DIFFERENTIAL TRENDS IN EQUITY OF HEALTH SERVICE UTILIZATION OF IN-PATIENT AT SECONDARY AND TERTIARY HEALTH CARE LEVELS AMONG THAI ELDERLY

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ABSTRACT: Currently, Thailand has an ageing society. The growth of aging population and the supply side of health care services for elderly are, therefore, of great interest. This study explores the trends of equity in health care utilization by Thai elderly at the secondary and tertiary health care levels for in-patient using Health and Welfare Survey from 2003 to 2007 provided by the National Statistical Office. The methods employ the percentage, quintile and concentration index for measuring equity. This research found that the universal coverage is a pro-poor policy which can reduces the barriers of health care utilization in the overall health services, but when the secondary and tertiary health care levels are divided Universal coverage is pro-poor for the secondary health care level and is pro-rich for the tertiary health care level.

Keywords: Equity, Health Equity, Concentration index

INTRODUCTION

Population ageing is a global phenomenon: the proportion of older persons in the World's population increased from about 8 per cent in 1950 to 21 per cent in 2050. In light of increases in life expectancy during the second half of the twentieth century, most of the countries in Asia are now facing problems related to their ageing population [1]. Indeed, the average proportion of elderly in Asia is increasing at a rate higher than that for the world as a whole as well as for that of less developed regions.

Data from Institute for Population and Social Research [2] shows that either the number of total populations or the number of older persons (aged 60 years and more) and the proportions of older persons in Thailand have continually increased from the past to the present and also through the future. As a result Thailand will have an aging society and generally, old people are more likely to have more risk of illnesses and chronic conditions than young people.

A primary challenge for many societies is the higher burden of disease which leads to a higher demand of health care among the elderly. As a result, adjusting health infrastructure and human resources for health, especially enhancing availability of essential and proper health services, will be a key need for providing adequate health care for the elderly. These challenges will be particularly profound in Asia, where the aging population is growing very rapidly and health infrastructure are relatively limited.

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OBJECTIVE

Since the health care services play an important role for the elderly care, the main objective of the study is, therefore, to examine the equity trend of in-patients health care utilization by Thai elderly at the secondary and tertiary health care levels.

Concepts and theories: equity in health care

Whitehead defined health inequities as differences in health that are unnecessary, avoidable, unfair and unjust [3]. WHO defines equity in health as the absence of socially unjust or unfair health disparities [4].

Gwatkin [5] also defined the concept of equity by using the following three criteria. The first is the health of the poor with a focus on ensuring the health of the poor, rather than decreasing the variation between the rich and the poor. The second is equality, with an aim at reducing differences in health well-being between the rich and the poor. The third is reduction of health inequity, with an aim at improving the health status of disadvantaged groups.

In this research equity means the poor elderly can use health care utilization more than rich elderly as a pro-poor. Since income distribution between the rich and the poor in Thailand is still being problems. It means a number of poor people have more than a number of rich people. From Table 1, it shows that since 1990, the proportion of total income share of the richest people in the fifth quintile has had more than 50 percent It means that most Thai people are rather relatively poor. But

Table 1 Percent of Income Share by Income Quintiles

Income Quintile	Income share of Population (Percent)									
	1990	**1992**	**1994**	**1996**	**1998**	**2000**	**2002**	**2004**	**2006**	**2007**
Quintile 1 (Poorest)	4.29	3.96	4.07	4.18	4.30	3.95	4.23	4.54	3.84	4.30
Quintile 2	7.54	7.06	7.35	7.55	7.75	7.27	7.72	8.04	7.67	8.01
Quintile 3	11.70	11.11	11.67	11.83	12.00	11.50	12.07	12.41	12.12	12.42
Quintile 4	19.50	18.90	19.68	19.91	19.82	19.83	20.07	20.16	20.08	20.22
Quintile 5 (Richest)	56.97	58.98	57.23	56.53	56.13	57.45	55.91	54.86	56.29	55.06
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Proportion Q5/Q1	**13.28**	**14.90**	**14.07**	**13.52**	**13.06**	**14.55**	**13.23**	**12.10**	**14.66**	**12.81**

Source: National Economic and Social Development Board

Table 2 Use of health insurance scheme and health service utilization for in-patient by quintile of wealth index in 2006-2007

