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Catastrophic Health Expenditure among Developing Countries

Sharifa Ezat Wan Puteh and Yasmin AlmuallmDepartment of Community Health,
Faculty of Medicine, National University
of Malaysia

Abstract

Catastrophic health expenditure (CHE) occurs when medical cost is equal or exceeding 40% of a household's non-Poverty and poor health are common consequences of CHE and vice versa. CHE occurs in the form of out of pocket spending on healthcare. Poverty, type of illness, lack of health insurance all contribute to CHE. Health financing mechanisms are the mainstay to appropriate use of healthcare services and to reduce the overdependence on out of pocket payment. When there are no financial barriers to access healthcare then CHE can be prevented and universal coverage can be achieved. In order to do that, governments should implement prepayment mechanisms in the form of social health insurance to pool risk across the population. Unlike private health insurance, enrollment in social health insurance is compulsory and contributions are based on a person's income and not his health status.

Keywords: Catastrophic health expenditure; Social health insurance; Out-of-pocket payment; Universal coverage

Corresponding author: Yasmin Almuallm

✉ yasminraad@ymail.com

Department of Community Health,
Faculty of Medicine, National University of
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Introduction

Catastrophic health expenditure (CHE) refers to any expenditure for medical treatment that can pose as a threat towards a household's financial ability to maintain its subsistence needs. CHE is not necessarily related to very It occurs when people have to pay large sum of money on health in relation to their income. Total health expenditure of 10% or more from the total income is often considered as indication of CHE. World Health Organization (WHO) indicated that whenever the health expenditure is equal or exceeding 40% of a household's non-subsistence income, it is considered catastrophic. Subsistence need is defined as the minimum requirement for household to maintain basic life needs in a society. The basic life needs are food, shelter, clothing and certain household goods. Household subsistence income use the standard poverty line decided by the country as a tool to determine its' threshold [1]. Household's non-subsistence income is the remaining money after basic needs have been met. Using the poverty line, non-subsistence income is equivalent to the remaining income after subtraction of total household's income with the poverty line income [2].

More than 150 million individuals from 44 million households are exposed to CHE every year. From this, more than 100 million individuals from 25 million households are pushed into poverty

[2]. Compared to developed countries which are covered by tax funded health system or social health insurance, developing countries are poverty and overdependence on out of pocket spending on health. Malaysia for example, has protected its populations from CHE by providing public healthcare at a nominal level and universal health coverage.

Poor health is a common consequence of poverty and vice versa. Poor health leads to poverty through the inability to work and generate income. The more the disease progress and complication occurs, the more spending on medical treatment. For people with low income this is one of the devastating consequences of falling ill, and is the sad reality of those who do not have health insurance. Non Communicable Diseases (such as Diabetes and Hypertension) and Cancer are good examples of diseases that are associated with complication due to poor early detection. Sometimes people will not seek treatment until the disease has affected their daily activities, this could be due to financial reasons or unavailability of healthcare services.

Health System Financing

Health System consists of all organizations, people and actions whose primary intent is to promote, restore or maintain health. This includes efforts to influence determinants of health as well

as more direct health-improving activities [3]. A successful health system is a one that responds to its population needs through improving the health status of individuals and communities, protect the population against health threats, guard the people from catastrophic health expenditure, have equitable access to healthcare and allow people to make decisions that affect their health [4]. The ultimate goals of a health system are improving health status, health equity and to make the most efficient use of the available resources. There are also intermediate goals which to achieve more coverage and better access to health services without having to compromise on quality and safety. Universal health coverage means that everyone in the population has access to preventive, curative and rehabilitative health care at the time they need it and at a cost they can afford [5]. It is also based on an equitable financing system in which people contribute depending on their ability to pay and not whether they fall ill. This means the biggest source of fund should come from prepaid and pooled contribution and not from fees charged when services are accessed. Everyone in the society contributes a fair share. Fair contribution ensures risk pooling between the sick and the healthy and risk sharing across all income levels. In risk pooling, those who are healthy will pay for those who are sick, ensuring that the sick individual will not be struck by double burden of sickness and financial costs of health care. Risk sharing is almost similar but the fairness does not mean equal contributions. People with higher income will need to contribute more [1], even though this is not routinely well tolerated in the modern society.

Poor healthcare policy can lead people to seek treatment only when they absolutely need to. When healthcare fees are charged over the counter, everyone pays the same amount regardless of their level of income.

There are four main types of financing for healthcare: Government-funded (through taxes), social insurance (through payroll, taxes or direct contributions) private insurance and Out-Of-Pocket (OOP). The first three types are pre-paid financing mechanisms and have some form of risk pooling. There is variation across.

