

Medical and Economic Burden of Chronic Hepatitis B Patients at Queen Savang Vadhana Memorial Hospital

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Objective: To study and to compare the medical and economic burden among chronic hepatitis B (CHB) patients.

Material and Method: A prospective observational study was conducted among 129 adult CHB patients. The medical burden was assessed by using the EuroQol-5D (EQ-5D) and the Chronic Liver Disease Questionnaire (CLDQ) at initial day, the six and 12-month follow-up. The economic burden was assessed in term of total cost per case per year.

Results: At one-year follow-up, the mean age of 129 patients was 41.6 (SD = 11.8) years. For medical burden at over time, CHB with antiviral drugs (ARV) for hepatitis B infection had a significant decreased in percentage of anxiety, and increased the mean (SD) CLDQ score. The mean total costs per case per year of CHB without ARV (52 cases), CHB with antiviral drugs (50 cases), and CHB with cirrhosis/hepatocellular carcinoma (HCC) with ARV (27 cases) were significantly different ($p < 0.001$) with USD 615.9 (SD = 688.0), 1,777.4 (SD = 1,220.4), and 2,651.3 (SD = 3,885.0), respectively.

Conclusion: CHB causes a great economic burden in Thailand. Early antiviral drugs treatment prevents complication in CHB patients.

Keywords: Chronic hepatitis B, Economic burden, Medical burden

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Hepatitis B is a major global health problem that can cause chronic liver disease and chronic infection. It puts people at high risk of death from cirrhosis of the liver and liver cancer⁽¹⁾. Several studies have shown that chronic hepatitis B (CHB) patients have medical burden such as pain (93.3%)⁽²⁾, fatigue/loss of energy (90%)⁽³⁾, and suffering (90%)⁽⁴⁾. In addition, previous economic analysis showed that CHB diseases impose a substantial economic burden on patients, families, and the society. Therefore, strategies for prevention and early antiviral drugs in CHB management are important⁽⁵⁻⁷⁾. However, many perspectives from these studies could not be used in Thai population as they referred to their own countries' point of view. The studies stated that costs analysis in the specific context of each country is necessary to guide to the most cost-effective approach in each country⁽⁸⁾, enable countries to prioritize their public health preventive measures,

and make the most appropriate use of available resources⁽⁹⁾.

Thailand is classified as a high prevalence of hepatitis B infection. In 2005, the prevalence of hepatitis B surface antigen was approximately 5 to 7% of Thai adults⁽⁷⁾ or an estimated 1.3 to 4.5 million from 65 million Thais are infected with hepatitis B virus. However, there is no study on medical and economic burden in Thai CHB patients. In the present study, the medical burden was assessed by using EuroQol-5D (EQ-5D) and Chronic Liver Disease Questionnaire (CLDQ). The use of both generic and disease-specific questionnaires in clinical research was encouraged to gain substantial information⁽¹⁰⁾. Consequently, the study of medical burden with economic assessments among Thai CHB patients with and without antiviral drugs (ARV) treatment will demonstrate a magnitude of CHB burden, and provide basic economic data to estimate cost-effectiveness of CHB management in Thailand.

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Objective

To study and compare the medical and economic burden among CHB patients with and without ARV treatment at out-patient setting

Material and Method

A prospective observational study was conducted at Queen Savang Vadhana Memorial Hospital. The study was approved by the Ethical Committee of the Faculty of Tropical Medicine, Mahidol University, and Queen Savang Vadhana Memorial Hospital. The sample size was calculated from the highest prevalence rate of hepatitis B infection in Thailand (7%) by this formula ($n = z^2 \times p \times (1-p)/d^2$). Even though the sample size was 51 participants, it was estimated at least 100 participants for the reliability of data analysis.

Inclusion criteria were 1) male or female aged 18 years and over, 2) criteria for diagnosis and/or treatment bases on Thailand Consensus Recommendations for Management of Chronic Hepatitis B and C 2009⁽¹¹⁾, 3) participant was willing to participate voluntarily, and 4) participant was willing and able to provide written informed consent. Exclusion criteria were severe uncontrolled disease involving other organs except the liver (heart, kidney, and lung) to control biases of costs from other diseases. Therefore, all cases diagnosed CHB who visited out-patient setting between November 2011 and April 2013 were selected. The patients were divided into three groups, uncomplicated CHB without ARV, CHB with ARV, and CHB with cirrhosis/hepatocellular carcinoma (HCC) with ARV.

