The Evaluation of the Effect of the Critical Illness Insurance System on the Household Financial Burden

Yinxin Chen
Zhongnan University of Economics and Law, Wuhan, Hubei, China

Abstract: This study addresses the growing need to evaluate the effectiveness of China's Critical Illness Insurance (CII) system, highlighting gaps in existing research regarding its comprehensive impact on household financial burdens under evolving demographic and economic conditions. A qualitative research approach combining literature review, policy text analysis, and case study methods was employed to assess the system's operational mechanisms and outcomes. The study utilized data from empirical research, government reports, and insurance reimbursement records covering multiple Chinese cities and populations. Results indicate that while the CII system significantly reduces out-of-pocket medical expenses and alleviates poverty caused by illness, challenges remain in coverage disparities and income protection. These findings contribute to the theoretical understanding of healthcare social security systems and provide practical recommendations for enhancing policy design, aiming to establish a more integrated and equitable healthcare protection framework in China

Keywords: Critical Illness Insurance; Household Financial Burden; Healthcare Security System

1. Introduction

"No universal health means no comprehensive well-being for all." General Secretary Xi Jinping has stressed the need to ensure that the broad masses can access fair, attainable, and continuously coordinated health services nearby-including prevention, treatment, rehabilitation, and health promotion.

China's critical illness insurance (CII) system was established in 2012. *The Guiding Opinions on Carrying Out Critical Illness Insurance for Urban and Rural Residents*, issued that year, described the program as "an expansion and extension of the basic medical security system and a valuable supplement to basic medical protection," marking its formal launch. The 2015 *Opinions on the Comprehensive Implementation of Critical Illness Insurance for Urban and Rural Residents* signaled nationwide rollout. The 14th Five-Year Plan for Universal Medical Security (2021) called for improving and standardizing the urban-rural CII system and strengthening its linkage with basic medical insurance and medical assistance. In 2023, critical illness insurance reimbursements for urban and rural residents benefited 11.56 million people [12]. With an average reduction in financial burden of RMB 7,924 per person. By June 2024, the system covered about 1.2 billion people, achieving near-universal coverage.

Ongoing social changes, however, are steadily increasing public demands on the system. Recent trends include sustained shifts in population structure toward a moderately aged society; greater labor mobility and growth of flexible, new-economy employment that create gaps in benefit continuity; differentiated medical capacity across regions and easier travel that call for streamlined cross-region treatment procedures; and rapid advances in medical technology, devices, and pharmaceuticals that drive up medical costs. These factors indicate that while critical illness insurance has reduced household medical expenses, its effectiveness in lowering family financial burdens under evolving demographic and employment conditions requires further assessment and targeted adjustments.

For academic contributions, through reviewing and analysing relevant literature, it traces the evolution and practical implementation of China's CII system over its 13-year history. Furthermore, employing a qualitative approach in the form of a literature review, this study evaluates the impact of the critical illness insurance system on household financial burdens. This enriches the body of knowledge regarding the assessment of similar policy

implementations.

For practical relevances, The issue of healthcare provision for a large population remains a focal point of research within China's social security sector. As the nation navigates the critical developmental phase of the ‘Two Centenary Goals,' research into the CII directly impacts the vital interests of China's 1.4 billion citizens and, indeed, the fundamental welfare of populations worldwide facing comparable national circumstances.Furthermore, by synthesising prior empirical analyses of the critical illness insurance system's impact on healthcare burdens among urban and rural residents, it furnishes decision-makers with evidence for formulating scientifically sound and equitable healthcare policies.

In today's era of poverty eradication and building a moderately prosperous society, critical illness insurance plays an increasingly important role: it reduces poverty caused or exacerbated by illness and helps preserve the hard-won achievements of the anti-poverty campaign.This study employs literature review, case analysis, and policy text analysis to evaluate the effectiveness of China's critical illness insurance system in alleviating the actual financial burden on households.

2. Literature Review

2.1 The Burden-reducing Effect of the Critical Illness Insurance System

The critical illness insurance system eases household financial burdens through multiple channels: directly lowering out-of-pocket medical expenses, reducing debt, protecting vulnerable groups, and narrowing urban-rural disparities. Beyond these direct effects, it generates indirect economic benefits-raising household labor participation and income and preventing loss of earning capacity due to illness-thereby producing more sustained poverty-reduction outcomes.

