to customers. This ecosystem facilitates comprehensive management from prevention and diagnosis to treatment, effectively controlling the incidence of chronic diseases.

Some insurance companies have started to explore dynamic pricing mechanisms based on health behaviors. By collecting customers' daily health data, such as exercise levels and dietary habits, premiums can be adjusted in real-time, incentivizing customers to maintain healthy lifestyles. The integration of health management and insurance is also reflected in innovative claims services. Insurance companies are now offering value-added services, such as chronic disease management guidance and rehabilitation advice, to help patients better manage their conditions and reduce the risk of complications. This trend transforms the traditional passive payout model of insurance, bringing new growth points to the chronic disease insurance market.

4.2. Personalized insurance plan design

With advancements in big data analytics and the diversification of consumer needs, insurance companies are beginning to move away from a "one-size-fits-all" product strategy in favor of more precise and flexible coverage options. This trend is primarily evident in the following areas. Insurance companies are now customizing insurance plans based on individual health conditions, lifestyle habits, and risk preferences. For example, they adjust coverage scope and amounts according to customers' family medical histories and occupational characteristics. Modular design has become a new trend, where insurance companies break down different types of chronic disease coverage and health management services into independent modules, allowing customers to freely combine them according to their needs, achieving true personalized customization. This flexibility meets the diverse needs of different customer segments and enhances the cost-effectiveness of the products. Dynamic adjustment mechanisms are now being introduced into personalized plans. Based on changes in customers' health status and lifestyle, insurance companies can adjust the coverage and premiums in real-time, ensuring that insurance plans consistently align with customer needs. Personalization also extends to claims services, with insurance companies offering differentiated claims processes and services based on different customers' disease characteristics and lifestyle requirements. For instance, providing home claims services for patients with mobility issues or arranging dedicated claims advisors for patients with specific diseases. This personalization trend enhances the customer experience and helps insurance companies control risks more accurately and improve operational efficiency.

4.3. Application of technological innovations in products

Technological innovations are profoundly changing the design, pricing, and service models of chronic disease insurance products. The application of artificial intelligence and machine learning technologies has significantly improved the accuracy of risk assessment. By analyzing vast amounts of health data, medical records, and lifestyle information, insurance companies can build more accurate risk models, achieving refined pricing and personalized underwriting, thus enhancing the competitiveness of insurance products and reducing operational risks for the companies.

The popularity of Internet of Things (IoT) technologies and wearable devices has made real-time health monitoring possible. Insurance companies are beginning to utilize smart wristbands, blood glucose monitors, and other devices to collect real-time health data from customers for dynamic risk assessment and personalized health management. This real-time monitoring helps in the early detection of health anomalies, providing a basis for dynamic pricing of insurance products. The application of blockchain technology has improved the transparency of insurance contracts and the efficiency of claims processing. Through smart contracts, insurance companies can automate claim payouts, shorten claims cycles, and enhance customer satisfaction. The immutable

nature of blockchain also increases the credibility of health data, helping to address information asymmetry. Virtual reality (VR) and augmented reality (AR) technologies are starting to play a role in health education and disease management. Insurance companies use these technologies to provide immersive health education and rehabilitation guidance to chronic disease patients, improving their self-management capabilities. The application of big data analysis and predictive models enables insurance companies to accurately forecast disease trends and changes in medical costs, optimizing product design and pricing strategies. These technological innovations enhance the value of chronic disease insurance products and provide new momentum for the sustainable development of the entire industry.

5. Innovations in chronic disease insurance service models

5.1. Comprehensive lifecycle health management

Comprehensive lifecycle health management is becoming the core of innovation in chronic disease insurance service models. This approach breaks through the limitations of traditional insurance, which only focuses on the disease phase, expanding the service scope to encompass the entire process from prevention and treatment to rehabilitation. During the prevention phase, insurance companies help clients identify potential health issues early through regular health check-ups, health assessments, and risk screenings. They provide personalized health guidance and lifestyle interventions to reduce the risk of chronic diseases.

In the disease management phase, insurance companies are no longer limited to passive claims processing but are actively involved in disease management. They offer professional medical consultations, medication guidance, and condition monitoring services to help patients better control their conditions. Insurance companies also integrate high-quality medical resources, providing clients with expedited medical access and expert consultation services to enhance treatment effectiveness. In the rehabilitation phase, insurance companies extend their services to later-stage disease management, offering rehabilitation guidance, psychological counseling, and support for lifestyle reconstruction. This comprehensive lifecycle health management increases the value of insurance products, helps control claims costs, and achieves a win-win situation for both insurance companies and clients.

5.2. Telemedicine and intelligent monitoring

The application of telemedicine and intelligent monitoring technologies is revolutionizing the service model for chronic disease insurance. Insurance companies utilize these technologies to overcome geographical limitations, providing clients with convenient and timely medical services and health monitoring. In terms of telemedicine, insurance companies collaborate with medical institutions to offer online consultations, remote diagnoses, and prescription refills for chronic disease patients. This not only improves the accessibility of medical resources but also reduces patients' healthcare costs and risks, which is especially important during special circumstances such as pandemics.

The application of intelligent monitoring technology allows for more precise and personalized chronic disease management. Insurance companies collect real-time health data from clients, such as blood pressure, blood glucose, and heart rate, by integrating with wearable devices and smart home technologies. After smart analysis, these data can timely identify health anomalies and trigger corresponding intervention measures. For example, if abnormal blood glucose levels are detected, the system can automatically alert the patient to take their medication or seek medical attention. The combination of telemedicine and intelligent monitoring also

enables early warning and intervention for chronic diseases. Through long-term data accumulation and analysis, insurance companies can predict health risks for clients and take preventive measures in advance.

5.3. Integration of rehabilitation and long-term care services

The integration of rehabilitation and long-term care services is an important direction for innovation in chronic disease insurance service models. With the aging population and increasing prevalence of chronic diseases, simple medical coverage no longer meets the comprehensive needs of clients. Insurance companies are beginning to include rehabilitation treatment and long-term care in their coverage, building a more complete health protection system. In the area of rehabilitation services, insurance companies collaborate with professional rehabilitation institutions to provide personalized rehabilitation plans for chronic disease patients, including physical therapy, occupational therapy, and speech therapy. These services can accelerate the recovery process, help prevent complications, and reduce the rate of readmissions.

Long-term care services focus on chronic disease patients who are disabled or semi-disabled, offering daily living assistance and professional medical care. Insurance companies integrate community resources and professional care institutions to provide clients with various options, including home care and institutional care. The introduction of smart care devices and remote monitoring systems enhances the quality and efficiency of care. Insurance companies are also beginning to pay attention to the mental health of patients and their families, providing psychological counseling and support services. This comprehensive approach to rehabilitation and care improves the quality of life for chronic disease patients and alleviates the financial and caregiving burdens on families.

6. Conclusion

This study provides an in-depth exploration of the current situation, challenges, and development trends of the chronic disease insurance market in China. In the face of challenges such as risk assessment, long-term claims settlement, and regulatory restrictions, the market is evolving towards the integration of health management, personalized plan design, and the application of technological innovations. Innovation in service models has become a key competitive factor in the industry, encompassing comprehensive lifecycle health management, telemedicine and intelligent monitoring, and the integration of rehabilitation and long-term care services. In the future, chronic disease insurance will not only provide economic security but also play an active role in disease prevention and health promotion, making important contributions to the establishment of a universal health security system.

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