

CHAPTER IV

RESULT AND DISCUSSION

This chapter will give the interesting results from data analysis, they're general characteristic results that get from questionnaire and results form cost components both of patient and relative by cost calculations and also discussion and the regression analysis for factor affecting to total cost.

Result of general characteristics of data of population study (Patient)

1. Gender of patient.

Table 4.1: Gender of patient

Sex	Frequency	Percentage
Male	76	80
Female	19	20
total	95	100

Sex: Most of disability victims by alcohol drunk driving from traffic accident case study in Bangkok were male 76 patients or 80% and female 19 patients or 20%

2. Distribution of patient by age group

Table 4.2: Distribution of patient by age group

Age	Frequency	Percentage
20-29	38	40
30-39	33	34.74
40-49	16	16.84
50-59	8	8.42
Total	95	100

Age : Most of disability patient age (nowadays) is during 20-29 years old by 40% and age between 30-39 also most nearly to as a second rank by 34.74%.

3. Marital status of patient

Table 4.3: Marital status of patient

Marital status	Frequency	Percentage
Single	60	63.16
Married	20	21.05
Divorce	10	10.53
Other(cohabitation,etc.)	5	5.26
total	95	100

Marital status: Most of disability patient's marital status is single by 63.16% and 21.05% married while 10.53% divorce.

4. Education level of patient

Table 4.4: Education level of patient

Education level	Frequency	Percentage
Less than elementary	0	0
Prathom 1-3(Grade 1-3)	0	0
Prathom 4-6(Grade 4-6)	6	6.32
Mattayom 1-3(Grade 7-9)	16	16.84
Mattayom 4-6 (Grade10-12)	24	25.26
Diploma/High vocational	12	12.63
Bachelor degree	34	35.79
Higher than Bachelor degree	3	3.16
others	0	0
total	95	100

Education level: Most of disability patient's education level is Bachelor degree by 35.79% the second is Mattayom 4-6 (equal to Grade 10-12) by 25.26%.and found the third is Mattayom 1-3 (Grade 7-9) by 16.84%.

5. Career of disability victims (nowadays)

Table 4.5: Career of disability victims (nowadays)

career	Frequency	Percentage
1.Civil servants	0	0
2.State enterprise	5	5.26
3.Private company employee	22	23.16
4.Personal business	20	21.05
5.Housewife	0	0
6.Unemployed	17	17.89
7.to hire one self out	3	3.16
8.volunteer of DDD foundation	11	11.58
9.Others	17	17.90
total	95	100

Career: Most of disability patient (nowadays) are 23.15% working as Private company employees and follow by doing their own business 21.05% and unemployed by 17.89%.

6. Distribution of income per month of patient before patient's accident

Table 4.6: Distribution of income per month of patient before patient's accident

Income per month(Baht)	Before accident	
	frequency	percentage
None	16	16.84
1-5,000	26	27.37
5,001 – 10,000	32	33.68
10,001 – 15,000	9	9.74
15,001 – 20,000	0	0
20,001 – 25,000	9	9.74
25,001 – 30,000	0	0
30,001 – 35,000	0	0
35,001 – 40,000	0	0
40,001 – 45,000	0	0
45,001 – 50,000	0	0
50,001 – 55,000	3	3.16
total	95	100

Most of patients have income per month of patient before patient's accident between 5,001 – 10,000 Baht by 33.68% while 16.84% has no income.

7. Distribution of income per month of patient after patient's accident

Table 4.7: Distribution of income per month of patient after patient's accident

Income per month(Baht)	After accident	
	frequency	percentage
None	35	36.84
1 -5,000	8	8.42
5,001 – 10,000	15	15.79
10,001 – 15,000	13	13.68
15,001 – 20,000	9	9.47
20,001 – 25,000	2	2.11
25,001 – 30,000	1	1.05
30,001 – 35,000	2	2.11
35,001 – 40,000	2	2.11
40,001 – 45,000	1	1.05
45,001 – 50,000	3	3.16
50,001 – 55,000	1	1.05
55,001 – 60,000	1	1.05
60,001 – 65,000	1	1.05
65,001 – 70,000	1	1.05
total	95	100

Most of patients have no income per month of patient after patient's accident by 36.84% while 15.79% have income per month between 5,001 – 10,000 Baht.

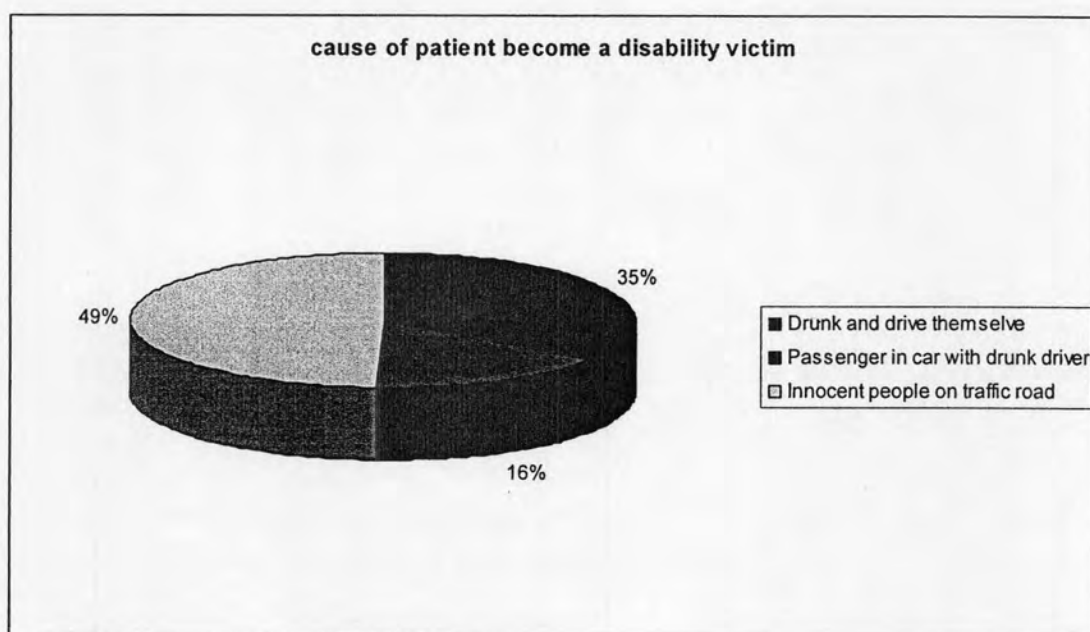
8. Cause of become a disability victim

Table 4.8: Cause of become a disability victim

Cause of become a disability victims	Frequency	Percent
Drunk and drive themselves	33	34.74
Passenger travel with drunk driver	15	15.79
Innocent people on traffic road	47	49.47
Total	95	100

Cause of become a disability victim : most of cause that make patient become a disability victim is innocent victims who were crashed by drunk driver by 33.74%, for the second is from drink and drive themselves by 34.74 % and the third is from passenger travel with drunk driver by 15.79%.

Figure 4.1: Cause of become a disability victim (percentage)



9. Compensation that the patient received after an accident.(CPI adjust to year 2008 value by base year 2007 = 100)

Table 4.9: Compensation that the patient received after an accident

type of compensations	frequency	Percent	Value (Baht)	Average/ 1 person in 1st year (Baht)
own insurance	27	19.01	6,593,189	69,401.99
litigant's insurance	4	2.82	84,549.74	890.00
compensation from litigant	26	18.31	3,507,716	36,923.33
The protection for motor vehicle accident victim act B.E.2535 of patient	44	30.99	1,978,384	20,825.09
The protection for motor vehicle accident victim act B.E.2535 of litigant	11	7.75	2,080,656	21,901.65
Social Security	14	9.86	974,490	10,257.79
Civil servants/state enterprise	5	3.52	79,018.07	831.77
Benefit from private company	11	7.75	17,528,255	184,507.90
Foundation	0	0.00	0	0
others	0	0.00	0	0
total	142	100.00	32,826,258	345,539.60

From 95 patients in a sample ,There're 80 (84.21%) patients got compensation while 15 (15.79%) didn't get any compensation. Average of the compensation per 1 person in 1st year of treatment = 345,539.60 Baht/person in 1st year of treatment And for 1 patient can have more than 1 compensation. and the most of compensation type that patient receive is from The protection for motor vehicle accident victim act B.E.2535 of patient by 30.99%.but the value of money that patient's get most is the benefit from private company by 184,507.90 Baht per 1 person in first year after patient's accident.

10.Payment methods that patient used when access to receive a medical treatment in a hospital(one patient can have more than one of payment methods)

Table 4.10: Payment methods that patient used when access to receive a medical treatment in a hospital

payment method	frequency	percentage
no health benefit package	2	1
The protection for motor vehicle accident victim act B.E.2535 of patient	34	16
Universal coverage scheme	11	5
Social security	28	14
Civil servant,Retirement benefit,State enterprise benefit	24	12
Life and accident insurance	14	7
have health benefit package but also pay out of pocket	75	36
other benefit	19	9
total	207	100
other benefit: Queen fund, litigant pay compensation all for the medical treatment, from the disability card, money from social work organization.		

From 95 patients in a sample ,There're use method to pay out of pocket even though they get the benefit as the most of payment method by 36%,by using the benefit from The protection for motor vehicle accident victim act B.E.2535 of patient by 16%,social security by 14% and by civil servant, retirement benefit, State enterprise benefit by 12%.