Hu Yangmu et al. (2024) [1]and Chen Zhongnan et al. (2022)[2] both demonstrate that the critical illness insurance system significantly reduces the proportion of household healthcare expenditure, thereby alleviating the economic burden on families. The former employs empirical analysis, while the latter utilises CFPS data and a difference-in-differences model to confirm that critical illness insurance markedly lowers the probability of households falling into absolute poverty, effectively reducing instances of impoverishment and relapse into poverty due to illness.

Buchmueller (2005), reviewing historical literature on healthcare coverage and insurance expansion, concluded that the costs and benefits of extending health insurance coverage depend on how and to what extent it influences healthcare service utilisation. [6] The effectiveness of healthcare services enhances insurance benefits, thereby reinforcing the utility of insurance itself. In the context of critical illness insurance, this further amplifies its burden-reduction effects. Insurance coverage leads to varying increases in the number of outpatient and inpatient visits for both children and adults within households over a year. This increase is not attributable to declining health status but rather to insurance coverage making medical treatment more affordable. This also demonstrates that health insurance can reduce household financial burdens.

Wang Chaoqun et al. (2014) [8] conducted a foundational analysis using survey data from a major city in China to investigate the direct impact of CII on CHE among urban and rural households. Employing econometric models, they controlled for various demographic and economic factors to isolate the effect of the insurance program. Their findings were significant: participation in the CII scheme was statistically correlated with a lower probability of experiencing catastrophic health expenditure. This study provides concrete, micro-level evidence that CII serves as a functional buffer, protecting families from the most severe financial consequences of major illness.

2.2 The Operational Model and Development Direction of the Critical Illness Insurance System

Yue Wei et al. (2021) [9]utilised data from the China Household Finance Survey to examine the impact of health risks and medical insurance on household financial vulnerability from a liquidity perspective. Findings indicate that health risks significantly increase household financial vulnerability, whilst commercial medical insurance demonstrably mitigates such vulnerability. These studies elucidate the mechanism by which health insurance reduces household financial vulnerability by mitigating health risks and medical burdens, providing crucial empirical evidence for understanding

how health insurance influences household financial burdens through diverse channels.

Xu Xian (2025)[10] analysed the operational model of China's critical illness insurance, noting that its implementation through commercial insurance companies effectively bridges the gap between high medical expenses and basic health insurance. However, with population ageing, increased labour mobility, and technological advancements, critical illness insurance faces challenges such as rising medical costs and uneven regional fund reserves. In response to these challenges, the literature proposes multiple policy optimisation recommendations. These recommendations aim to further refine the critical illness insurance system, enhance its burden-reduction effectiveness, and ensure the system's fairness and sustainability.

2.3 The Limitations of Health Insurance

A singular focus on coverage expansion or pursuing rapid growth rates may lead to diminishing marginal returns on these benefits, or even produce adverse effects.

Sun, JL et al. (2022) [5]aimed to examine the impact of Social Medical Insurance (SMI) on poverty reduction (PR) in China. Considering the time-varying nature of factors, bootstrap Granger causality analysis across the entire sample and rolling window models within subsamples were employed to identify relationships between SMI and PR. Findings indicate bidirectional causality between SMI and PR during certain periods, influenced by healthcare reforms and pharmaceutical policies. Social medical insurance failed to exert positive effects on poverty reduction during certain periods. Consequently, the government must scrutinise the specifics of the critical illness insurance system and determine how to coordinate upgrades to other key components of medical insurance reform to align with the original, substantial role of healthcare security.

2.4 International Experience and Insights

Developed nations such as the United Kingdom, Germany, the United States and Singapore have all implemented comprehensive critical illness insurance schemes, which have been refined into multi-tiered healthcare systems featuring personal out-of-pocket expenditure caps and provisions for vulnerable groups. These experiences offer valuable insights for China's critical illness insurance system, including strengthening institutional integration and top-level design while ensuring fairness and sustainability.

3.The Evolutionary Developmnt of the Critical Illness Insurance System

The following section summarises the development process, operational mechanisms, and actual burden-reduction effects of the critical illness insurance system, compiled from various government documents and literature.

3.1 Origins and Exploration Stage (2009-2011)

3.1.1 The Zhanjiang Model

The Zhanjiang Model refers to an innovative mechanism that integrates commercial insurance into the social security system through public-private partnerships.