The medical burden was assessed by EQ-5D and CLDQ three times at initial day (D0), the sixth month (M6), and the twelfth month (M12) follow-up. As a generic quality of life questionnaire, EQ-5D has the least items (5 items) with high reliability test rate range from 0.70 to 0.85⁽¹²⁾. Its five dimensions include mobility, self-care, usual activity, pain or discomfort, and anxiety or depression. Each dimension has three levels of severity, no health impairment or level 1, some health impairments or level 2, and severe health impairments or level 3. As the data on the EQ-5D dimensions is not continuous but ordinal, the percentage of patients reporting moderate or severe health impairments (level 2 plus level 3) in each EQ-5D dimension were reported.

CLDQ is a liver disease specific questionnaire having a high rate of internal consistency (>0.79). It includes 29 items in six domains, abdominal symptoms (AB), fatigue (FA), systemic symptoms (SY), activity (AC), emotional function (EM), and worry (WO)⁽¹³⁾. Its responses result in seven-point Likert scales with one score means "all of the time" or the most impairment to seven scores mean "none of the time"

or the least impairment; therefore, the higher score indicates the better health. In Thailand, Sobhonslidsuk et al⁽¹⁴⁾ translated and validated the CLDQ to Thai. The Cronbach's alpha of the overall Thai CLDQ scores was 0.96. In addition, it was found to have discriminant validity.

Economic burden in term of total cost per case were collected within one year. For direct medical cost, data were collected from hospital information system in each patient. The routine service costs with capital cost were data from unit cost study of the study hospital. The direct non-medical cost was informed by the patients. Indirect cost was assessed in term of work productivity loss by asking the patients for degree of impairment from the least 0 score to the most 10 scores that were applied to percentage multiplied with patients' salary. The schematic diagram of economic burden in term of total cost is shown in Fig. 1.

Statistical analysis

Data were analyzed by SPSS version 17.0. Baseline socio-demographic and clinical characteristic data are presented as number, percentage, mean (SD) or median (Q1, Q3) as appropriate. Costs and income were reported with mean (SD) and median (Q1, Q3) for benefits of further studies.

The statistics used in comparing frequencies, mean (SD), and median (Q1, Q3) among the patients groups were Chi-square test, one-way analysis of variance (ANOVA), and Kruskal Wallis test, respectively. The comparison of percentage of health impairment and median (Q1, Q3) of CLDQ score within group at D0, M6, and M12 were analyzed using Cochran's Q and Friedman K related test. A *p*-value less than 0.05 was considered statistically significant. In the present

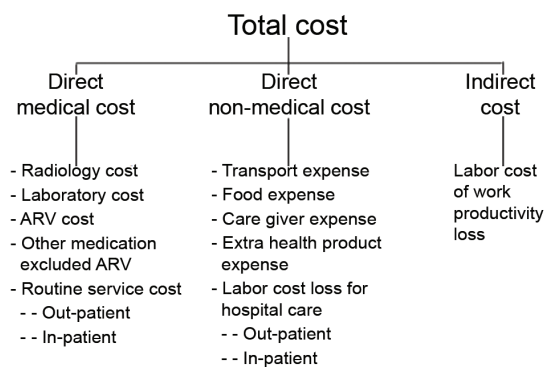


Fig. 1 Schematic diagram of economic burden in term of total cost in the present study.

study, the reliability by split-half Cronbach's alpha of the EQ-5D and the CLDQ were 0.76, and 0.82.