11. Distribution of medical equipment classified by type (1patient can have more than 1 equipment)

Table 4.11: Distribution of medical equipment classified by type

Equipments	Number of equipment that patient use(unit)	Percentage
Wheel chair	74	16.26
Wheel chair electricity	13	2.86
Cushion	51	11.21
Gel cushion	9	1.98
Staff	9	1.98
Tri-staff	7	1.54
walker	19	4.18
crutch	39	8.57
Airbed	33	7.25
Hospital bed	13	2.86
Pamparse	60	13.19
Toilet chair	19	4.18
Urine set	48	10.55
Alcohol set	37	8.13
Others	24	5.27
total	455	100.00

Most of patient by 16.26% used wheel chair,used pamparse by 13,19% and cushion by 11,21%

For others medical equipment can be:Titanium supporter,NACL Set,prosthesis leg,Leg equipment ,Braze(for leg),back support shirt, tube bed, Alfa bed.

12. Level of severity of patient

According from result found that all 95 observations are the patient who have impairment of physical ability or locomotion and be a member of Don't drive drunk foundation (see definition of impairment of physical ability or locomotion on chapter 2 page 20) found that most of patients have the level of severity at level 4 by 72.63%

The level of severity of patient's (from disability book which issued by National Office for empowerment of persons with Disability (NEP.) as the references to severity level. it defines to level 1 to 5 from light to serious case and must be approved by medical doctor)

Table 4.12 : Level of severity of patient

Level of severity	Frequency	Percent
1	0	0
2	0	0
3	7	7.37
4	69	72.63
5	19	20
Total	95	100

The example for each level of severity

Level 3; Leg prosthesis, just each left or right or both two legs.

Level 4 ;Paralysis half body

Level 5; Paralysis all body from neck to toe

13. Type of vehicle that patient used for transportation and got accident.

Table 4,13: Type of vehicle that patient used for transportation and got accident.

Type of vehicle	Frequency	Percent
Taxi	3	3.16
Bus	2	2.11
Motorcycle	63	66.32
Personal car	20	21.05
Walking	7	7.37
Total	95	100.00

Type of vehicle that patient used for transportation and got accident:

Most of disability patient's got an accident by motorcycle for 66.32%, personal car by 21.05% and 7.37% are from walking beside traffic road .

14. Place of accident (Province) of disability patient.

Table 4.14: Place of accident (Province) of disability patient.

Place of accident(Province)	Frequency	Percent
Bangkok	40	42.11
Chonburi	13	13.68
Chumpon	1	1.05
Kanjanaburi	1	1.05
Nakornrachasima	4	4.21
Nakornsawan	1	1.05
Nonthaburi	13	13.68
Pathumtani	1	1.05
Pathumthani	4	4.21
Phuket	1	1.05
Prae	2	2.11
Prajuabkirikhan	3	3.16
Rachaburi	2	2.11
Samutprakarn	2	2.11
Samutsakorn	1	1.05
Songkla	1	1.05
Srakeaw	1	1.05
Surathani	2	2.11
Trung	1	1.05
Udonthani	1	1.05
Total	95	100

Place of accident (Province) of disability patient:

Most of place of accident of patient is Bangkok by 42.11% ,Chonburi and Nonthaburi are likely as the same percentage by 13.68%

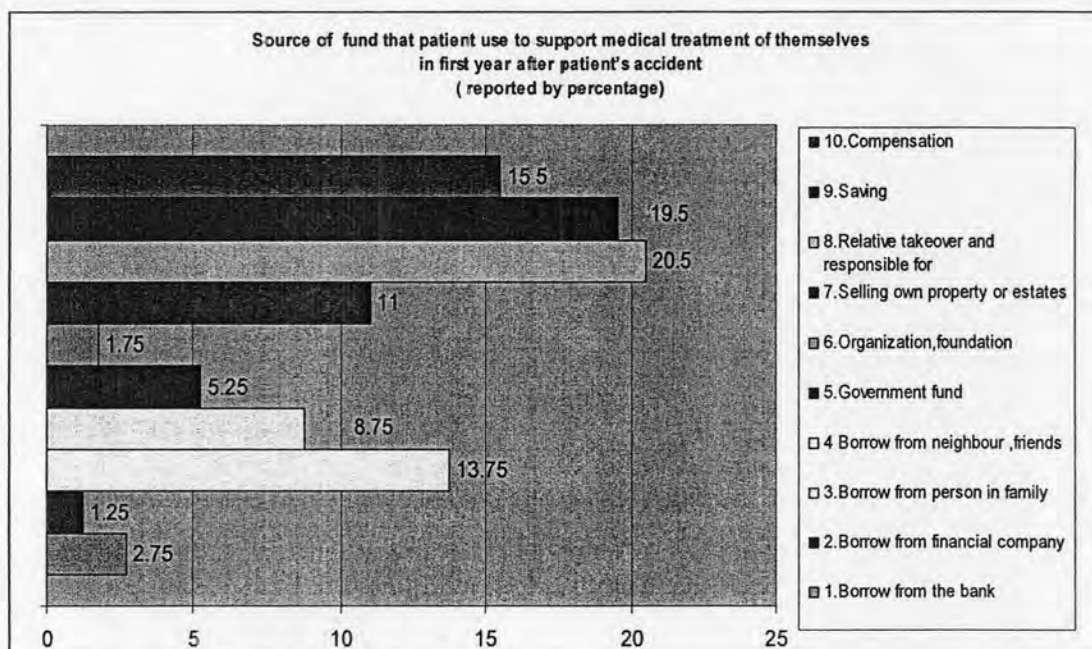
15. Source of fund that patient use to support medical treatment of themselves in first year after patient's accident(patient can have more than 1 source).

Table 4.15: Sources of fund that patient use to support medical treatment of themselves

Source of fund	Frequency	Percent
1.Borrow from the bank	11	2.75
2.Borrow from financial company	5	1.25
3.Borrow from person in family	55	13.75
4 Borrow from neighbour ,friends	35	8.75
5.Government fund	21	5.25
6.Organization,foundation	7	1.75
7.Selling own property or estates	44	11
8.Relative takeover and responsible for	82	20.5
9.Saving	78	19.5
10.Compensation	62	15.5
total	400	100

Source of fund that patient use to support medical treatment of themselves in first year after patient's accident; Most of disability patient used sources of fund from their Relative to take over and responsible for all costs by 20.5% ,by themselves saving by 19.5% and 15.5% use fund that received from compensation as the source of fund to support their expenditures as disability victims from traffic accident.

Figure: 4.2: Sources of fund that patient use to support medical treatment of themselves



Result of general characteristics of data of population study

Patient's relative

From 95 observations there're 5 patients that didn't have relative to take care. And for relative who mortality now so there're only 90 observations that have patient's relative data.

The patient may take responsible to answer questionnaire about what the relative do did for patient in first year after patient accident in the pass.

1. Gender of patient's relative.

Table 4.16: Gender of patient's relative.

Sex	Frequency	Percentage
Male	9	10
Female	81	90
total	90	100

Note: from 95 observations there're 5 patients that didn't have relative to take care. Sex: Most of patient's relative who take care patient were female 81 observations or 90% and male by 9 observations or 10% .

2. Distribution of patient's relative by age group (nowadays).

Table 4.17: Distribution of patient's relative by age group (nowadays).

Age	Frequency	Percentage
20-29	0	0
30-39	2	2.22
40-49	26	28.89
50-59	37	41.11
60-69	17	18.89
70-79	0	0
80-89	3	3.33
mortality	5	5.56
Total	90	100

Note: from 95 observations there're 5 patients that didn't have relative to take care. Age : Most of Patient's relative age (nowadays) is during 50-59 years old by 41.11% ,age between 40-49 as a second rank by 28.89%. age 60-69 by 18.89%and in 5.56% have died already.

3. Marital status of patient's relative.

Table 4.18: Marital status of patient's relative.

Marital status	Frequency	Percentage
Single	5	5.56
Married	52	57.78
Divorce	28	31.11
Other(e.g. cohabitation, etc.)	5	5.56
total	90	100

Note: from 95 observations there're 5 patients that didn't have relative to take care. Marital status: Most of disability patient's marital status is single by 63.16% and 21.05% married while 10.53% divorce.

4. Education level of patient's relative.

Table 4.19: Education level of patient's relative.

Education level	Frequency	Percentage
Less than elementary	0	0.00
Prathom 1-3(Grade 1-3)	4	4.44
Prathom 4-6(Grade 4-6)	52	57.78
Mattayom 1-3(Grade 7-9)	3	3.33
Mattayom 4-6 (Grade10-12)	10	11.11
Diploma/High vocational	12	13.33
Bachelor degree	6	6.67
More than Bachelor degree	3	3.33
others	0	0
total	90	100

Note: from 95 observations there're 5 patients that didn't have relative to take care.

Education level: Most of patient's relative education level is Prathom 4-6(grade 4-6) by 57.78% , the second is Diploma or high vocational level by 13.33%.and found the third is Mattayom 4-6 (Grade 10-12) by 11.11%.

5. Career of disability victims (at the year of patient's accident).

Table 4.20: Career of disability victims (at the year of patient's accident).