In January 2009, Zhanjiang City consolidated the New Rural Cooperative Medical Scheme with the Urban Resident Medical Insurance. 15% of individual contributions were allocated from the Urban Employee Medical Insurance Fund to purchase introduced commercial insurance. Non-employed urban residents paid either ¥20 or ¥50 per person per household. Insurance companies advance a portion of premiums to partner hospitals to cover costs exceeding basic medical insurance limits. Patients need not pay upfront for all medical expenses, settling only their personal contribution, with remaining costs settled between social security departments, insurers, and hospitals. This ‘secondary reimbursement' scheme provides maximum coverage of ¥35,000 and ¥65,000 respectively. Additionally, the Zhanjiang model extends medical insurance coverage to include special outpatient expenses for 23 types of critical illnesses [13].

As shown in Table 1, the medical subsidy arrangements in Zhanjiang City, from the implementation of the ‘Zhanjiang Model' up to 2018, were determined by the contribution levels of hospitals at different tiers and individuals.[4]

3.1.2 The Taicang Model

In July 2011, Taicang's medical insurance administration launched the ‘Taicang Critical Illness Reinsurance' scheme. Allocating 3% (approximately ¥21.68 million) of the medical insurance fund, it purchased supplementary critical illness insurance from PICC Health Insurance Suzhou Branch. The medical

insurance centre and insurer jointly undertook the risk, providing secondary reimbursement for medical expenses exceeding the basic coverage. The insurer received a 4.5% service fee for administration. When the critical illness insurance scheme generated a surplus, both parties shared 50% of the surplus funds. In the event of claims under the critical illness insurance, after deducting the administrative service fee, both parties bore 50% of the payout amount. A dedicated critical illness supplementary medical insurance settlement window was established adjacent to the medical insurance settlement counter. In 2011, for insured individuals diagnosed with critical illnesses during the policy year, out-of-pocket expenses exceeding ¥10,000 per occurrence or cumulatively were categorised into 13 cost tiers. Reimbursement was tiered at rates ranging from 53% to 82%, with no maximum claim limit.

The Taicang model operates broadly similarly to the Zhanjiang model, but builds upon it by introducing ‘unlimited reimbursement amounts'. This means that the higher the individual out-of-pocket expenses, the greater the reimbursement received.

Table 1. Basic Medical Insurance and Critical Illness Insurance in Zhanjiang City (Unit: Yuan)

Year	Individual Contribution Level	Hospital Grade(level)	Basic Medical Insurance Deductible Threshold	Reimbursement Rate	Inpatient Fund	Major Medical Assistance (unit:10,000)	Critical Illness Cover	Aggregate Limit
2009	1st gear:20	1st	100	70%	15,000	3.5	Not yet established	5
	2nd gear:50	2nd	300	60%	15,000	6.5		8
		3rd	500	40%				
2010				75%	20,000	6		8
				65%	20,000	8		10
				45%				
2011				75%		8		10
				65%		10		12
				50%				
2012	1st gear:30	townships	100	80%	20,000	13	9	25
	2nd gear:60	1st	100	75%	20,000	15	12	30
		2nd	300	65%				
		3rd	500	50%				
2013	1st gear:50	townships	100	85%	16		9	25
	2nd gear:80	1st	200	80%	18		12	30
		2nd	300	65%				
		3rd	500	50%				
2014				85%				30
				80%				50
				65%				
				50%				
2015				85%				30
				80%				50
				70%				
				50%				
2016	120	townships	100	85%	20		30	50
		1st	100	80%				
2017	150	2nd	300	70%			40	60
2018	180	3rd	500	50%			40	60

Source: Hua Yazhou (2018). Research on the Reform and Development of China's Critical Illness Insurance System for Urban and Rural Residents

3.2 Implementation and Pilot Phase (2012-2015)

In 2012,the joint issuance of the Guiding Opinions on Implementing Critical Illness Insurance for Urban and Rural Residents by six government departments marked the formal promulgation and implementation of the critical illness insurance system. The document stated that critical illness insurance for urban and rural residents ‘constitutes an extension and expansion of the basic medical security system, serving as a valuable supplement to fundamental healthcare coverage.'

The scheme was initially rolled out in selected regions through pilot programmes, with the

scope of these trials progressively expanding from 2012 to 2014. By 2013, China had implemented major illness insurance across 25 provinces and 144 regions, with 360 million individuals receiving claims payments under the scheme. In 2014, the State Council's Medical Reform Office issued the *'Notice on Accelerating the Implementation of Critical Illness Insurance for Urban and Rural Residents'*, mandating that all regions fully implement critical illness insurance pilot schemes by the end of 2014.