Countries in determining their health financing mechanism, but it mainly depends on the country's economic status. The poorer the country, the more dependent on out of pocket payment. This form of payment does not pool risk. Studies in 89 countries concluded that no system is better than the others at protecting households from CHE after controlling for the level of prepayment²³. However, different types of financial policy might target at different population groups.

Out-of-Pocket Payment (OOP)

OOP is the most inefficient, inequitable and regressive forms of healthcare financing. However, it is the most important means of healthcare financing in most developing country. It can be divided into direct or indirect costs. Direct costs include doctor's consultation fees, medications, tests, procedures, hospital bills etc. Indirect costs include transport charges to treatment site, daily living cost for accompanying household members and loss of income due to illness.

OOP is not the only cause of catastrophic payments, poverty,

poor healthcare service accessibility and lack of risk pooling all contribute to the occurrence of CHE. CHE is a big issue when all these three factors are most pronounced. Out-of-pocket payment accounts for 50% of total health expenditure in the year 2007 in 33 low-income countries.

Social Health Insurance

Social health insurance is one of the mechanisms to raise and pool funds for health financing. Compulsory contributions are made by working people, employers, self-employed and the government to cover for a package of health services. Government contributes on behalf of those who are unable to pay such as the unemployed. Contributions for social health insurance are based on income and not health status [6]. This mechanism aims to overcome the exclusion of the poor and disadvantaged from health services. Contributions are made into single fund or multiple funds and these funds are managed by the government or nongovernment not-for-profit organizations.

CHE Model in Other Developing Countries

Analysis of household survey data on effects of healthcare payments on poverty (after taking account of OOP for healthcare) in 11 low to middle income countries in Asia showed that the overall prevalence of absolute poverty is than the conventional estimation at the equivalent 78.16 million people [7]. Additional 2.7% or equivalent to 2.1 million people ended up with hardcore poverty. In Vietnam and Bangladesh where OOP more than 60%), the additional estimates of poverty increased about 4.5% in Vietnam and 3.6% in Bangladesh [7]. In Sri Lanka, a low income country, the threat of impoverishment can be mitigated through a healthcare policy ensuring OOP have been contained below 50% of health financing. As a comparison, the initial poverty head count in Sri Lanka and Vietnam is similar, however after the adjustment due to healthcare expenditure, the post payment poverty head count in Vietnam is almost four times than in Sri Lanka [7]. In Sri Lanka, this positive effect was contributed by minimum healthcare charges in public service and its accessibility through wide geographic distribution. In Indonesia, even though the proportion of population at extreme poverty was the similar size as in Bangladesh, however the impoverishment after taking account of health payment was much lower. The possible explanation of Indonesia's apparent success in shielding poor families from CHE is its policy implemented through a health card. Charge exemptions for the poor are implemented through a health card system. Alternatively, this can be interpreted as those threatened by poverty merely forgo healthcare because of unaffordable charges. Especially compared to other countries, Indonesia spent smaller share of their household budgets on healthcare. Similarly, the poorest 20% of the population in Indonesia accounted only 3.7% of all hospital admission to public hospital compared to Bangladesh (12%) and India (9%) [7]. In most countries, prescribed medicine is not included in the exemptions of charges in public healthcare. This partial exemption is seldom effective since expenditure for drugs typically account for greater share of OOP ranging about 18-55% in most countries and exceeding 70% in Bangladesh and India¹⁸. In China, the rural populations represent China has achieved a remarkable

economic growth. Several studies indicated that illness is the number one poverty generator in China. OOP in healthcare raised the poverty head count by 3.96% in rural China while the poverty gap increased by almost 146.6% [10]. To reduce the medical impoverishment, two major policy interventions were made available: providing insurance coverage and controlling medical costs.

CHE Determinants

There are several factors seen as determinants of CHE. These include

Urban Versus Rural Topography

The CHE in India was higher in rural (25.3%) compared to urban (17.5%) [8]. In most of the poor states in India, 87% of poverty attributed to OOP occurred in rural areas. While in the richest states, the proportion of poverty in rural area was 67% [8]. The poverty intensity also was higher in rural areas (3.5%) compared to urban areas (2.5%) [9]. In Kenya, even though the direct cost burden below 5% of total income is higher in urban (57.2%) than rural (51.5%), however the proportion of CHE in rural is higher (31.1%) than in urban (28.1%) [10]. In China, rural populations are more vulnerable for CHE since majority of the rural populations are involved in agricultural sectors that have no insurance coverage. The National Health Services Survey in 1998 found that OOP had raised total number of rural households living below the poverty line by 44.3% [11].