Career	Frequency	Percentage
1.Civil servants	2	2.22
2.State enterprise	3	3.33
3.Private Company officer	8	8.89
4.Self Business	32	35.56
5.Housewife	17	18.89
6.Unemployed	9	10.00
7.To hire one self out	8	8.89
8. Retirement	11	12.22
9.Others	0	0.00
total	90	100

Note: from 95 observations there're 5 patients that didn't have relative to take care.

Career: Most of patient's relative career (at the year of patient's accident) are 35.56% have their own business and 18.89% are housewife 12.22% are during retirement and unemployed by 10.%.

6. Average monthly income of disability victims of patient's relative (Before accident)

Table 4.21: Average monthly income of disability victims of patient's relative (Before)

Income per month(Baht)	Before accident	
	frequency	percentage
None	6	6.67
0 -5,000	13	14.44
5,001 – 10,000	33	36.67
10,001 – 15,000	15	16.67
15,001 – 20,000	8	8.89
20,001 – 25,000	3	3.33
25,001 – 30,000	2	2.22
30,001 – 35,000	2	2.22
35,001 – 40,000	0	0.00
40,001 – 45,000	5	5.56
45,001 – 50,000	0	0.00
50,001 – 55,000	1	1.11
55,001 – 60,000	0	0.00
60,001 – 65,000	2	2.22
total	90	100

Note: from 95 observations there're 5 patients that didn't have relative to take care. Most of Patient's relative Average monthly income before accident of patient is between 5,001-10,000 Baht per month by 36.67% while 6.67 % are unemployed.

7. Average monthly income of disability victims of patient's relative (After accident)

Table 4.22: Average monthly income of disability victims of patient's relative (After)

Income per month(Baht)	After accident	
	frequency	percentage
None	49	54.44
1 -5,000	6	6.67
5,001 – 10,000	13	14.44
10,001 – 15,000	10	11.11
15,001 – 20,000	6	6.67
20,001 – 25,000	0	0.00
25,001 – 30,000	0	0.00
30,001 – 35,000	0	0.00
35,001 – 40,000	2	2.22
40,001 – 45,000	2	2.22
45,001 – 50,000	0	0.00
50,001 – 55,000	0	0.00
55,001 – 60,000	0	0.00
60,001 – 65,000	2	2.22
total	90	100

Note: from 95 observations there're 5 patients that didn't have relative to take care. Most of Patient's relative average monthly income after accident of patient is no income by 54.44% between 5,001-10,000 baht/month by 14.44% while 11.11% are between 10,001 – 15,000 baht/month

8. Average monthly income of disability victims of patient's relative (Nowadays)

Table 4.23: Average monthly income of disability victims of patient's relative (Nowadays)

Income per month(Baht)	Nowadays	
	frequency	percentage
None	23	25.56
1 -5,000	15	16.67
5,001 – 10,000	21	23.33
10,001 – 15,000	11	12.22
15,001 – 20,000	9	10.00
20,001 – 25,000	0	0.00
25,001 – 30,000	0	0.00
30,001 – 35,000	2	2.22
35,001 – 40,000	0	0.00
40,001 – 45,000	3	3.33
45,001 – 50,000	3	3.33
50,001 – 55,000	3	3.33
total	90	100

Note: from 95 observations there're 5 patients that didn't have relative to take care.

Most of Patient's relative average monthly income nowadays is no income by 25.56%, income between 5,001-10,000 baht/month by 23.33%.

9. Source of fund that patient's relative use to support medical treatment of patient in first year after patient's accident

(patient's relative can have more than 1 source).

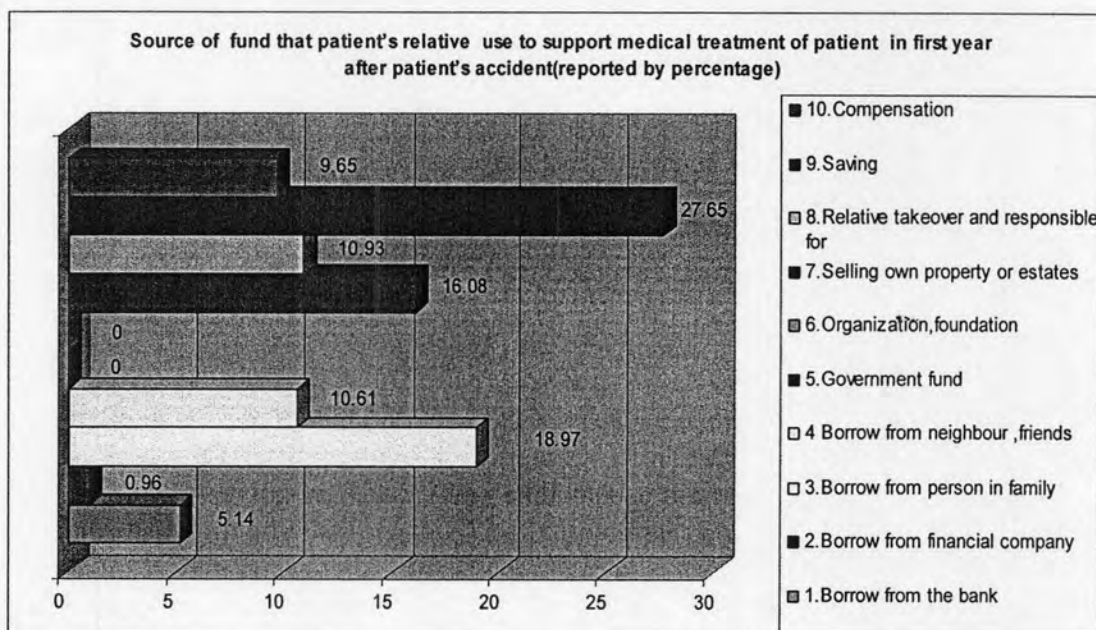
Table 4.24: Source of fund that patient's relative use to support medical treatment of patient in first year after patient's accident

Source of fund	Frequency	Percent
1.Borrow from the bank	16	5.14
2.Borrow from financial company	3	0.96
3.Borrow from person in family	59	18.97
4 Borrow from neighbour ,friends	33	10.61
5.Government fund	0	0.00
6.Organoisation, foundation	0	0.00
7.Selling own property or estates	50	16.08
8.Relative takeover and responsible for	34	10.93
9.Saving	86	27.65
10.Compensation	30	9.65
total	311	100.00

Note: from 95 observations there're 5 patients that didn't have relative to take care.

Source of fund that patient's relative use to support medical treatment of patient in first year after patient's accident; Most of patient's relative used sources of fund from their saving by 27.65% and 18.97% use fund that received borrowing from person in family while the third used selling own property or estates by 16.08%.

Figure 4.3: Source of fund that patient's relative use to support medical treatment of patient in first year after patient's accident (reported by percentage)



Result of cost components of disability victims by alcohol drunk driving from traffic accident

There're 12 components of Patient's cost, from cost number 1-11 that can be divided to both direct and indirect costs and each of them can be divided again to medical cost, non-medical cost. Include number 12 which is patient's other cost.

Patient's costs

Direct cost

Medical

1. Medical equipment cost

According to the result from 95 observations found that medical equipments are paid by patient by 43 observations (45.27%) and patient's relative paid by 52 observations (54.73%). The table below show the cost of medical equipments per *only person who pay* for medical equipment cost only.

Table 4.25: Medical equipment cost average only per person who pay in 1st year after patient's accident (Baht).

Type of Medical equipment cost	Total in 1st year of patient's accident (Baht)	Average per person who pay for medical equipment in 1 st year (Baht)	Observation	Percentage (%)
Patient 's medical equipment cost	5,354,183.99	124,515.91	43	45.27
Patient 's relative medical equipment cost	6,095,053.62	117,212.57	52	54.73
Total Medical equipment cost(Patient's and Relative's)	11,449,237.61	120,518.29	95	100

Due to the purpose of this cost analysis .researcher would like to average cost per 1 person in first year after patient's accident. so the total cost of each medical equipment costs from patient's and relative must *average to all 95 observations* that show in the table below.

Table 4.26: Medical equipment cost average per person in 1st year after patient's accident (Baht).

Type of Medical equipment cost	Total in 1st year of patient's accident (Baht)	Average/person in 1 st year (Baht)	Observation	Percentage (%)
Patient 's medical equipment cost	5,354,183.99	56,359.83	95	46.76
Patient 's relative medical equipment cost	6,095,053.62	64,158.46	95	53.24
Total Medical equipment cost(Patient and Relative)	11,449,237.61	120,518.29	95	100

Explanation: use the average of cost patient's medical equipment cost per 1 person in first year after patient's accident(P1) is 56,359.83 Baht to calculate Total cost of disability victims by alcohol drunk driving from traffic accident (**P1 = 56,359.83 Baht**)

2. Supplement food cost (for patient)

According to the result from 95 observations found that supplement food cost are paid by patient by 6 observations (6.32%) while patient's relative paid by 42 observations (44.21%) and 47 observations (49.47%) didn't have supplement food cost. The table below show the cost of supplement food cost per *only person who pay* for supplement food cost only.

Table 4.27 : supplement food cost average only per person who pay in 1st year after patient's accident (Baht).