The table2 below details the implementation timelines and coverage areas for critical illness insurance across different provinces and municipalities.

Table 2. Timeline and Coverage of Critical Illness Insurance Implementation Across Provinces and Municipalities

Region	Critical Illness Insurance Pilot Timeline	Pilot Scope	Remarks
Beijing Municipality	2014/1/1	Citywide	
Tianjin Municipality	2014/7/1	Citywide	
Hebei Province	Year 2013	Partial	Shijiazhuang, Tangshan
Shanxi Province	2013/5/1	Partial	Yangquan, Yuncheng
Inner Mongolia Autonomous Region	2013/4/1	Partial	Hohhot, Baotou, Chifeng and 5 other cities
Liaoning Province	2014/1/1	Entire province	
Jilin Province	2013/7/1	Entire province	
Heilongjiang Province	2013/8/1	Partial	Yichun, Suihua
Shanghai Municipality	2014/7/1	Citywide	
Jiangsu Province	2013/7/1	Partial	At least one county (city, district) selected per prefecture-level city
Zhejiang Province	Year 2013	Entire province	
Anhui Province	2013/7/1	Partial	Hefei, Bengbu, Lu'an, Wuhu, Tongling
Fujian Province	Year 2013	Entire province	
Jiangxi Province	Year 2013	Entire province	
Shandong Province	Year 2013	Entire province	
Henan Province	2013/4/1	Partial	Zhengzhou, Xinxiang
Hubei Province	Year 2013	Entire province	
Hunan Province	2013/5/20	Partial	Changde, Chenzhou, Xiangxi Autonomous Prefecture
Guangdong Province	Year 2013	Partial	16 cities
Guangxi Zhuang Autonomous Region	Year 2013	Partial	Liuzhou, Qinzhou
Hainan Province	Year 2014	Entire province	
Chongqing Municipality	2013/1/1	Citywide	
Sichuan Province	2013/3/1	Partial	
Guizhou Province	2013/7/1	Partial	Guiyang, Bijie, Qianxinan Prefecture
Yunnan Province	Year 2012	Partial	Kunming, Qujing
Tibet Autonomous Region	Year 2014	Partial	
Shaanxi Province	Year 2013	Partial	Xi'an, Baoji, Yan'an, Hanzhong
Gansu Province	Year 2013	Partial	Qingyang, Dingxi, Jinchang
Qinghai Province	Year 2013	Entire province	
Ningxia Hui Autonomous Region	2013/8/1	Partial	Shizuishan, Guyuan
Xinjiang Uygur Autonomous Region	Year 2013	Partial	Urumqi, Tacheng, Altay, Aksu, Kizilsu

Source: Compiled based on relevant government notices and announcements

3.3 Full Implementation Phase (2015-present)

In August 2015, the General Office of the State Council issued the 'Opinion on the Comprehensive Implementation of Critical Illness Insurance for Urban and Rural Residents', marking the nationwide rollout of the critical illness insurance system. This directive required all localities to achieve universal coverage for critical illness insurance by the end of 2015, with the establishment of a relatively comprehensive critical illness insurance system by 2017. This

system was designed to integrate with the medical assistance scheme, employing multiple measures to prevent catastrophic medical expenses. By 2016, critical illness insurance had covered over one billion people, essentially achieving the universal coverage target. By 2018, critical illness insurance covered 1.15 billion people, benefiting over 17 million individuals. Some 8.815 million people received critical illness insurance benefits, with the fund disbursing ¥51.095 billion and an average payout of ¥5,796 per beneficiary. Direct settlement for hospitalisation across regions became available nationwide.

In 2019, the National Healthcare Security Administration and the Ministry of Finance jointly issued the ‘Notice on Strengthening Major Illness Medical Security for Urban and Rural Residents in 2019', mandating increased funding standards and enhanced coverage levels. By August that year, major illness insurance contracts were to be adjusted through consultation, with premiums required to be paid according to the new funding standards by year-end. Local authorities were mandated to ensure adequate funding, policy implementation, and service delivery, fulfil medical insurance's role in poverty alleviation, establish municipal-level coordination mechanisms, and enhance management standards. That year, China's medical insurance expanded coverage to include treatments for various critical illnesses such as pulmonary arterial hypertension, Type C Niemann-Pick disease, primary carnitine deficiency, and young-onset Parkinson's disease, broadening the scope of major illness medical insurance protection. In 2020, critical illness insurance increased reimbursement rates by over 13%.

