



The Impact of Health Insurance on Economic Burden for Hepatitis B Inpatients in China

*Hua ZHANG¹, Jianqian CHAO¹, Shiyuan WANG², *Pei LIU²*

- 1. Dept. of Medical Insurance, School of Public Health, Southeast University, Nanjing, Jiangsu, China*
- 2. Dept. of Epidemiology and Biostatistics, School of Public Health, Southeast University, Nanjing, Jiangsu, China*

***Corresponding Author:** Email: liupeiseu@126.com

(Received 18 Aug 2015; accepted 11 Sep 2015)

Dear Editor-in-Chief

China's ongoing health care reform, up to date social health insurance include urban employee basic medical insurance (UEBMI), urban resident basic medical insurance (URBMI) and the New Rural Cooperative Medical Scheme (NRCMS) (1). Health insurance can share economic risks, and enable populations to access health care services (2). HBV-related disease impose financial burden to society (3-5). It was therefore of great interest whether health insurance affect the financial burden for those with Hepatitis B.

Between August and December 2012, we conducted the survey of patients with HBV-related diseases in 3 county hospitals from 3 model regions in Jiangsu Province, China. Overall, 230 inpatients were observed, the expenditures of hospitalization were extracted directly from the hospital financial database. Among the inpatients 168 (73%) were males, and 62 (27%) were females. Average hospitalization expense of UEBMI pa-

tients was the highest (US\$ 3344.43), with median of US\$ 2805.23. Hospitalization expense ranged from one-fourth (for UEBMI and URBMI) close to one-second (for NRCMS) of the average annual household income. Hospitalization expenses have exceeded annual personal income for patients with URBMI and NRCMS. Medication accounted for the major part of hospitalization expense (up to 63.73%), the ratio of medication for patients with UEBMI, URBMI and NRCMS was 65.36%, 64.92%, 60.75% respectively. Average hospital stays of UEBMI patients were nearly 40 days, higher than patients with URBMI and NRCMS, there was statistically significant ($P<0.05$). Reimbursement ratio of UEBMI was the highest (75%), and reimbursement ratio of NRCMS was the lowest, there was significant difference ($P<0.05$).

Table 1: HBV-related disease burden among three type of health insurance

Type of Health Insurance	Hospitalization Expense (\$)	Hospital Stays	Ratio of Annual Household Income (%)	Ratio of Annual Personal Income (%)	Reimbursement Ratio (%)
URBMI	2324.40	34.43	24.90	132.40	72.45
UEBMI	3344.43	39.35	25.25	86.08	75.25
NRCMS	2500.60	26.61	42.51	145.59	56.41

The study showed hepatitis B impose considerable financial burden on society and family (4). Health insurance reduced financial burden of patients, but reimbursement ratio was statistically significant among the three type of health insurance. Six medications are now approved for the treatment of chronic hepatitis B (5), only lamivudine is included in Chinese national drug list. To reduce the cost of medication and include them into drug list of health insurance scheme can reduce the burden of patients. To construct a unified health insurance system and balance reimbursement policy can realize the fair of hepatitis B patients.

Acknowledgements

This study was funded by the National Natural Science Foundation of China (Project No. 81402769), and the Important National Science & Technology Specific Projects (Grant Number2011ZX10004902). The authors declare that there is no conflict of interests.

References

1. Barber SL, Yao L (2011). Development and status of health insurance systems in China. *Int J Health Plann Manage*, 26(4):339–56.
2. Filipski MJ, Zhang Y, Chen KZ (2015). Making health insurance pro-poor: evidence from a household panel in rural China. *BMC Health Serv Res*,15(1):210. doi: 10.1186/s12913-015-0871-7.
3. Ong SC, Lim SG, Li SC (2009). How big is the financial burden of hepatitis B to society? A cost-of-illness study of hepatitis B infection in Singapore. *J Viral Hepat*, 16(1):53-63.
4. Yang BM, Kim DJ, Byun KS, Kim, HS, Park JW, et al. (2010). The societal burden of HBV-related disease: South Korea. *Dig Dis Sci*, 55(3):784-93.
5. Dan YY, Aung MO, lim SG (2008). The economics of treating chronic hepatitis B in Asia. *Hepatol Int*, 2(3):284-95.