Type of Supplement food cost	Total in 1st year of patient's accident (Baht)	Average per person who pay for Patient 's Supplement food in 1 st year (Baht)	Observation	Percentage (%)
Patient's Supplement food cost	852,469.8	142,078.3	6	6.32
Patient's relative Supplement food cost	2,871,687	68,373.51	42	44.21
Total Supplement food cost (Patient and Relative)	3,724,157	77,586.61	48	50.53
Didn't have Supplement food cost			47	49.47
		Total	95	100

Due to the purpose of this cost analysis .researcher would like to average cost per 1 person in first year after patient's accident. so the total cost of each supplement food costs from patient's and relative must *average to all 95 observations* that show in the table below.

Table 4.28: supplement food cost average per person in 1st year after patient's accident (Baht).

Type of Supplement food cost	Total in 1st year of patient's accident (Baht)	Average/person in 1 st year (Baht)	Observation	Percentage (%)
Patient's Supplement food cost	852,469.8	8,973.37	95	22.89
Patient's relative Supplement food cost	2,871,687	30,228.29	95	71.11
Total Supplement food cost (Patient and Relative)	3,724,157	39,201.66	95	100

Explanation: use the average of supplement food costs per 1 person in first year after patient's accident (P2) is 8,973.37 Baht to calculate total cost of disability victims by alcohol drunk driving from traffic accident. **(P2 = 8,973.37 Baht)**

3. Home nursing cost

According to the result from 95 observations found that home nursing cost are paid by patient by 14 observations (14.74%) while patient's relative paid by 20 observations (21.05%) and 61 observations (64.21%) didn't have home nursing cost. The table below show the cost of home nursing cost per *only person who pay* for home nursing cost only.

Table 4.29 : Home nursing cost average only per person who pay in 1st year after patient's accident (Baht).

Type of Home nursing cost	Total in 1st year of patient's accident (Baht)	Average per person who pay for Patient 's home nursing in 1 st year (Baht)	Observation	Percentage (%)
Patient's home nursing cost	154,186.43	11,013.31	14	14.74
Patient's relative home nursing cost	337,761.07	16,888.05	20	21.05
Total home nursing cost (Patient and Relative)	491,947.50	14,469.04	34	35.79
Didn't have home nursing cost			61	64.21
		Total	95	100

Due to the purpose of this cost analysis .researcher would like to average cost per 1 person in first year after patient's accident. so the total cost of each home nursing costs from patient's and relative must *average to all 95 observations* that show in the table below.

Table 4.30: Home nursing cost average per person in 1st year after patient's accident (Baht).

Type of Home nursing cost	Total in 1st year of patient's accident (Baht)	Average/person in 1 st year (Baht)	Observation	Percentage (%)
Patient's Home nursing cost	154,186.43	1,623.02	95	31.34
Patient's relative Home nursing cost	337,761.07	3,555.38	95	68.66
Total Home nursing cost (Patient and Relative)	491,947.50	5,178.40	95	100

Explanation: use the average of home nursing costs per 1 person in first year after patient's accident (P3) is 1,623.02 Baht to calculate total cost of disability victims by alcohol drunk driving from traffic accident. (P3 = 1,623.02 Baht)

4. Doctor cost and drug cost

According to the result from 95 observations found that doctor cost and drug cost are paid by patient by 35 observations (37.14%) while patient's relative paid by 52 observations (54.28%) and 8 observations (8.58%) didn't pay for doctor cost and drug cost because they have the 3rd person who're not relative's paid for this cost such as can be the queen fund, litigant paid all for doctor cost and drug cost and can be paid by military civil servant benefit these also have cost too, but they're not include in this thesis framework. The table below show the cost of doctor cost and drug cost per *only person who pay* for doctor cost and drug cost only .

Table 4.31 : Doctor cost and drug cost average only per person who pay in 1st year after patient's accident (Baht).

Type of Doctor cost and drug cost	Total in 1st year of patient's accident (Baht)	Average per person who pay for Patient 's doctor cost and drug cost in 1 st year (Baht)	Observation	Percentage (%)
Patient's doctor cost and drug cost	27,902,972	797,227.78	35	37.14
Patient's relative doctor cost and drug cost	25,315,539.89	486,837.31	52	54.28
Total doctor cost and drug cost (Patient and Relative)	53,218,512	611,707.04	87	91.42
Didn't pay for doctor cost and drug cost			8	8.58
		Total	95	100

Due to the purpose of this cost analysis .researcher would like to average cost per 1 person in first year after patient's accident. so the total cost of each doctor cost and drug costs from patient's and relative must *average to all 95 observations* that show in the table below.

Table 4.32 : Doctor cost and drug cost average per person in 1st year after patient's accident (Baht).

Type of Doctor cost and drug cost	Total in 1st year of patient's accident (Baht)	Average/person in 1 st year (Baht)	Observation	Percentage (%)
Patient's Doctor cost and drug cost	27,902,972	293,715.50	95	52.43
Patient's relative Doctor cost and drug cost	25,315,539.89	266,479.37	95	47.57
Total Doctor cost and drug cost (Patient and Relative)	53,218,512	560,194.87	95	100

Explanation: use the average of doctor cost and drug costs per 1 person in first year after patient's accident (P3) is 293,715.50 Baht to calculate total cost of disability victims by alcohol drunk driving from traffic accident. **(P4 = 293,715.50 Baht)**

Non Medical

5. Travelling Cost (pay for transportation) of patients

According to the result from 95 observations found that travelling cost(transportation) are paid by patient by 37 observations (38.95%) while patient's relative paid by 58 observations (61.05%) and none of all observations didn't have travelling cost(transportation).The table below show the cost of travelling cost(transportation) per *only person who pay* for travelling cost(transportation) only.

Table 4.33: Travelling Cost (pay for transportation) of patient average only per person who pay in 1st year after patient's accident (Baht)

Type of Travelling cost(transportation)	Total in 1st year of patient's accident (Baht)	Average per person who pay for Patient 's travelling cost(transportation) in 1 st year (Baht)	Observation	Percentage (%)
Patient's travelling cost(transportation)	187,070.7	5,055.96	37	38.95
Patient's relative travelling cost(transportation)	251,524.1	4,336.62	58	61.05
Total travelling cost(transportation) (Patient and Relative)	438,594.8	4,616.79	95	100
Didn't pay for travelling cost(transportation)			0	0
			Total	95
				100

Due to the purpose of this cost analysis .researcher would like to average cost per 1 person in first year after patient's accident. so the total cost of each travelling cost(transportation) from patient's and relative must *average to all 95 observations* that show in the table below.

Table 4.34: Travelling Cost (pay for transportation) of patient average per person in 1st year after patient's accident (Baht).

Type of Travelling cost(transportation)	Total in 1st year of patient's accident (Baht)	Average/person in 1 st year (Baht)	Observation	Percentage (%)
Patient's Travelling cost(transportation)	187,070.7	1,969.16	95	42.65
Patient's relative Travelling cost(transportation)	251,524.1	2,647.62	95	57.35
Total Travelling cost(transportation) (Patient and Relative)	438,594.8	4,616.78	95	100

Explanation: use the average of travelling cost(transportation) per 1 person in first year after patient's accident (P5) is 1,969.16 Baht to calculate total cost of disability victims by alcohol drunk driving from traffic accident. **(P6 = 1,969.16Baht)**

6. Electricity and water cost

According to the result from 95 observations found that electricity and water cost are paid by patient by 25 observations (26.32%) while patient's relative paid by 70 observations (73.68%) and all of 95 observations have electricity and water cost. The table below shows the cost of electricity and water cost per *only person who pay* for electricity and water cost only.

Table 4.35 : Electricity and water cost average only per person who pay in 1st year after patient's accident (Baht)

Type of Electricity and water cost	Total in 1st year of patient's accident (Baht)	Average per person who pay for Patient's electricity and water cost in 1 st year (Baht)	Observation	Percentage (%)
Patient's electricity and water cost	83,648.60	3,345.94	25	26.32
Patient's relative electricity and water cost	164,541.75	2,350.60	70	73.68
Total electricity and water cost (Patient and Relative)	248,190.35	2,612.53	95	100
Didn't pay for electricity and water cost			0	0
			Total	95
				100

Due to the purpose of this cost analysis .researcher would like to average cost per 1 person in first year after patient's accident. so the total cost of each electricity and water costs from patient's and relative must *average to all 95 observations* that show in the table below.

Table 4.36 : Electricity and water cost average per person in 1st year after patient's accident (Baht).

Type of Electricity and water cost	Total in 1st year of patient's accident (Baht)	Average/person in 1 st year (Baht)	Observation	Percentage (%)
Patient's Electricity and water cost	83,648.60	880.51	95	33.70
Patient's relative Electricity and water cost	164,541.75	1,732.02	95	66.30
Total Electricity and water cost (Patient and Relative)	248,190.35	2,612.53	95	100

Explanation: use the average of electricity and water costs per 1 person in first year after patient's accident (P6) is 880.51 Baht to calculate total cost of disability victims by alcohol drunk driving from traffic accident. **(P6 = 880.51 Baht)**

7. Accommodation cost

According to the result from 95 observations found that accommodation costs are paid by patient by 5 observations (5.26%) while patient's relative paid by 35 observations (36.84%) and 55 observations (57.90%) didn't pay for accommodation cost. The table below show the cost of accommodation cost per *only person who pay* for accommodation cost only.