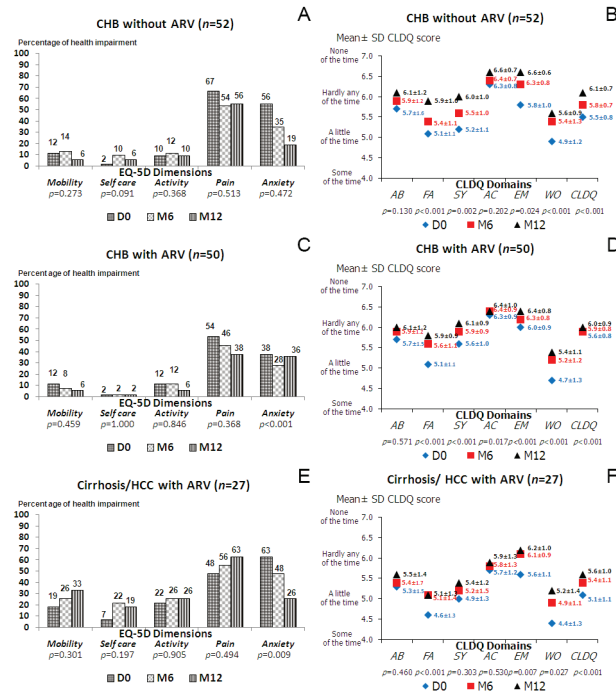
Results

One hundred twenty nine patients completed one-year follow-up. Number of uncomplicated CHB without ARV, CHB with ARV, and CHB with cirrhosis/HCC with ARV were 52 cases, 50 cases, and 27 cases, respectively. Overall, the mean age, months of treated ARV, and hepatitis B virus deoxyribonucleic acid were 41.6 (11.8) years, 22.8 (17.8) months and 5.9 (34.1) IU/ml. Among CHB related-disease, CHB with cirrhosis/HCC with ARV had the significant worst baseline socio-demographic and clinical characteristics than the others (Table 1).

Regarding the medical burden measuring by EQ-5D and CLDQ at over time, CHB with ARV and CHB with cirrhosis/HCC with ARV had significant decreasing in percentage of anxiety at M6 and M12 (Fig. 2C, E). For CLDQ, all groups had significantly

increased overall median CLDQ score at M6 and M12 (Fig. 2B, D, F). Overall, CHB with antiviral drugs had significant decreasing in percentage of anxiety, and increasing mean CLDQ score at M6 and M12 almost all domains except AB (Fig. 2C, D).

For 129 CHB patients, sum of costs, direct medical costs, direct non-medical costs, and indirect cost from work productivity loss were USD 192,482, 135,210, 19,111, and 38,161. The mean (SD) of these costs were USD/patient/year 1,492.1 (2,109.9), 1,048.1 (1,770.8), 148.1 (207.4), and 295.8 (622.3). Of total cost, direct medical costs, indirect cost, and direct non-medical cost accounted for 70.3%, 19.8%, and 9.9%. Mean (SD) total costs of CHB without ARV, CHB with ARV, and CHB with cirrhosis/HCC with ARV were significant difference ($p < 0.001$) with USD 615.9 (688.0), 1,777.4 (1,220.4), and 2,651.3 (3,885.0), respectively (Table 2). Among CHB groups, cirrhosis/HCC with ARV had on average a significant highest all costs than the others groups



AB = abdominal symptoms; AC = activity; ARV = antiviral drugs for hepatitis B infection; CLDQ = Chronic Liver Disease Questionnaire; CLDQM = overall CLDQ score; D0 = Day zero; EM = emotional function; FA = fatigue; M6 = 6th month of follow-up; M12 = 12th month of follow-up; SY = systemic symptoms; WO = worry

Fig. 2 Medical burden measuring by EQ-5D and CLDQ of CHB patients at D0, M6, and M12, (A) percentage of health impairment reporting by EQ-5D of CHB without ARV, (B) mean \pm SD CLDQ score of CHB without ARV, (C) percentage of health impairment reporting by EQ-5D of CHB with ARV, (D) mean \pm SD CLDQ score of CHB with ARV, (E) percentage of health impairment reporting by EQ-5D of cirrhosis/HCC with ARV, (F) mean \pm SD CLDQ score of cirrhosis/HCC with ARV.