Sociodemographic Factors

In Kenya, they found out that the prevalence of CHE and impoverishment is higher in rural area, where majority of the adults have no education (53.5%). The adults in urban are more educated with 28.0% have secondary level education while only 11.2% was reported as having no education [1]. In Burkina Faso, CHE occurs in 6-15% of total. Even though rich households reported illnesses and received treatment more frequent than the poor, the percentage of CHE and impoverishment is higher among the poor income groups. Healthcare utilization was very low, possibly because poor people choose not to seek healthcare, reserving their income on essential needs and goods; rather than cope with impoverishment. In Georgia, households in the poorest quintile were four times more likely to face CHE when compared with the richest quintile [12]. In Nigeria, the highest proportion of CHE is among the lower income group (23%) which is three times compared to the rich. For the richest quintile, less than 8% of households experienced CHE [13]. In Uganda, households headed by older people, unemployed and presence of households with disabilities were more likely to be affected by CHE [14]. Household head with little education increased the odds of CHE within the poor and non-poor households similarly. The effect of age was more pronounced in the poor, while the effect of education was stronger in the non-poor. The sex of the household head did not influence the probability of CHE [14]. In Burkina Faso, they found out that household size had a positive association with CHE even though the association is rather weak [15].

Type of Illnesses

Evidence from Vietnam, indicated that CHE is not usually the result of one single disastrous event, but is a series of rather than injuries. In Vietnam, communicable diseases predominate among the episode of illnesses. Household with CHE had an average of 6.1 episodes of illness compared to 3.3 episodes for all households in the study [16].

In Burkina Faso, an increase by one illness among adults significantly increased the probability of CHE from 1.5 to 1.7 times. The presence of chronic illness among household members associated with higher risk for CHE [15].

Types of Health Facilities and Providers

In Thailand, the universal coverage policy was launched in 2001 to ensure equitable access of healthcare for all. It is a tax-financed program requiring only a nominal payment of 30 bath (US\$0.70) per visit or admission. Since its introduction, CHE has reduced from 5.4% to 3.0%, while the impoverishment decreased from 18.3% to 8-10% [12]. Households using inpatient service is at higher risks to encounter CHE as it demands higher intensity of care in general (14.6% in 2004 and 31% in 2000). For outpatient services, the incidence is 8.3% in 2004 and 12% in 2000 [12]. The risk of CHE among households utilizing services from private healthcare is higher for both, inpatient (28.5%) and outpatient services (27.8%). For impoverishment, the incidence is highest among those using inpatient services (2.6% increment) [12]. In Sierra Leone, more than 50% of OOP accounted from high cost treatment involving private healthcare. They calculated if half of these cases have been treated at public healthcare, the mean costs burden of OOP as percentage of household income can be reduced from 6.9% to 5.6% [17]. In Burkina Faso, even at low level with modest amount of healthcare utilizations, 6 to 15% of total households faced CHE [16]. One of the key determinants is modern healthcare utilization. They revealed that professional-care to illness ratio was a very important determinant for CHE. They projected that if all illness were treated through professional care, CHE will increase 15 to 25 times [12]. In Nigeria, private expenditure accounted for almost 70% of total expenditure on health of which 90% is OOP. This high level of OOP implies that health care can place a significant financial burden on households [18].

Lessons Learnt From Developed Countries

Most developed countries are protected from CHE due to strategic financial policies such as the social health insurance or population based tax-funded health systems [19]. A multinational study of the developed countries such as Sweden, Canada, United Kingdom, France and Germany, the percentage of CHE was less than 0.5% [20].

The main difference in the extent of CHE in developed and developing countries is the proportion of total health spending through OOP as opposed to taxation, social insurance or private insurance [21]. The pre-payment mechanism is not related to an

individual's health status or services used since payment is made not at the point of service [22]. Prepayment through taxation, social insurance or private insurance can pool the financial risk [23].

Conclusion

CHE is not always synonymous with high health-care costs. An expensive bill for health might not be catastrophic in a country with good policy for health when the household does not have to bear the full cost, either because the service is provided free or at a subsidized price, or it is covered by third-party insurance. On the other hand, in a country with poor policy and the absence of insurance coverage, even small costs for common illnesses can be financially disastrous especially among poor households.

Anticipating the nature of ill-health against extraordinary healthcare expenditure that can lead to poverty requires systematic healthcare policies that can protect the society at risk. The aim should be to reduce inequality by ensuring better access to health services and have a pre-payment mechanism to avoid the risk of financial ruin.

Equity is the fundamental principle in health financing. It is based on national solidarity and shared responsibility in which the healthy and rich share the economic burden in order for treatment to be available for the sick and poor. It is the duty of the government to provide comprehensive, accessible and good quality healthcare for all. And it is the duty of the people to ensure that the health system is not abused and the service is used responsibly.

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