Table 4.37 : Accommodation cost average only per person who pay in 1st year after patient's accident (Baht)

Type of Accommodation cost	Total in 1st year of patient's accident (Baht)	Average per person who pay for Patient's accommodation cost in 1 st year (Baht)	Observation	Percentage (%)
Patient's accommodation cost	610,106.10	122,021.2	5	5.26
Patient's relative accommodation cost	6,663,345	190,381.3	35	36.84
Total accommodation cost (Patient and Relative)	7,273,451	181,836.3	40	42.10
Didn't have accommodation cost			55	57.90
			Total	95
				100

Due to the purpose of this cost analysis .researcher would like to average cost per 1 person in first year after patient's accident. so the total cost of each accommodation costs from patient's and relative must *average to all 95 observations* that show in the table below.
 Table 4.38: Accommodation cost average per person in 1st year after patient's accident (Baht).

Type of Accommodation cost	Total in 1st year of patient's accident (Baht)	Average/person in 1 st year (Baht)	Observation	Percentage (%)
Patient's Accommodation cost	610,106.10	6,422.17	95	8.39
Patient's relative Accommodation cost	6,663,345	70,140.47	95	91.61
Total Accommodation cost (Patient and Relative)	7,273,451	76,562.64	95	100

Explanation: use the average of accommodation costs per 1 person in first year after patient's accident (P7) is 6,422.17 Baht to calculate total cost of disability victims by alcohol drunk driving from traffic accident. **(P7 = 6,422.17 Baht)**

Table 4.38.1: The objective of patient's spending accommodation cost for.

patient	relative
<ul style="list-style-type: none"> • build toilet and slope • lift • renovate house 	<ul style="list-style-type: none"> • Built toilet and slope • house renovate • buy new house • construction, renovate room

Indirect cost

8. Total travelling time cost of outpatients and inpatient

According to the result from 95 observations found that total travelling time cost of outpatients and inpatient are paid by patient by 60 observations (63.16%) and 35 observations (36.84%) didn't pay for total travelling time cost of outpatients and inpatient due to they didn't have income or during studying, or unemployed at that time. The table below show the cost of total travelling time cost of outpatients and inpatient per *only person who pay* for total travelling time cost of outpatients and inpatient only.

Table 4.39: Total travelling time cost of outpatients and inpatient average only per person who pay in 1st year after patient's accident (Baht)

Type of Total travelling time cost of outpatients and inpatient cost	Total in 1st year of patient's accident (Baht)	Average per person who pay for Patient 's total travelling time cost of outpatients and inpatient in 1st year (Baht)	Observation	Percentage (%)
Patient's total travelling time cost of outpatients and inpatient	180,516.29	3,008.60	60	63.16
Didn't have total travelling time cost of outpatients and Inpatient			35	36.84
		Total	95	100

Due to the purpose of this cost analysis .researcher would like to average cost per 1 person in first year after patient's accident. so the total cost of each total travelling time cost of outpatients and inpatient must *average to all 95 observations* that show in the table below.

Table 4.40: Total travelling time cost of outpatients and inpatient average per person in 1st year after patient's accident (Baht).

Type of Total travelling time cost of outpatients and inpatient	Total in 1st year of patient's accident (Baht)	Average per person in 1 st year (Baht)	Observation	Percentage (%)
Patient's total travelling time cost of outpatients and inpatient	180,516.29	1,900.17	95	100
		Total	95	100

Explanation: use the average of total travelling time cost of outpatients and inpatient per 1 person in first year after patient's accident (P8) is 1,900.17 Baht to calculate total cost of disability victims by alcohol drunk driving from traffic accident. **(P8 = 1,900.17 Baht)**

9. Total waiting time cost of outpatient

According to the result from 95 observations found that total waiting time cost of outpatient are paid by patient by 52 observations (54.74%) and 43 observations (45.26%) didn't pay for total waiting time cost of outpatient due to IP waiting time spend hour = 0 because Total waiting time cost of Inpatient would be included in Loss of income due to illness during treatment in hospital for inpatient already. The table below show the cost of total waiting time cost of outpatient per *only person who pay* for total waiting time cost of outpatient only.

Table 4.41: Total waiting time cost of outpatient average only per person who pay in 1st year after patient's accident (Baht)

Type of Total waiting time cost of outpatient	Total in 1st year of patient's accident (Baht)	Average per person who pay for Patient's total waiting time cost of outpatient in 1 st year (Baht)	Observation	Percentage (%)
Patient's total waiting time cost of outpatient	205,406.41	3,950.12	52	54.74
Didn't have total waiting time cost of outpatient (Inpatient and unemployed)			43	45.26
		Total	95	100

Due to the purpose of this cost analysis .researcher would like to average cost per 1 person in first year after patient's accident. so the total cost of each total waiting time cost of outpatient must *average to all 95 observations* that show in the table below.

Table 4.42: Waiting time cost of outpatient average per person in 1st year after patient's accident (Baht).

Type of Total waiting time cost of outpatients	Total in 1st year of patient's accident (Baht)	Average per person in 1 st year (Baht)	Observation	Percentage (%)
Patient's total waiting time cost of outpatient	205,406.41	2,162.17	95	100
		Total	95	100

Explanation: use the average of total waiting time cost of outpatient per 1 person in first year after patient's accident (P9) is 2162.17 Baht to calculate total cost of disability victims by alcohol drunk driving from traffic accident. (P9 = 2,162.17 Baht)

10. Loss of income due to illness during treatment in hospital for Inpatient

According to the result from 95 observations found that loss of income due to illness during treatment in hospital for inpatient are paid by patient by 60 observations (63.16%) and 35 observations (36.84%) didn't pay for loss of income due to illness during treatment in hospital for inpatient due to some of patients unemployed and no income before accident. The table below show the cost of loss of income due to illness during treatment in hospital for inpatient per *only person who pay* for loss of income due to illness during treatment in hospital for inpatient only.

Table 4.43: Loss of income due to illness during treatment in hospital for inpatient average only per person who pay in 1st year after patient's accident (Baht).

Type of Loss of income due to illness during treatment in hospital for inpatient	Total in 1st year of patient's accident (Baht)	Average per person who pay for Patient's loss of income due to illness during treatment in hospital for inpatient in 1 st year (Baht)	Observation	Percentage (%)
Patient's loss of income due to illness during treatment in hospital for inpatient	11,292,864.35	188,214.41	60	63.16
Didn't have loss of income due to illness during treatment in hospital for inpatient (unemployed)			35	36.84
		Total	95	100

Due to the purpose of this cost analysis .researcher would like to average cost per 1 person in first year after patient's accident. so the total cost of each loss of income due to illness during treatment in hospital for inpatient must *average to all 95 observations* that show in the table below.

Table 4.44: Loss of income due to illness during treatment in hospital for inpatient average per person in 1st year after patient's accident (Baht).

Type of Loss of income due to illness during treatment in hospital for inpatient	Total in 1st year of patient's accident (Baht)	Average per person in 1 st year (Baht)	Observation	Percentage (%)
Patient's loss of income due to illness during treatment in hospital for inpatient	11,292,864.35	118,872.26	95	100
		Total	95	100

Explanation: use the average of loss of income due to illness during treatment in hospital for inpatient per 1 person in first year after patient's accident (P10) is 118,872.26 Baht to calculate total cost of disability victims by alcohol drunk driving from traffic accident. **(P10 = 118,872.26 Baht)**

For IP . Loss of income due to illness during treatment in hospital for Inpatient can be only IP in the first year of treatment as IP, so they must stay in a hospital a whole year in first year of treatment (admit 365 days/first year).

But for OP, They can be both of IP and OP in the first year of treatment; this cost also calculated only Loss of income due to illness as Inpatient of OP.

11. Loss of income due to illness of outpatient

According to the result from 95 observations found that loss of income due to illness during treatment in hospital for outpatient are paid by patient by 53 observations (55.79%) and 42 observations (44.21%) didn't pay for loss of income due to illness during treatment in hospital for outpatient due to some of patients unemployed, no income before accident or was inpatient in all of 1st year. The table below show the cost of loss of income due to illness during treatment in hospital for outpatient per *only person who pay* for loss of income due to illness during treatment in hospital for outpatient only.

Table 4.45: Loss of income due to illness of outpatient average only per person who pay in 1st year after patient's accident (Baht).

Type of Loss of income due to illness during treatment in hospital for outpatient	Total in 1st year of patient's accident (Baht)	Average per person who pay for Patient's loss of income due to illness during treatment in hospital for outpatient in 1 st year (Baht)	Observation	Percentage (%)
loss of income due to illness during treatment in hospital for outpatient	8,948,134	168,832.70	53	55.79
Didn't have loss of income due to illness during treatment in hospital for outpatient (unemployed or was Inpatient all of 1 st year)			42	44.21
		Total	95	100

Due to the purpose of this cost analysis .researcher would like to average cost per 1 person in first year after patient's accident. so the total cost of each loss of income due to illness during treatment in hospital for outpatient must *average to all 95 observations* that show in the table below.

Table 4.46: Loss of income due to illness of outpatient average per person in 1st year after patient's accident (Baht).

Type of loss of income due to illness during treatment in hospital for patient	Total in 1st year of patient's accident (Baht)	Average per person in 1 st year (Baht)	Observation	Percentage (%)
loss of income due to illness during treatment in hospital for outpatient	8,948,134	94,190.89	95	100
		Total	95	100

Explanation: use the average of loss of income due to illness during treatment in hospital for outpatient per 1 person in first year after patient's accident (P11) is 94,190.89 Baht to calculate total cost of disability victims by alcohol drunk driving from traffic accident. **(P11 = 94,190.89 Baht)**

Note; OP can be both of IP and OP periods in the first year of treatment; this cost calculated only Loss of income due to illness as during Outpatient period.