Table 1. Baseline socio-demographic and clinical characteristics of CHB patients

Parameters	Overall (n = 129)	CHB without ARV (n = 52)	CHB with ARV (n = 50)	CHB with Cirrhosis/ HCC with ARV (n = 27)	p-value by ANOVA/ Kruskal Wallis test
Baseline socio-demographic					
Age, mean (SD) (years)	41.6 (11.8)	39.4 (11.2)	39.5 (10.4)	49.6 (12.1)	<0.001
Male gender, number (%)	69 (53.5)	23 (44.2)	27 (54.0)	19 (70.4)	0.087
Employee, number (%)	87 (67.4)	36 (69.2)	34 (68.0)	17 (63.0)	0.848
Monthly household income					
Mean (SD) (USD)	507.4 (1,032.5)	386.9 (298.6)	492.9 (383.0)	766.2 (2,167.5)	0.301
Median (Q1, Q3) (USD)	326.4 (236.6, 595.6)	311.7 (244.8, 473.2)	391.6 (261.1, 652.7)	310.0 (146.9, 489.6)	0.176
Had health security, number (%)	123 (95.3)	49 (94.2)	47 (94.0)	27 (100.0)	0.434
Had presence of other diseases except liver disease, number (%)	59 (45.7)	23 (44.2)	21 (42.0)	15 (55.6)	0.502
Baseline clinical characteristics					
Months of treated antiviral drugs, mean (SD)	22.8 (17.8) (n = 77)	-	20.8 (12.9) (n = 50)	27.2 (25.3) (n = 27)	-
HBV-DNA, mean (SD) IU/ml	5.9 (34.1) (n = 107)	2.6 (1.9) (n = 30)	9.9 (48.9) (n = 50)	2.1 (2.2) (n = 27)	0.529
HBeAg-negative, number (%)	72 (60.5)	33 (78.6)	21 (42.0)	18 (66.7)	0.001
ALT, median (Q1, Q3) (U/l)	25.5 (21.0-35.0)	24.0 (20.0-29.7)	25.5 (21.0, 35.0)	34.0 (26.0-56.0)	0.001
AST, median (Q1, Q3) (U/l)	27.0 (18.0-45.0)	20.5 (16.0-30.5)	27.0 (18.0-45.0)	28.0 (20.0-43.0)	0.048
Alkaline phosphates, mean (SD) (U/l)	81.0 (36.4)	66.4 (24.4)	80.1 (28.4)	109.1 (50.8)	<0.001
Alpha-fetoprotein, mean (SD) (ng/ml)	8.2 (38.4) (n = 118)	2.7 (2.7) (n = 45)	2.9 (2.1) (n = 47)	27.5 (79.9) (n = 26)	0.014
Total bilirubin, mean (SD) (mg/dl)	0.7 (0.6)	0.7 (0.5)	0.6 (0.3)	1.1 (1.0)	0.002
Albumin, mean (SD) (g%)	4.2 (0.5)	4.3 (0.3)	4.3 (0.6)	3.8 (0.6)	<0.001
INR, mean (SD)	1.0 (0.2)	1.0 (0.2)	1.0 (0.1)	1.1 (0.2)	0.001
Hematocrit, mean (SD) (g%)	38.7 (4.9)	39.3 (4.0)	40.0 (4.6)	35.3 (5.6)	<0.001

CHB = chronic hepatitis B; HCC = hepatocellular carcinoma; ALT = aminotransferase; ARV = antiviral drugs for hepatitis B infection; AST = aspartate aminotransferase; HBeAg = hepatitis B e antigen; HBV-DNA = hepatitis B virus deoxyribonucleic acid; INR = international normalized ratio; Q1 = quartile 1; Q3 = quartile 3; SD = standard deviation; USD = United States Dollar

Table 2. Comparison of costs in USD of CHB with ARV, CHB without ARV, and CHB with cirrhosis/HCC with ARV