	2006				**2007**			
	Q1 (Poorest)	**Q5 (Richest)**	***Total***	**Q5-Q1**	**Q1 (Poorest)**	**Q5 (Richest)**	***Total***	**Q5-Q1**
Use of health insurance for in-patient								
None	0.4	0.8	2.5	0.4	0.3	1.0	2.5	0.7
UC-P	3.2	2.9	15.6	- 0.3	1.2	1.1	6.4	- 0.1
UC-free	13.1	10.1	60.2	- 3.1	17.6	7.7	70.6	- 9.9
SSS	0.2	0.2	1.0	0.0	0.0	0.5	1.0	0.5
CSMBS	2.9	5.2	19.2	2.4	0.7	9.4	18.9	8.7
Private	0.0	0.3	0.5	0.3	0.0	0.2	0.3	0.2
Employer	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.0
Other	0.2	0.3	0.9	0.1	0.3	0.0	0.4	- 0.3
Total	***20.0***	***20.0***	***100.0***		***20.0***	***20.0***	***100.0***	
Use of health services for in-patient								
Community hospital	11.6	4.7	46.6	-6.9	12.3	3.8	46.6	-8.4
General/ regional hospital	6.2	8.6	34.7	2.4	6.4	6.2	37.1	-0.2
University hospital	0.3	1.9	4	1.6	0.5	2.7	4.0	2.2
Other public hospital	0.3	1.1	3.6	0.8	0.01	2.5	3.1	2.5
Private polyclinic	-	0.1	0.4	0.1	0.1	0.3	0.6	0.1
Private hospital	1.6	3.5	10.7	1.9	1.0	4.6	8.6	3.6
Total	***20.0***	***19.9***	***100.0***		***20.3***	***20.0***	***100.0***	

Source: Calculated from HWS, 2006-2007

Note: Universal Coverage Scheme, co-payment with 30 baht (UC-P), Universal Coverage Scheme, fee exempt (UC-free), Health insurance covered by employer (employer)

opportunities for the rich people to utilize health care service are higher than the poor people. Thus, the equity situation should favor the poor. However, if the result show that the poor elderly can utilize health service more than the rich, it means that opportunity for the poor elderly to access to health service has been increased. Thus, it reflects that the equity in health care utilization also has been increased.

DATA AND METHODS

Sources of data

All data in this study come from Health and Welfare Survey from 2003 to 2007 provided by the National Statistical Office (NSO). The methods employ in this study include the percent, quintile and concentration index for measuring equity. There are three major reasons for applying these data in this study. Firstly, they were primary data from nationally representative household surveys. Secondly, the data allow researcher to be able to construct economic status indicators such as income quintile and wealth asset index. Thirdly, they can give the trends of health care utilization in the past and the tendency in future.

Measurement of equity

This study will measure health equity by using concentration index in order to explore the trends of the health equity between rich and poor elderly. The concentration index (CI) presents a method of counting the degree of income-related inequality in

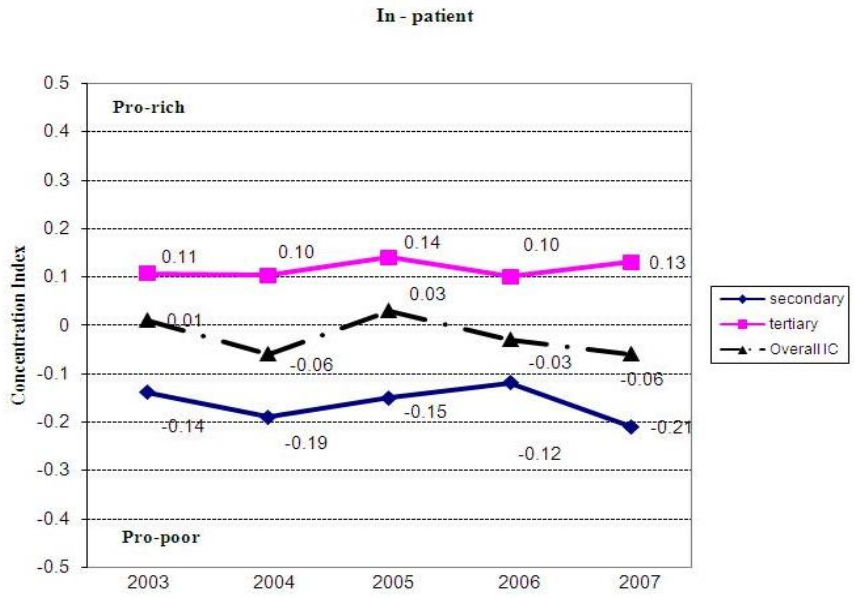


Figure 1 Concentration indices of in-patient healthcare use at overall health services, secondary and tertiary levels from 2003 to 2007

a health variable. For the equity situation of health care utilization, there are three possible situations. The first is the equality situation that means the rich elderly and the poor elderly use the health care services equally, CI equals 0. The second is the pro-rich situation, positive value of CI that means the rich elderly use the health care services more than the poor elderly. Finally, the pro-poor situation that means the rich elderly use the health care services less than the poor elderly, negative value of CI. The range of the absolute value of the concentration index is 1 and -1 [6].