In September 2021, the State Council General Office issued the ‘14th Five-Year Plan for Universal Medical Security', setting new requirements for the critical illness insurance system: as a vital component of supplementary medical insurance, it must effectively coordinate with basic medical insurance and medical assistance to form a cohesive protection system, better meeting the diverse medical security needs of the population.

4.Content and Implementation Mechanism of the Critical Illness Insurance Scheme

4.1 The Funding Mechanism for Critical Illness Insurance

China determines reasonable funding standards for critical illness insurance based on local circumstances. Premiums for critical illness insurance primarily derive from surplus funds within the medical insurance system; when such surpluses prove insufficient, medical insurance premiums may be appropriately increased. Funds for critical illness insurance may be pooled according to municipal standards or at provincial, autonomous region, or municipal levels, but must cover all medical insurance participants.

Effectiveness mechanism: This funding approach prevents residents from incurring secondary payments, offering convenience and public benefit while ensuring seamless continuity between basic medical insurance and critical illness insurance.

4.2 Coverage under Critical Illness Insurance

Critical illness insurance covers individuals enrolled in medical insurance schemes, with coverage scope aligned with basic medical insurance. When insured persons incur substantial medical expenses, reimbursement is first processed through basic medical insurance. A deductible threshold is set at 60% of the individual's out-of-pocket costs; amounts exceeding this threshold are then subject to secondary, tiered reimbursement under critical illness insurance. Regional critical illness insurance schemes adopt either higher reimbursement caps (i.e., maximum payout amounts for critical illness medical expenses) or no reimbursement caps whatsoever.

Additionally, for impoverished populations, provinces implement varied subsidy measures. These include lowering deductible thresholds (Guizhou, Fujian, Jiangxi, Anhui, Hunan, Henan, Heilongjiang, etc.), eliminating deductibles altogether (Jiangsu, Hebei, Shanxi, etc.), increasing reimbursement rates by varying percentages, broadening coverage scope, or abolishing maximum reimbursement caps.

Effectiveness Mechanism: The supplementary medical protection nature of the critical illness insurance system effectively addresses households facing catastrophic expenditure burdens due to severe illnesses or chronic conditions, preventing poverty caused by illness and relapse into poverty due to illness. As the system continues to evolve, additional subsidies for vulnerable groups (such as the impoverished

populations mentioned above) further assist these communities in overcoming hardship. This reduces social inequality and poverty, promotes social equity and justice, maintains social harmony and stability, and demonstrates the policy's meticulousness and humanistic warmth.

4.3 The Implementation Method for Critical Illness Insurance

Medical insurance administrative bodies determine successful bidders through tendering processes with commercial insurers, subsequently purchasing critical illness insurance from the winning companies. Regulations stipulate that insurers undertaking critical illness insurance operations must meet the qualification criteria set by the China Banking and Insurance Regulatory Commission (CBIRC): possessing over five years' experience in operating domestic health insurance; maintaining sound market credibility, comprehensive service networks, and robust medical insurance operational capabilities; employing dedicated staff with medical specialisation; Head offices must authorise their branches to underwrite critical illness insurance and provide necessary informational, operational, and financial support; and possess the capability for separate accounting of critical illness insurance. Insurers' separate accounting of critical illness insurance premiums enables effective integration with medical insurance systems, facilitating real-time settlement and cross-regional claims processing.

Effectiveness Mechanism: Critical illness insurance fundamentally constitutes a nationally unified commercial insurance system administered by the state and operated by companies. The nationwide consolidated accounting characteristic of commercial insurers elevates the coordination level of critical illness insurance and enhances risk resilience. Concurrently, fully leveraging the specialised operational strengths of commercial insurance institutions significantly improves the efficiency of basic medical insurance fund utilisation, thereby optimising protection standards.

4.4 Regulatory Management of Critical Illness Insurance

The Ministry of Human Resources and Social Security, the Ministry of Finance, the China Banking and Insurance Regulatory Commission, the National Health Commission, and the National Audit Office are responsible for the supervision and management of critical illness insurance. They rigorously oversee medical institutions and healthcare expenditures through multi-stakeholder oversight mechanisms, including information disclosure.