12. Other costs of patient

According to the result from 95 observations found that other cost of patient are paid by patient by 12 observations (12.63%) and 83 observations (87.37%) didn't pay for other cost of patient. The table below show the cost of other cost of patient per *only person who pay* for other cost of patient only.

Table 4.47 : Other cost of patient average only per person who pay in 1st year after patient's accident (Baht).

Type of Other cost of patient	Total in 1st year of patient's accident (Baht)	Average per person who pay for Patient 's other cost in 1 st year (Baht)	Observation	Percentage (%)
Patient's other cost	1,535,815.1	127,984.59	12	12.63
Didn't have other cost of patient			83	87.37
		Total	95	100

Due to the purpose of this cost analysis .researcher would like to average cost per 1 person in first year after patient's accident. so the total cost of each other cost of patient must *average to all 95 observations* that show in the table below.

Table 4.48: Other cost of patient average per person in 1st year after patient's accident (Baht).

Type of Type of Other cost	Total in 1st year of patient's accident (Baht)	Average per person in 1 st year (Baht)	Observation	Percentage (%)
Patient's other cost	1,535,815.10	16,166.47	95	100
		Total	95	100

Explanation: use the average of other cost of patient per 1 person in first year after patient's accident (P12) is 16,166.47 Baht to calculate total cost of disability victims by alcohol drunk driving from traffic accident. (P12 = 16,166.47 Baht)

The reasons that patient paid for other cost ; for alternative traditional treatment cost .car renovates ,changing system to hand controls for the car , buy 2nd hand cars, needle treatment.

Result of cost components of disability victim's relatives by alcohol drunk driving from traffic accident

There're 13 components from no. 13-24 of Patient's relative cost, that can be divided to both direct and indirect costs and each of them can be divided again to medical and non-medical costs. Include no.25 that's patient's relative other cost.

Patient's relative costs

Direct cost

Medical

13. Medical equipments cost (Relative pay for patient)

According to the result from 95 observations found that medical equipments are paid by patient's relative by 52 observations (54.73%). and patient paid by 43 observations (45.27%). The table below show the cost of medical equipments per *only person who pay* for medical equipment cost only.

Table 4.49: Medical equipments cost (Relative pay for patient) average only per person who pay in 1st year after patient's accident (Baht).

Type of Medical equipment cost	Total in 1st year of patient's accident (Baht)	Average per person who pay for medical equipment in 1 st year (Baht)	Observation	Percentage (%)
Patient 's medical equipment cost	5,354,183.99	124,515.91	43	45.27
Patient 's relative medical equipment cost	6,095,053.62	117,212.57	52	54.73
Total Medical equipment cost(Patient's and Relative's)	11,449,237.61	120,518.29	95	100

Due to the purpose of this cost analysis .researcher would like to average cost per 1 person in first year after patient's accident. so the total cost of each medical equipment costs from both patient's relative and patient must *average to all 95 observations* that show in the table below.

Table 4.50: Medical equipments cost (Relative pay for patient) average per person in 1st year after patient's accident (Baht).

Type of Medical equipment cost	Total in 1st year of patient's accident (Baht)	Average/person in 1 st year (Baht)	Observation	Percentage (%)
Patient 's medical equipment cost	5,354,183.99	56,360	95	46.76
Patient 's relative medical equipment cost	6,095,053.62	64,158	95	53.24
Total Medical equipment cost(Patient and Relative)	11,449,237.61	120,518.29	95	100

Explanation: use the average of cost patient's relative medical equipment cost per 1 person in first year after patient's accident(R1) is **64,158 Baht** to calculate Total cost of disability victims by alcohol drunk driving from traffic accident (**R1 = 64,158 Baht**)

14 .Supplement food cost patient's relative paid (for patient)

According to the result from 95 observations found that supplement food cost are paid by patient by 6 observations (6.32%) while patient's relative paid by 42 observations (44.21%) and 47 observations (49.47%) didn't have any supplement food cost. The table below show the cost of supplement food cost per *only person who pay* for supplement food cost only.

Table 4.51: Supplement food cost patient's relative paid (for patient) average only per person who pay in 1st year after patient's accident (Baht).

Type of Supplement food cost	Total in 1st year of patient's accident (Baht)	Average per person who pay for Patient 's Supplement food in 1 st year (Baht)	Observation	Percentage (%)
Patient's Supplement food cost	852,469.8	142,078.3	6	6.32
Patient's relative Supplement food cost	2,871,687	68,373.51	42	44.21
Total Supplement food cost (Patient and Relative)	3,724,157	77,586.61	48	50.53
Didn't have Supplement food cost			47	49.47
		Total	95	100

Due to the purpose of this cost analysis .researcher would like to average cost per 1 person in first year after patient's accident. so the total cost of each supplement food costs from both patient's relative and patient must *average to all 95 observations* that show in the table below.

Table 4.52: Supplement food cost patient's relative paid (for patient) average per person in 1st year after patient's accident (Baht).

Type of Supplement food cost	Total in 1st year of patient's accident (Baht)	Average/person in 1 st year (Baht)	Observation	Percentage (%)
Patient's Supplement food cost	852,469.8	8,973.37	95	22.89
Patient's relative Supplement food cost	2,871,687	30,228.29	95	71.11
Total Supplement food cost (Patient and Relative)	3,724,157	39,201.65	95	100

Explanation: use the average of supplement food costs per 1 person in first year after patient's accident by patient's relative (R2) is 30,228.29 Baht to calculate total cost of disability victims by alcohol drunk driving from traffic accident. **(R2 = 30,228.29 Baht)**

15. Home nursing cost (Relative pay for patient)

According to the result from 95 observations found that home nursing cost are paid by patient by 14 observations (14.74%) while patient's relative paid by 20 observations (21.05%) and 61 observations (64.21%) didn't have home nursing cost. The table below show the cost of home nursing cost per *only person who pay* for home nursing cost only.

Table 4.53: Home nursing cost (Relative pay for patient) average only per person who pay in 1st year after patient's accident (Baht).

Type of Home nursing cost	Total in 1st year of patient's accident (Baht)	Average per person who pay for Patient's home nursing in 1 st year (Baht)	Observation	Percentage (%)
Patient's home nursing cost	154,186.43	11,013.31	14	14.74
Patient's relative home nursing cost	337,761.07	16,888.05	20	21.05
Total home nursing cost (Patient and Relative)	491,947.50	14,469.04	34	35.79
Didn't have home nursing cost			61	64.21
		Total	95	100

Due to the purpose of this cost analysis .researcher would like to average cost per 1 person in first year after patient's accident. so the total cost of each home nursing costs from both patient's relative and patient must *average to all 95 observations* that show in the table below.

Table 4.54: Home nursing cost (Relative pay for patient) average per person in 1st year after patient's accident (Baht).

Type of Home nursing cost	Total in 1st year of patient's accident (Baht)	Average/person in 1 st year (Baht)	Observation	Percentage (%)
Patient's Home nursing cost	154,186.43	1,623.02	95	31.34
Patient's relative Home nursing cost	337,761.07	3,555.38	95	68.66
Total Home nursing cost (Patient and Relative)	491,947.50	5,178.40	95	100

Explanation: use the average of home nursing costs per 1 person in first year after patient's accident by patient's relative (R3) is 3555.38 Baht to calculate total cost of disability victims by alcohol drunk driving from traffic accident. **(R3 = 3,555.38 Baht)**

16. Doctor cost and drug cost (Relative pay for patient)

According to the result from 95 observations found that doctor cost and drug cost are paid by patient by 35 observations (37.14%) while patient's relative paid by 52 observations (54.28%) and 8 observations (8.58%) didn't pay for doctor cost and drug cost because they have the 3rd person who're not relative's paid for this cost such as can be the queen fund, litigant paid all for doctor cost and drug cost and can be paid by military civil servant benefit these also have cost too, but they're not include in this thesis framework. The table below show the cost of doctor cost and drug cost per *only person who pay* for doctor cost and drug cost only.

Table 4.55: Doctor cost and drug cost (Relative pay for patient) average only per person who pay in 1st year after patient's accident (Baht).

Type of Doctor cost and drug cost	Total in 1st year of patient's accident (Baht)	Average per person who pay for Patient's doctor cost and drug cost in 1 st year (Baht)	Observation	Percentage (%)
Patient's doctor cost and drug cost	27,902,972	797,227.78	35	37.14
Patient's relative doctor cost and drug cost	25,315,539.89	486,837.31	52	54.28
Total doctor cost and drug cost (Patient and Relative)	53,218,512	611,707.04	87	91.42
Didn't pay for doctor cost and drug cost			8	8.58
		Total	95	100

Due to the purpose of this cost analysis .researcher would like to average cost per 1 person in first year after patient's accident. so the total cost of each doctor cost and drug costs from patient and relative must *average to all 95 observations* that show in the table below.

Table 4.56: Doctor cost and drug cost (Relative pay for patient) average per person in 1st year after patient's accident (Baht).