Costs	Overall (n = 129)	CHB without ARV (n = 52)	CHB with ARV (n = 50)	Cirrhosis/HCC with ARV (n = 27)	p-value by ANOVA/Kruskal Wallis test
Direct medical costs					
Mean (SD)	1,048.1 (1,770.8)	254.3 (213.3)	1,983.9 (3,271.2)	1,983.9 (3,271.2)	<0.001
Median (Q1, Q3)	698 (232, 958)	201 (142, 301)	848 (749, 1,611)	870 (568, 1,456)	<0.001
Antiviral drugs cost					
Mean (SD)	454.3 (781.6)	-	879.4 (904.9)	507.2 (836.7)	-
Median (Q1, Q3)	61 (0, 510)	-	510 (510, 615)	121 (61, 510)	-
Other medication cost excluded antiviral drugs					
Mean (SD)	235.6 (1,244.5)	30.6 (96.2)	123.9 (269.1)	837.4 (2,643.2)	0.016
Median (Q1, Q3)	6 (0, 49)	2 (0, 21)	9 (0, 96)	34 (1, 276)	0.006
Laboratory cost					
Mean (SD)	171.8 (100.6)	100.6 (67.6)	200.4 (80.9)	255.9 (92.3)	<0.001
Median (Q1, Q3)	168 (100, 232)	79 (46, 153)	182 (145, 243)	239 (194, 289)	<0.001
Radiology cost					
Mean (SD)	69.6 (107.1)	43.7 (17.1)	67.4 (90.6)	123.6 (189.7)	0.006
Median (Q1, Q3)	38 (38, 77)	39 (39, 46)	39 (39, 60)	77 (38, 116)	<0.001
Routine service cost					
Mean (SD)	116.8 (299.9)	61.2 (39.1)	97.3 (233.6)	259.8 (555.9)	0.016
Median (Q1, Q3)	55 (55, 70)	56 (42, 66)	56 (56, 70)	70 (56, 84)	<0.001
Direct non-medical costs					
Mean (SD)	148.1 (207.4)	104.7 (147.1)	133.9 (147.4)	258.0 (334.1)	0.006
Median (Q1, Q3)	74 (41, 151)	54 (33, 96)	81 (53, 152)	91 (62, 267)	0.009
Supplementary expense					
Mean (SD)	64.2 (166.2)	43.1 (128.2)	60.7 (146.3)	111.3 (245.4)	0.222
Median (Q1, Q3)	0 (0, 25)	0 (0, 9)	0 (0, 49)	0 (0, 98)	0.330
Caregiver expense					
Mean (SD)	16.7 (45.3)	16.0 (46.1)	6.2 (25.3)	37.8 (63.6)	0.012
Median (Q1, Q3)	0 (0, 0)	0 (0, 0)	0 (0, 0)	0 (0, 107)	0.017
Transport expense					
Mean (SD)	15.1 (14.4)	11.5 (11.0)	15.9 (12.9)	20.4 (20.3)	0.026
Median (Q1, Q3)	10 (5, 19)	8 (4, 16)	12 (6, 20)	13 (8, 23)	0.012
Food expense					
Mean (SD)	9.8 (9.5)	8.9 (9.2)	9.8 (10.3)	11.5 (8.4)	0.523
Median (Q1, Q3)	7 (5, 11)	7 (4, 9)	7 (4, 12)	9 (6, 15)	0.096
Labor cost loss for hospital care					
Mean (SD)	42.2 (88.8)	25.1 (19.5)	41.2 (38.5)	76.9 (182.9)	0.047
Median (Q1, Q3)	24 (15, 45)	21 (14, 33)	30 (18, 63)	24 (11, 57)	0.081
Indirect cost					
Mean (SD)	295.8 (622.3)	256.9 (595.9)	275.0 (589.6)	409.3 (733.2)	0.564
Median (Q1, Q3)	0 (0, 182)	0 (0, 0)	0 (0, 95)	0 (0, 568)	0.441
Total cost					
Mean (SD)	1,492.1 (2,109.9)	615.9 (688.0)	1,777.4 (1,220.4)	2,651.3 (3,885.0)	<0.001
Median (Q1, Q3)	891 (391, 1,705)	333 (218, 703)	1,313 (830, 2,867)	1,101 (870, 2,653)	<0.001

ARV = antiviral drugs for hepatitis B infection; CHB = chronic hepatitis B; Q1 = quartile 1; Q3 = quartile 3
 1 USD = 30.64 Thai Baht

except supplementary expense, food expense and indirect cost.

Discussion

The present study is the first study to describe economic burden in term of total cost together with assessment of medical burden. However, the costs in the present study had limitation because the economic burden did not have full economic evaluation. The costs of CHB patients in the present study were quite low compared to the studies in China^(5,15). It could be explained as followings. First, the CHB patients in the present study were OPD cases. Second, the present study is a cost approach while others may be a charge approach. In addition, the cost of drugs used in the present study was quite low because most of drugs were locally made. Third, the present study was conducted in between treatment; the initial day did not correspond to the beginning of treatment. Patients who had active hepatitis were already treated. As a result, the cases were less severe. Therefore, it may be assumed that this is the lower bound cost of CHB or it is the cost of maintaining service for uncomplicated CHB.

The present study proves that hepatitis B infection imposes a considerable economic burden on Thai CHB patient, family, and the society, there have never been studied before. The finding provided that direct non-medical accounted for 10%, which might interfere to loss of income and well-being of these patients. This was consistent with studies in China and Pakistan where patient and family underwent a significant economic pressure because the majority of healthcare costs are paid by patients themselves^(15,16). Although 92.8% of the patients in the present study had health security coverage to direct medical cost, the direct non-medical cost was a burden to the patients. Regarding the rest, nearly 10% of patients in the present study did not have health security and payment was by cash. It was explained that the studied hospital context is a hospital under the Thai Red Cross Society that provided universal coverage health care to minority people in its location from the governments' policy. Therefore, some patients who intended to receive health service had to pay for themselves. This situation indicated the limitation of the universal coverage program.