Effectiveness Mechanism: Multiple departments collaborate to leverage their respective strengths, ensuring comprehensive and effective oversight through coordinated policy formulation and organisational coordination. Rigorous oversight regulates healthcare providers' conduct, curbs adverse practices such as excessive medical treatment, ensures reasonable expenditure of medical costs, and enhances the efficiency of medical insurance fund utilisation; Information disclosure safeguards insured persons' right to know, increases regulatory transparency, and encourages standardised operations by healthcare institutions and relevant departments; Multi-stakeholder participation broadly incorporates societal feedback and suggestions, making oversight more responsive to practical needs.

5. Implementation Outcomes of Critical Illness Insurance

This section examines a study that extracted 2014 insurance reimbursement data from critical illness insurance information systems across four cities. It utilises the characteristics of critical illness insurance schemes to describe their implementation status. The effectiveness of critical illness insurance is assessed by calculating the proportion of medical expenses covered by insurance and the percentage of individuals incurring catastrophic healthcare expenditure.

It is worth noting that within academic circles, catastrophic healthcare expenditure (CHE) is commonly employed as an indicator for measuring the financial burden of healthcare on households. By calculating the probability of CHE occurrence (P_CHE), one can estimate the extent to which critical illness insurance alleviates residents' healthcare expenditure burdens.In this case, CHE is defined as occurring when an individual's total annual out-of-pocket medical expenses exceed the average annual disposable income per capita in their city.

The Table3 below summarizes the characteristics of the 4 recruited cities' critical illness insurance

systems.

Table 3. Characteristics of Critical Illness Insurance in the 4 Sampled cities in China

					Reimbursement methods	
City	Per capita annual disposable income	Premium	Deductible*	Cap	Medical expenses (CNY)	Reimbursement ratio, %
Beijing	43,910	50	40,321	No cap	40,321-90,321	50
					90,321-	60
Siping	26,000	30	9,600	300,000	9,600-19,600	50
					19,601-29,600	51
					29,601-39,600	52
					39,601-49,600	53
					49,601-59,600	54
					59,601-109,600	65
					109,601-	80
Yichang	25,025	39	8,000	No cap	8,000-30,000	50
					30,001-50,000	60
Zhaoqing	21,725.8	20	70,000**	180,000	50,001-	70
					70,001-	90

CNY=China Yuan.

* Deductible of critical illness insurance is defined as that medical expense within the payment scope of medical insurance exceeds the threshold after being reimbursed by basic medical insurance.

** In Zhaoqing, critical illness insurance will come into play when the reimbursement of basic health insurance reach up to 70,000 CNY.

Table 4. Reimbursement of Basic Health Iinsurance and Critical Illness Insurance.

	payment			Proportion of expenses within the payment scope of insurance, %	S1			S2		
City	Median	P25	P75		BHI	CII	Total	BHI	CII	Total
Beijing	147,419	118,427	196,116	83.86	64.05	6.45	70.50	53.64	5.29	58.93
Siping	46,046	31,863	78,841	79.28	49.68	9.87	59.58	39.57	7,72	47.29
Yichang	29,071	15,523	46,978	91.61	53.22	14.52	67.74	48.76	13,30	62.05
Zhaoqing	184,282	145,151	239,950	81.71	47.28	27.81	75.09	39.11	22.63	61.75

S1=aggregate insurance benefit received in a single policy year/medical expenses within the payment scope of basic medical insurance *100%.

S2=aggregate insurance benefit received in a single policy year/total medical expends*100%.

BHI=Basic Health Insurance, CII=Critical Illness Insurance [14]

According to the survey[3], the proportion of medical expenses reimbursed by health insurance stood at 58.93% in Beijing, 47.29% in Siping, 62.05% in Yichang, and 61.75% in Zhaoqing. The percentage of individuals suffering CHEs in each city was 100%, 60.13%, 12.54%, and 97.12% respectively. Following CII implementation, the reimbursement rate increased by 5.29 percentage points in Beijing, 7.72 percentage points in Siping, 13.30 percentage points in Yichang, and 22.63 percentage points in Zhaoqing (Table 4). Regarding The percent of individuals suffering CHEs, Beijing remained stable, while Siping decreased by 7.04 percentage points, Yichang decreased by 11.22 percentage points, and Zhaoqing decreased by 2.19 percentage points.