Type of Doctor cost and drug cost	Total in 1st year of patient's accident (Baht)	Average/person in 1 st year (Baht)	Observation	Percentage (%)
Patient's Doctor cost and drug cost	27,902,972	293,715.50	95	52.43
Patient's relative Doctor cost and drug cost	25,315,539.89	266,479.37	95	47.57
Total Doctor cost and drug cost (Patient and Relative)	53,218,512	560,194.87	95	100

Explanation: use the average of doctor cost and drug costs per 1 person in first year after patient's accident (R3) is 266,479.37 Baht to calculate total cost of disability victims by alcohol drunk driving from traffic accident. (R4 = 266,479.37 Baht)

Non Medical

17. Travelling Cost (Relative pay for transportation for patient)

According to the result from 95 observations found that travelling cost(transportation) are paid by patient by 37 observations (38.95%) while patient's relative paid by 58 observations (61.05%) and none of all observations didn't have travelling cost(transportation).The table below show the cost of travelling cost(transportation) per *only person who pay* for travelling cost(transportation) only.

Table 4.57: Travelling Cost (Relative pay for transportation for patient) average only per person who pay in 1st year after patient's accident (Baht).

Type of Travelling cost(transportation)	Total in 1st year of patient's accident (Baht)	Average per person who pay for Patient 's travelling cost(transportation) in 1st year (Baht)	Observation	Percentage (%)
Patient's travelling cost(transportation)	187,070.7	5,055.96	37	38.95
Patient's relative travelling cost(transportation)	251,524.1	4,336.62	58	61.05
Total travelling cost(transportation) (Patient and Relative)	438,594.8	4,616.79	95	100
Didn't pay for travelling cost(transportation)			0	0
			Total	95
				100

Due to the purpose of this cost analysis .researcher would like to average cost per 1 person in first year after patient's accident. so the total cost of each travelling cost(transportation)s from patient's and relative must *average to all 95 observations* that show in the table below.

Table 4.58: Travelling Cost (Relative pay for transportation for patient) average per person in 1st year after patient's accident (Baht).

Type of Travelling cost(transportation)	Total in 1st year of patient's accident (Baht)	Average/person in 1 st year (Baht)	Observation	Percentage (%)
Patient's Travelling cost(transportation)	187,070.7	1,969.17	95	42.65
Patient's relative Travelling cost(transportation)	251,524.1	2,647.62	95	57.35
Total Travelling cost(transportation) (Patient and Relative)	438,594.8	4,616.79	95	100

Explanation: use the average of travelling cost(transportation) that relative per 1 person in first year after patient's accident (R5) is 2,647.62 Baht to calculate total cost of disability victims by alcohol drunk driving from traffic accident. **(R5 = 2,647.62 Baht)**

18. Travelling cost of relative pay for transportation visit IP during admit in hospital

According to the result from 95 observations found that travelling cost of relative pay for transportation to visit IP during admit in hospital by 90 observations (94.74%) while 5 observations didn't have travelling cost of relative pay for transportation to visit IP during admit in hospital because they didn't have patient's relative. The table below show the travelling cost of relative pay for transportation to visit IP during admit in hospital per *only person who pay* for travelling cost of relative pay for transportation to visit IP during admit in hospital only.

Table 4.59: Travelling cost of relative pay for transportation visit IP during admit in hospital average only per person who pay in 1st year after patient's accident (Baht).

Type of Travelling cost(transportation)	Total in 1st year of patient's accident (Baht)	Average per person who pay for travelling cost of relative pay for transportation to visit IP during admit in hospital in 1 st year (Baht)	Observation	Percentage (%)
Travelling cost of relative pay for transportation visit IP during admit in hospital	4,054,996.82	45,055.52	90	94.74
Didn't pay for travelling cost of relative pay for transportation visit IP during admit in hospital (no patient's relative)			5	5.26
		Total	95	100

Due to the purpose of this cost analysis .researcher would like to average cost per 1 person in first year after patient's accident. so the total cost of each travelling cost(transportation)s from patient's and relative must *average to all 95 observations* that show in the table below.

Table 4.60: Travelling cost of relative pay for transportation visit IP during admit in hospital average per person in 1st year after patient's accident (Baht).

Type of Travelling cost(transportation)	Total in 1st year of patient's accident (Baht)	Average/person in 1 st year (Baht)	Observation	Percentage (%)
Travelling cost of relative pay for transportation visit IP during admit in hospital	4,054,996.82	42,684.18	95	100
		total	95	100

Explanation: use the average of travelling cost of relative pay for transportation to visit IP during admit in hospital that relative per 1 person in first year after patient's accident (R6) is **42,684.18** Baht to calculate total cost of disability victims by alcohol drunk driving from traffic accident. **(R6 = 42,684.18 Baht)**

19. Electricity and water cost (Relative pay for patient)

According to the result from 95 observations found that electricity and water cost are paid by patient by 25 observations (26.32%) while patient's relative paid by 70 observations (73.68%) and all of 95 observations have electricity and water cost. The table below show the cost of electricity and water cost per *only person who pay* for electricity and water cost only.

Table 4.61: Electricity and water cost (Relative pay for patient) average only per person who pay in 1st year after patient's accident (Baht).

Type of Electricity and water cost	Total in 1st year of patient's accident (Baht)	Average per person who pay for Patient's electricity and water cost in 1 st year (Baht)	Observation	Percentage (%)
Patient's electricity and water cost	83,648.60	3,345.94	25	26.32
Patient's relative electricity and water cost	164,541.75	2,350.60	70	73.68
Total electricity and water cost (Patient and Relative)	248,190.35	2,612.53	95	100
Didn't pay for electricity and water cost			0	0
		Total	95	100

Due to the purpose of this cost analysis .researcher would like to average cost per 1 person in first year after patient's accident. so the total cost of each electricity and water costs from patient's and relative must *average to all 95 observations* that show in the table below.

Table 4.62: Electricity and water cost (Relative pay for patient) average per person in 1st year after patient's accident (Baht).

Type of Electricity and water cost	Total in 1st year of patient's accident (Baht)	Average/person in 1 st year (Baht)	Observation	Percentage (%)
Patient's Electricity and water cost	83,648.60	880.51	95	33.70
Patient's relative Electricity and water cost	164,541.75	1,732.02	95	66.30
Total Electricity and water cost (Patient and Relative)	248,190.35	2,612.53	95	100

Explanation: use the average of electricity and water costs (Relative pay for patient) per 1 person in first year after patient's accident (R7) is 1.732.02 Baht to calculate total cost of disability victims by alcohol drunk driving from traffic accident. **(R7 = 1,732.02 Baht)**

20. Accommodation (Relative pay for patient)

According to the result from 95 observations found that accommodation costs are paid by patient by 5 observations (5.26%) while patient's relative paid by 35 observations (36.84%) and 55 observations (57.90%) didn't pay for accommodation cost. The table below show the cost of accommodation cost per *only person who pay* for accommodation cost only.

Table 4.63: Accommodation (Relative pay for patient) average only per person who pay in 1st year after patient's accident (Baht).

Type of Accommodation cost	Total in 1st year of patient's accident (Baht)	Average per person who pay for Patient's accommodation cost in 1 st year (Baht)	Observation	Percentage (%)
Patient's accommodation cost	610,106.10	122,021.2	5	5.26
Patient's relative accommodation cost	6,663,345	190,381.3	35	36.84
Total accommodation cost (Patient and Relative)	7,273,451	181,836.3	40	42.10
Didn't have accommodation cost (didn't pay for accommodation cost or no patient's relative take care)			55	57.90
		Total	95	100

Due to the purpose of this cost analysis .researcher would like to average cost per 1 person in first year after patient's accident. so the total cost of each accommodation costs from patient's and relative must *average to all 95 observations* that show in the table below.
 Table 4.64: Accommodation (Relative pay for patient) average per person in 1st year after patient's accident (Baht).

Type of Accommodation cost	Total in 1st year of patient's accident (Baht)	Average/person in 1 st year (Baht)	Observation	Percentage (%)
Patient's Accommodation cost	610,106.10	6,422.17	95	8.39
Patient's relative Accommodation cost	6,663,345	70,140.47	95	91.61
Total Accommodation cost (Patient and Relative)	7,273,451	76,562.64	95	100

Explanation: use the average of accommodation costs per 1 person in first year after patient's accident (R8) is 70,140.47 Baht to calculate total cost of disability victims by alcohol drunk driving from traffic accident. **(R8 = 70,140.47 Baht)**

Table 4.64.1 : The objective of patient's relative spending accommodation cost for .

Patient	Relative
<ul style="list-style-type: none"> • toilet and slope • lift • renovate house • build toilet 	<ul style="list-style-type: none"> • Built toilet and slope • house renovation • buy new house • construction • renovate room

Indirect cost

21. Total travelling time cost of outpatient's relative

According to the result from 95 observations found that total travelling time cost of outpatient's relative are paid by patient's relative by 73 observations (76.84%) and 22 observations (23.16%) didn't pay for total travelling time cost of outpatient's relative due to they didn't have income, during studying, unemployed or was inpatient in all of first year at that time (no patient day as outpatient). The table below show the cost of total travelling time cost of outpatient's relative per *only person who pay* for total travelling time cost of outpatient's relative only.

Table 4.65: Total travelling time cost of outpatient's relative average only per person who pay in 1st year after patient's accident (Baht).

