

The purpose of this study was to compare the health expenditure of patients under three different health insurance schemes, namely the patients who paid out of their pocket, patients under the civil servant medical benefit scheme (CSMBS) and the patients under universal health coverage (UC), at outpatient service at Saraphi hospital, Chiang Mai during June 1, 2001 to December 31, 2001. Data record forms were used to collect retrospective data of health expenditure. Descriptive statistics, i.e., percentage, arithmetic mean, and standard deviation, were employed to analyze general data. Health expenditure among three groups of patients were compared using analysis of variance (ANOVA) with Scheffe method for comparing between groups. Paired t-test was also utilized to compare health expenditure before and after the implementation of universal health coverage.

The results of this study revealed that the average health expenditure in all diseases of three patient groups were significantly different ( $p < 0.001$ ). The average health expenditure of patients under CSMBS of 162.38 baht was higher than that of patients under UC and patients who paid out of pocket of 138.44 and 123.11 baht respectively.

Comparison of the health expenditure of the most common diseases, namely, upper respiratory tract infection (URI), hypertension (HT), and diabetes mellitus (DM) were performed.

It is showed that the health expenditure on URI among three groups of patients were significantly different ( $p < 0.05$ ). The average health expenditure on URI of patients under CSMBS was 113.67 baht and was higher than that of patients who paid out of pocket at 102.81 baht. The average health expenditure on HT in patient under CSMBS at 181.46 baht was also statistically higher than those of patients under UC and of patients paid out of pocket at 129.41 and 81.80 baht respectively ( $p < 0.001$ ). The result on health expenditure of DM was in line with URI and HT as average health expenditure of patients under CSMBS at 209.77 baht was statistically higher than those of patients under UC and of patients paid out of pocket at 169.34 and 146.69 baht respectively ( $p < 0.001$ ).

Paired t-test between health expenditure before and after UC implementation revealed that the average health expenditure on DM of patients before implementing UC at 143.37 baht was significantly lower than the average health expenditure after implementing UC at 199.26 baht ( $p < 0.001$ ). The similar analysis to compare health expenditure on HT and DM before and after UC implementation was performed and found no significant difference.

In conclusion, this study indicates that types of health insurance scheme would result in different health expenditure among different schemes. Most of health expenditure was on drug cost. Patients under CSMBS had higher drug expense than patients under UC and patients paid out of pocket. The hospital, therefore, should have a policy to monitor and control drug prescription to patients from different schemes to ensure the equitable health care to people.