RESULTS

The major objective of the Universal Healthcare Coverage Scheme (UCS) was to extend health insurance coverage to uninsured Thais. Table 2 shows the use of health facilities in 2006 by the wealthy quintile for those with in-patient illnesses during the previous 12 months. Community hospitals were used more frequently by the first quintile (11.6%) than by the fifth quintile (4.7%). Use of general/regional hospitals was most popular among the poorest group (6.2%) while use of private hospitals was more prevalent among the fifth quintile elderly, as shown in the Q5-Q1 of 1.0% between the lowest and highest quintiles.

Between 2006 and 2007, the wealth quintile analysis of the health services utilization shows increased trend in the use of public facilities by the poorer elderly groups as well as significant use of community hospitals for in-patient illnesses. This increase in health service use by poorer elderly groups may reflect, to a certain extent, previous demand as well as the impact of the UCS in changing pattern of health service utilization more toward the secondary care level.

The overall trend of concentration indices from 2003 to 2007 for in-patient elderly healthcare utilization at public health services reflects a rather equitable situation. Although the concentration index was positive in 2005, it was very close to zero, meaning that the rich elderly and poor elderly used hospitals almost equally. The negative values of the concentration index reflect a trend toward pro-poor policy, which means that the poor elderly used the health service more than the rich elderly as presented in Figure 1.

The elderly in rural areas utilize community hospitals since they tend to be near their homes and thus more convenient, while the elderly in urban areas tend to seek healthcare at public hospitals and private medical services. In addition, the UCS card greatly reduces healthcare fees and is convenient to use. In 2002, the UCS was implemented to ensure that the Thai population would have access to health services. This scheme helped the elderly to maintain good health and get appropriate treatment when they get sick. Accordingly, the elderly can see a doctor for their health problems without worrying about the health care fee. Thus, trends in health care utilization are equitable at the secondary level, as indicated by negative concentration indices from 2003 to 2007. The poor elderly used secondary-level health services more than did the rich elderly.

The tertiary level, is composed of regional/general hospitals, large hospitals, specialized hospitals. The rich elderly who were in-patients utilized health services more than the poor elderly, and the

situation was pro-rich (positive concentration index) from 2003 to 2007. The trends in health utilization reflect inequity at the tertiary level because trends of concentration indexes are positive values. This reflects the fact that economic status was an important factor in healthcare utilization. It was difficult for the poor to access healthcare services because there are costs, such as transportation, that they could not afford. Consequently, the rich elderly were better able to use healthcare services than the poor elderly.

DISCUSSIONS AND RECOMMENDATIONS

Universal Healthcare Coverage helps to reduce obstructions to healthcare service utilization at community hospitals; for example, insurance cards are convenient to use. Besides, there are community hospitals that cover all sub-districts, are easy for travelling and they are prioritized for use. The Universal Coverage Scheme (UCS) was designed to be pro-poor and was implemented to ensure that all Thai elderly have access to public health services by removing the cost barriers for healthcare. The results have been that the poor elderly in-patients tend to use the health services more than do the rich elderly. The UCS ensures that all people can maintain their health and get appropriate treatment for sickness. The elderly can see the doctors for their health problems without worrying about the health care fee. Trends in healthcare utilization show equity at the secondary level from 2003 to 2007, with negative concentration indices, meaning that poor elderly used secondary healthcare more than did the rich elderly.

Similarly, results from Benjakul [7] found that healthcare use at community hospitals was significantly pro-poor. The Universal Coverage (UC) policy improves equity in health services utilization because the UC card helps to remove the financial barriers to health care at secondary and tertiary levels for in-patient. Although some accessibility barriers (such as medical fees) for the elderly are reduced by the Universal Healthcare Coverage Scheme (UCS), area of residence is still an important barrier. Since most elderly live in rural areas, they are obstructed from easily accessing healthcare services by poor roads and long distances when they use at the tertiary health care level.

As evidence shows here, community hospital deliver community-based primary care to a considerable and growing proportion of the country's most vulnerable and have produced significant improvement in the use of health services. In order to enhance equity further, there is now a need to strengthen the quality of secondary healthcare services, including ensuring adequate referral of the poor to tertiary care when required [8].

The Universal Healthcare Coverage decreases inequity and inequality in health. Nevertheless, it is significant to the root causes of inequity and inequality in healthcare utilization of Thai people. These causes include social, economic, and geographic factors. Attempts should be directed support for education because education relates with knowledge, occupation, income and wealth. Furthermore, education helps people avoid health risks because people who have higher education are more possible to take precautions and protect themselves from getting their illness. Besides, they can also better afford treatment than can people with a lesser education.

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