The result indicates that the healthcare coverage provided by CII systems across different cities exhibits significant variations. However, overall, the healthcare coverage offered by CII still presents certain limitations.

6. Discussion

The above represents merely one case study evaluating the implementation outcomes of China's critical illness insurance system. Numerous related studies exist, yet collectively they indicate that while China's critical illness insurance system has played a significant role in alleviating household medical burdens, its effectiveness in reducing such burdens is influenced by multiple factors including system design, health risks, urban-rural disparities, and geographical location.

For the CII system to truly function effectively in China, it must be tailored to the nation's specific circumstances. Consequently, this paper

proposes several innovative approaches and future development strategies based on existing research and current institutional frameworks.

6.1 The Redefinition of 'Household Financial Burden'

The preceding section mentioned estimating the extent to which critical illness insurance alleviates residents' medical expenditure burdens through CHE and calculating the probability of catastrophic health expenditure (P_CHE). The WHO defines CHE as occurring when medical costs exceed 40% of a household's non-food expenditure. According to the State Council's Document No. 57 (2015), China defines CHE by comparing out-of-pocket medical costs against either the per capita disposable income of urban residents or the per capita net income of rural residents.

However, the impact of critical illnesses on household financial burdens extends beyond medical expenditure alone, constituting a complex variable shaped by multiple interacting factors. Previous research has predominantly focused solely on the CHE dimension, to some extent neglecting the broader implications of major illnesses on household financial burdens. This study broadens the research perspective by defining ‘household financial burden' as the ‘dual effect of increased expenditure and reduced income' - namely, ‘increased expenditure + reduced income' - while maintaining a focus on composite expenditure.

6.1.1 Factors driving increased expenditure

(1) Medical Expenditure

Medical expenditure constitutes the most significant and overt component of critical illness costs. It shall not be elaborated upon further here.

(2) Displacement of Other Household Expenditures.

Should a household's total expenditure (TC) remain constant, a substantial increase in healthcare expenditure (C1) inevitably leads to the displacement and reduction of other expenditures. This includes basic physiological needs such as food, housing, and transportation, alongside expenditures on education and leisure. Consequently, the household's quality of life diminishes.

(3) Invisible Expenditure-Psychological Burden

This situation not only incurs direct, substantial economic costs forming tangible financial burdens, but also imposes additional psychological strain upon the family members of the affected individual at an implicit psychological level.

The Work-Family Conflict Theory, developed by American scholar Kahn and colleagues, provides robust theoretical support for explaining how serious illness indirectly exacerbates household financial burdens by influencing psychological stress and work efficiency. Work-family conflict fundamentally arises when demands from the workplace clash with those from the family sphere, creating an incompatible situation where individuals struggle to allocate resources and energy to satisfy both domains simultaneously.

Specifically, when a family member falls ill, demands within the household surge significantly. For instance, on the temporal dimension, more time must be devoted to accompanying the ill member and providing attentive care; on the financial dimension, greater economic support is required to cover medical expenses and other expenditures. This surge in family demands inevitably clashes with workplace obligations. Individuals may become preoccupied with domestic matters, hindering their ability to fully engage at work and consequently diminishing productivity.

Moreover, beyond diminished productivity, emotional distress and psychological disorders stemming from accumulated psychological strain warrant serious attention. These psychological burdens affect both patients and their families, not only diminishing individual quality of life but also potentially undermining the overall family atmosphere and functioning. This creates a vicious cycle, further exacerbating the challenges families face when confronting critical illnesses.

Factors Driving Decreased Expenditure - The Decline in Household Labour Participation Rates

Firstly, due to illness, the patient experiences a significant decline in physical functioning, potentially leading to a complete loss of working capacity. This directly manifests as a reduction in the household's labour force. Secondly, caring for the patient requires family members to devote considerable energy and time, which also contributes to a decline in the household's labour participation rate.

The Development Direction of CII Schemes and Healthcare Security Systems

6.2.1 Expanding coverage scope and enhancing composite expenditure protection

The traditional approach of measuring household

healthcare financial burdens solely through CHE proves overly simplistic. Future CII schemes and healthcare security systems should incorporate the dual impact of ‘increased expenditure + reduced income' on household finances, thereby precisely defining the scope of protection. For instance, psychological support services could be integrated into the healthcare system, offering free or low-cost counselling and psychological guidance to patients and their families. Concurrently, treatment costs arising from psychological issues-such as anti-anxiety and antidepressant medications-should be included within the scope of medical insurance reimbursement. This would alleviate the dual pressures of financial strain and psychological distress upon households.