The more severe CHB disease causes more economic burden that should be prevented. The finding showed that among CHB related-disease, CHB with cirrhosis/HCC with antiviral drugs cost on average a significant highest of all. Besides, cirrhosis had high

severity of liver disease determined by using CLDQ. This finding was similar to the previous studies that cirrhosis was associated with increasing health care cost and should be prevented^(15,16). In addition, antiviral drugs treatment for hepatitis B infection benefits uncomplicated CHB patients by decreasing medical burden over time. These patients had improved overall CLDQ score with almost all domains at the M6 and M12 follow-up while CHB with cirrhosis/HCC might not. Besides, antiviral drugs were recommended by guidelines for CHB patients especially those without liver cirrhosis to prevent the progress of disease, and reduce transmission of the virus⁽¹⁷⁾. Previous economic analyses have shown the cost-effectiveness of antiviral drugs in CHB patient^(18,19) that tended to save direct medical cost from progressive liver damages⁽¹⁵⁾. Hence, this finding confirmed the importance of early antiviral drugs treatment on medical and economic burden of CHB patient that should be considered. As a suggestion in clinical practice setting, the present study verified that cirrhosis has to be closely monitored and recommended implication for providing a holistic care in CHB cirrhosis patients and caregiver.

The costs of the present study could be used to estimate a large magnitude economic burden in Thailand (Table 3). With a 2 to 7% HBsAg prevalence, the estimated costs of all CHB patients in Thailand ranged between 1.9 and 6.8 billion USD per year. Approximately 0.4 to 1.5 million Thai CHB patients will develop cirrhosis and incur costs ranging from 1.1 to 4.0 billion USD per year. Saving might amount to 0.4 to 1.3 billion USD per year if cirrhosis or HCC have been prevented by treating CHB with ARV. Evidence from the present study also contributes to the understanding of potential benefits to society from allocating more resources to preventing and treating HBV infection in Thailand.

Additionally, this is the first study that assessed both EQ-5D and CLDQ at the same time in general practice setting that could visibly reflect medical burden in CHB patient at over time. With different approaches, EQ-5D is a generic approach whereas CLDQ is a liver disease specific measure. EQ-5D was found to be preferred for use in the Thai study^(21,22). However, it has been criticized as less sensitive than disease-specific measurements⁽²³⁾. CLDQ can determine a comprehensive understanding among liver disease stages of CHB. To some extent, both measures may have captured different aspects of health, thus different results may be obtained from the same item.

Table 3. Estimated economic burden of all CHB patients over Thailand

		Number of CHB patient	
Number of Thai population = 65,064,077 ⁺			
Prevalence of HBsAg	2.0-7.0%	1,301,281 (2%)	4,554,485 (7%)
Estimated one third develop to cirrhosis		433,760	1,518,162
Estimated new CHB case each year	8.6-10.4/100,000	5,595	6,786
	Costs per case	Estimated costs in USD per year	
Estimate cost (USD)			
All CHB over Thailand	1,492.1 (2,109.9)	1,941,641,380	6,795,747,069
Uncomplicated CHB without ARV	615.9 (688.0)	3,445,960	4,234,928
Complicated CHB with ARV	177.4 (1,220.4)	770,965,024	2,698,381,139
Cirrhosis/hepatocellular carcinoma with ARV	2,651.3 (3,885.0)	1,150,027,888	4,025,102,911
Cost saving			
If cirrhosis had been prevented in complicated CHB with ARV	873.9	379,062,864	1,326,721,772

⁺ National Statistic Office of Thailand; Ministry of Information and Communication Technology⁽²⁰⁾
Data were estimated from mean of costs

Conclusion

Hepatitis B infection imposes a considerable economic burden on Thai CHB patient, family, and society. The more severe CHB disease causes more economic burden thus, should be prevented. The findings showed that antiviral drugs treatment benefits CHB patients by decreasing medical burden over time.

Implication for policy makers

The regular liver biomarker monitoring should be provided for all CHB patients with early treatment in impaired liver function for superior clinical outcome, and cost saving. In addition, holistic care should be provided for CHB with cirrhosis or HCC patient.

