Social health insurance, healthcare expenditure, and outcome-based health equity among the elderly
A Longitudinal Study in China

School of Public Affairs, Zhejiang University, China   LIU Xiaoting

1. Aim

This paper examines the relationship between *health insurance, healthcare expenditure* and *health outcome* under the background of health reform in China. Although the coverage of social health insurance is nearly universal, inequitable development between different insurance schemes is still a big challenge for our health welfare system, especially for the elderly, who have higher medical needs. In addition, the relationship between above mentioned three variables is still a controversial question in the empirical literatures. It is of interest whether various health insurance schemes have different effects on healthcare costs and health outcome. Another question is what the direct relationship between healthcare expenditure and health outcome is. The objective of this research is *ideological transformation*: from equitable healthcare accessibility to equitable health outcome for the elderly.

2. Data & Methods

For this purpose, this study employed a 2-wave longitudinal survey database of *The National Survey of the Aged Population in Urban/Rural China* (2006 and 2010), to compare the changes of outcome-based health equity among the elderly before and after reform initiated in 2009. The sample size in the survey of 2006 is 19947, while that is 20126 in the later round. The PPS (Probability Proportional to Size) sampling is employed to select older adults in 20 provinces. *One-way ANOVA* makes up a research gap of disparities of healthcare expenditures between different health insurance schemes; while *Multiple Linear Regression* is applied later to exam the explanatory variables of major social determiants and health insurance schemes to predict health outcome; at last, a non-recursive model is identified through the method of *Path Analysis* to explore relationship between healthcare expenditure and health outcome.

3. Results

We found that One-way ANOVA illustrates that although healthcare expenditure of the elderly increased in each insurance scheme from 2006 to 2011, they have *different patterns*. The gap of insurance reimbursements between NRCMS and BMIUE is still very large. *Out-of-pocket spending* accounts for a large proportion of total healthcare expentitures even after reform. Multiple Linear Regression gets results that *socio-economic status, social support* and *social participation*, and *BMIUE* have positive effects on health outcome in 3 models, while *age* has a negative correlation with physical health but positive association with psychological health. Compared with uninsured group, BMIUR and NRCMS do not successfully predict health outcome in either model.

Consistency with literatures, the Basic Medical Insurance Scheme for Employees (instead of general health insurance coverage) indicates a directly positive impact on healthcare utilization, while it only demonstrates an indirect effect on health outcome with the *mediating effect* of healthcare utilization. A mutually *negative effect* between healthcare utilization and health outcome is identified to falsify the research hypothesis, which means the causal relation asks for an instrumental variable. By comparing the path coefficients, insurance factor is an important predict both for healthcare utilization and outcome. The results also indicated that fragmented health insurance schemes generated inequitable healthcare utilization and health outcome for the elderly, which re-emphasized the importance of integration of health insurance systems based on their outcome rather than entitlement.