6.2.2 Strengthening income protection to address declining labour participation rates

For patients who have lost their capacity to work due to illness, the disability allowance system under critical illness insurance should be enhanced. Allowances should be granted at corresponding rates based on the severity of the patient's condition and the extent of their loss of working capacity, thereby safeguarding their basic livelihood. Concurrently, a dynamic adjustment mechanism should be established, linked to price levels and average wage growth, to ensure the allowance's real protective capacity.

6.2.3 From the cii to a comprehensive protection system

Through an in-depth analysis of the aforementioned issues, it becomes evident that the financial burden on families arising from critical illnesses constitutes a multifaceted problem, with intricate mechanisms and complex influencing factors. Relying solely on a single critical illness insurance scheme is insufficient to achieve a systematic resolution of this financial burden. In view of this, it is necessary to broaden the scope of protection beyond a single critical illness insurance scheme. This entails advancing a comprehensive upgrade and coordinated integration of the healthcare security system, while further driving a strategic enhancement of the entire social security framework. Such measures will establish an institutional structure with greater comprehensive safeguarding capabilities, enabling an effective response to the multidimensional challenges posed by household financial burdens.

References

[1] Hu Yangmu, Li Lu, Du Ling, Fan Yangdong. The Effectiveness of Critical Illness Insurance and Its Influencing Factors in an Underdeveloped Region [J]. Medicine and Society, 2024, 37(12), 117-123.

[2] Chen Zhongnan, Sun Shengmin. Research on the Poverty Reduction Effects of Critical Illness Insurance: An Empirical Analysis Based on CFPS Data [J]. Journal of Jinan University (Philosophy and Social Sciences Edition), 2022, (3), 24-39.

[3] Fang P, Pan Z, Zhang X, et al. The effect of critical illness insurance in China[J]. Medicine, 2018, 97(27): e11362

[4] Hua Yazhou. Research on Reform and Development Strategies for China's Major Illness Insurance System for Urban and Rural Residents [D]. Hubei: Wuhan University, 2018.

[5] Sun, JL;Tao, R,Wang,L;Jin,LM. Does Social Medical Insurance Achieve a Poverty Reduction Effect in China?.[J].FRONTIERS IN PUBLIC HEALTH,2022,(9)

[6] Thomas C. Buchmueller, Kevin Grumbach, Richard Kronick, James G. Kahn. The Effect of Health Insurance on Medical Care Utilisation and Implications for Insurance Expansion: A Review of the Literature [J]. Medical Care Research and Review, 2005, (62): 3-30.

[7] Tian Wenhua. Institutional Arrangements and Experiential Insights of Critical Illness Insurance in Typical Developed Countries [J]. People's Forum, 2025, (13), 69-73.

[8] Wang Chaoqun, Liu Xiaoqing, Liu Xiaohong, Gu Xuefei. The Impact of Critical Illness Insurance on Catastrophic Health Expenditure Among Urban and Rural Households: An Analysis Based on Survey Data from a Selected City [J]. China Health Services Management, 2014, (6), 433-437.

[9] Yue Wei, Wang Xiong, Zhang Qiang. Health Risks, Medical Insurance and Household Financial Vulnerability [J]. China Industrial Economics, 2021, (10), 175-192.

[10] Xu Xian. Operational Models and Development Directions of China's Critical Illness Insurance [J]. People's Forum, 2025, (4), 21-23.

[11] Zhang Jianjun, Liu Kaiwei. A Multi-Party Game Analysis of Health Insurance Based on the ‘Zhanjiang Model' of PICC Health

Insurance [J]. Insurance Research, 2011(3): 102-107.

[12] Peng Yunjia, “2023 China Urban and Rural Critical Illness Insurance Benefited 11.56 Million People,” Xinhua News, April 3, 2024 7h, http://www.xinhuanet.com/20240403/67dfe880a13f46fc9322bea8dda473d2/c.html

[13] Zhang Jianjun, Liu Kaiwei. A Multi-Party Game Analysis of Health Insurance Based on the ‘Zhanjiang Model' of PICC Health Insurance [J]. Insurance Research, 2011(3): 102-107.

[14] Fang P, Pan Z, Zhang X, et al. The effect of critical illness insurance in China[J]. Medicine, 2018, 97(27): e11362