What is already known on this topic?

CHB patients have many medical burdens, both physical and psychological. This is from the complicated disease stages, which are non-linear. The infections impose a substantial economic burden on patients, families, and society. Previous studies have demonstrated this cost in view of their countries perspectives, which could not be used in Thai population. The medical and economic burden of Thai CHB patient has not been studied.

What this study adds?

This is the first study that assessed both EQ-5D and CLDQ at the same time in general practice setting that could visibly reflect physical and

psychological burden in CHB patient at over time. In addition, the presented study is the first study that described total cost including direct medical cost, direct non-medical cost, and indirect cost of Thai CHB patient together with quality of life assessment in the same patient. It proved that hepatitis B infection imposes a considerable economic burden on Thai CHB patients, family, and society. Indirect cost from work productivity loss accounted for 20%, which have never been described. It affects the employer and the society. Direct non-medical costs accounted for 10%, which might interfere to loss of income and well-being of the patients. The costs included in the study could be used to estimate the great economic burden of all CHB patients in Thailand. The finding emphasized the advantage of the routine liver function follow-up with early ARV for hepatitis B infection as one of the most important strategies for CHB management.

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Potential conflicts of interest

None.

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ภาระทางกายและทางเศรษฐกิจของผู้ป่วยโรคไวรัสตับอักเสบบีที่โรงพยาบาลสมเด็จพระบรมราชเทวี ณ ศรีราชา

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วัตถุประสงค์: เพื่อศึกษาและเปรียบเทียบภาระทางกายและทางเศรษฐกิจของผู้ป่วยโรคไวรัสตับอักเสบบี

วัสดุและวิธีการ: การศึกษาแบบสังเกตการณ์ที่ไปข้างหน้าในผู้ป่วยโรคไวรัสตับอักเสบบีที่เป็นผู้ใหญ่ 129 ราย ภาระทางกายและทางเศรษฐกิจประเมินโดยใช้แบบวัดคุณภาพชีวิต EQ-5D และแบบสำรวจสุขภาพฉบับในวันแรก เดือนที่ 6 และเดือนที่ 12 ของการมาตรวจตามนัด ภาระทางเศรษฐกิจประเมินเป็นต้นทุนรวมต่อรายในการตรวจรักษาเป็นเวลา 1 ปี

ผลการศึกษา: มีผู้ป่วย 129 ราย ที่มาตรวจรักษาเป็นเวลาครบ 1 ปี โดยมีอายุเฉลี่ย เท่ากับ 41.6 (SD = 11.8) ปี ภาระทางกายและทางเศรษฐกิจเมื่อเวลาผ่านไป พบกลุ่มผู้ป่วยโรคไวรัสตับอักเสบบีที่ได้รับยาต้านไวรัสมีร้อยละของความวิตกกังวลลดลงและมีคะแนนแบบสำรวจสุขภาพฉบับเพิ่มขึ้นอย่างมีนัยสำคัญส่วนภาระทางเศรษฐกิจ พบค่าเฉลี่ยต้นทุนรวมต่อรายต่อปีในกลุ่มผู้ป่วยโรคไวรัสตับอักเสบบีที่ไม่ได้รับยาต้านไวรัสเท่ากับ 615.9 (SD = 688.0) ดอลลาร์สหรัฐอเมริกา (ประมาณ 18,871 บาท) (52 ราย) กลุ่มผู้ป่วยโรคไวรัสตับอักเสบบีที่ได้รับยาต้านไวรัสเท่ากับ 1,777.4 (SD = 1,220.4) ดอลลาร์สหรัฐอเมริกา (ประมาณ 54,459 บาท) (50 ราย) และกลุ่มผู้ป่วยโรคไวรัสตับอักเสบบีที่เป็นตับแข็ง/มะเร็งตับที่ได้รับยาต้านไวรัสเท่ากับ 2,651.3 (SD = 3,885.0) ดอลลาร์สหรัฐอเมริกา (ประมาณ 81,235 บาท) (27 ราย) โดยแตกต่างกันอย่างมีนัยสำคัญ

สรุป: โรคไวรัสตับอักเสบบีทำให้เกิดภาระทางเศรษฐกิจในประเทศไทย การรักษาด้วยยาต้านไวรัสในระยะแรกเริ่มเป็นประโยชน์ในผู้ป่วยโรคไวรัสตับอักเสบบีที่ซับซ้อน