Type of Total travelling time cost of outpatient's relative	Total in 1st year of patient's accident (Baht)	Average per person who pay for total travelling time cost of outpatient's relative in 1 st year (Baht)	Observation	Percentage (%)
total travelling time cost of outpatient's relative	98,053.44	1,343.20	73	76.84
Didn't have total travelling time cost of outpatient's relative because unemployed, no income during studying, was inpatient in all of first year at that time (no patient day as outpatient or no patient's relative)			22	23.16
Total			95	100

Due to the purpose of this cost analysis .researcher would like to average cost per 1 person in first year after patient's accident. so the total cost of each total travelling time cost of outpatient's relative must *average to all 95 observations* that show in the table below.

Table 4.66: Total travelling time cost of outpatient's relative average per person in 1st year after patient's accident (Baht).

Type of Total travelling time cost	Total in 1st year of patient's accident (Baht)	Average per person in 1 st year (Baht)	Observation	Percentage (%)
total travelling time cost of outpatient's relative	98,053.44	1,032.14	95	100
		Total	95	100

Explanation: use the average of total travelling time cost of outpatient's relative per 1 person in first year after patient's accident (R9) is **1,032.14** Baht to calculate total cost of disability victims by alcohol drunk driving from traffic accident. (**R9 = 1,032.14 Baht**)

22. Total Travelling time cost of Inpatient's relatives

According to the result from 95 observations found that total travelling time cost of inpatient's relative are paid by patient's relative by 84 observations (88.42%) and 11 observations (11.58%) didn't pay for total travelling time cost of inpatient's relative due to they didn't have income or during studying, or unemployed at that time. The table below show the cost of total travelling time cost of inpatient's relative per *only person who pay* for total travelling time cost of inpatient's relative only.

Table 4.67: Total Travelling time cost of inpatient's relatives average only per person who pay in 1st year after patient's accident (Baht).

Type of Total travelling time cost of inpatient's relative	Total in 1st year of patient's accident (Baht)	Average per person who pay for total travelling time cost of inpatient's relative in 1 st year (Baht)	Observation	Percentage (%)
total travelling time cost of inpatient's relative	1,204,237.02	14,336.15	84	88.42
Didn't have total travelling time cost of inpatient's relative (because unemployed, during studying no income or no relative take care)			11	11.58
		Total	95	100

Due to the purpose of this cost analysis .researcher would like to average cost per 1 person in first year after patient's accident. so the total cost of each total travelling time cost of inpatient's relative must *average to all 95 observations* that show in the table below.

Table 4.68: Travelling time cost of inpatient's relatives average per person in 1st year after patient's accident (Baht).

Type of Total travelling time cost	Total in 1st year of patient's accident (Baht)	Average per person in 1 st year (Baht)	Observation	Percentage (%)
Patient's total travelling time cost of inpatient's relative	1,204,237.02	12,676.18	95	100
		Total	95	100

Explanation: use the average of total travelling time cost of inpatient's relative per 1 person in first year after patient's accident (R10) is 12,676.18 Baht to calculate total cost of disability victims by alcohol drunk driving from traffic accident. **(R10 = 12,676.18 Baht)**

23. Total waiting time cost of outpatient's relative

According to the result from 95 observations found that total waiting time cost of outpatient's relative are paid by patient's relative by 72 observations (75.79%) and 23 observations (24.21%) didn't pay for total waiting time cost of outpatient's relative. The table below show the cost of total waiting time cost of outpatient's relative per *only person who pay* for total waiting time cost of outpatient's relative only.

Table 4.69: Total waiting time cost of outpatient's relative average only per person who pay in 1st year after patient's accident (Baht).

Type of Total waiting time cost of outpatient's relative	Total in 1st year of patient's accident (Baht)	Average per person who pay for total waiting time cost of outpatient's relative in 1 st year (Baht)	Observation	Percentage (%)
Total waiting time cost of outpatient's relative	141,560.10	1,966.11	72	75.79
Didn't have total waiting time cost of outpatient's relative (was inpatient for all first year, unemployed or no relative take care)			23	24.21
		Total	95	100

Due to the purpose of this cost analysis .researcher would like to average cost per 1 person in first year after patient's accident. so the total cost of each total waiting time cost of outpatient's relative must *average to all 95 observations* that show in the table below.

Table 4.70: Total waiting time cost of outpatient's relative average per person in 1st year after patient's accident (Baht).

Type of Total waiting time cost of outpatients	Total in 1st year of patient's accident (Baht)	Average per person in 1 st year (Baht)	Observation	Percentage (%)
Patient's total waiting time cost of outpatient	141,560.11	1,490.11	95	100
		Total	95	100

Explanation: use the average of total waiting time cost of outpatient's relative per 1 person in first year after patient's accident (R11) is 2162.17 Baht to calculate total cost of disability victims by alcohol drunk driving from traffic accident. (R11 = 1,490.11 Baht)

24. Loss of relative's income due to leaving the job to take care the patient

According to the result from 95 observations found that loss of relative's income due to leaving the job to take care the patient are paid by patient's relative by 41 observations (43.15%) and 54 observations (54.85%) didn't pay for loss of relative's income due to leaving the job to take care the patient due to some of patients unemployed or no income before or didn't leave job after accident or no relative take care. The table below show the cost of loss of relative's income due to leaving the job to take care the patient per *only person who pay* for loss of relative's income due to leaving the job to take care the patient only.

Table 4.71: Loss of relative's income due to leaving the job to take care the patient average only per person who pay in 1st year after patient's accident (Baht).

Type of Loss of relative's income due to leaving the job to take care the patient	Total in 1st year of patient's accident (Baht)	Average per person who pay for Patient's loss of relative's income due to leaving the job to take care the patient in 1 st year (Baht)	Observation	Percentage (%)
loss of relative's income due to leaving the job to take care the patient	10,634,018.03	259,366.3	41	43.15
Didn't have loss of relative's income due to leaving the job to take care the patient (unemployed or no income before or didn't leave job after accident or no relative take care)			54	54.85
			Total	95
				100

Due to the purpose of this cost analysis .researcher would like to average cost per 1 person in first year after patient's accident. so the total cost of each loss of relative's income due to leaving the job to take care the patient must *average to all 95 observations* that show in the table below.

Table 4.72: Loss of relative's income due to leaving the job to take care the patient average per person in 1st year after patient's accident (Baht).

Type of Loss of relative's income due to leaving the job to take care the patient	Total in 1st year of patient's accident (Baht)	Average per person in 1 st year (Baht)	Observation	Percentage (%)
loss of relative's income due to leaving the job to take care the patient	10,634,018.03	111,937.03	95	100
		Total	95	100

Explanation: use the average of loss of relative's income due to leaving the job to take care the patient per 1 person in first year after patient's accident (R12) is 111,937.03 Baht to calculate total cost of disability victims by alcohol drunk driving from traffic accident. (R12 = 111,937.03 Baht)

25. Other costs of patient's relative

According to the result from 95 observations found that other cost of patient's relative are paid by patient's relative by 9 observations (9.47%) and 86 observations (90.53%) didn't pay for other cost of patient's relative. The table below show the cost of other cost of patient's relative per *only person who pay* for other cost of patient's relative only.

Table 4.73 : Other costs of patient's relative average only per person who pay in 1st year after patient's accident (Baht).

Type of Other cost of patient's relative	Total in 1st year of patient's accident (Baht)	Average per person who pay for Patient's other cost in 1 st year (Baht)	Observation	Percentage (%)
Patient's other cost	372,522.72	41,391.41	9	9.47
Didn't have other cost of patient's relative			86	90.53
		Total	95	100

Due to the purpose of this cost analysis .researcher would like to average cost per 1 person in first year after patient's accident. so the total cost of each other cost of patient's relative must *average to all 95 observations* that show in the table below.

Table 4.74 : Other costs of patient's relative average per person in 1st year after patient's accident (Baht).

Type of Type of Other cost	Total in 1st year of patient's accident (Baht)	Average per person in 1 st year (Baht)	Observation	Percentage (%)
Patient's other cost	372,522.72	3,921.29	95	100
		Total	95	100

Explanation: use the average of other cost of patient's relative per 1 person in first year after patient's accident (R13) is 3,921.29 Baht to calculate total cost of disability victims by alcohol drunk driving from traffic accident. (R13 = 3,921.29 Baht)

The reasons that patient's relative paid for other cost ; for alternative traditional treatment cost, needle treatment. Nursery for children due to cannot take care their baby because disability.

Table 4.75 ; Cost of the disability victims by alcohol drunk driving from traffic accident: A case study in Bangkok(All of cost components).

Type of costs	Cost (Baht)	cost/1patient/ 1st year of treatment(Baht)
Patient's costs		
<i>Direct cost</i>		
<i>Medical</i>		
1. Medical equipment cost	5,354,183.99	56,359.83
2. Supplement food cost(for patient)	852,469.83	8,973.37
3. Home nursing	154,186.43	1,623.02
4. Doctor cost and drug cost	27,902,972.33	293,715.50
<i>Non Medical</i>		
5. Travelling Cost (pay for transportation) of patients	187,070.66	1,969.16
6. Electricity and water cost	83,648.60	880.51
7. Accommodation cost	610,106.14	6,422.17
<i>Indirect cost</i>		
<i>Non Medical</i>		
8. Total travelling time cost of Outpatients and Inpatient	180,516.29	1,900.17
9. Total waiting time cost of Outpatient	205,406.41	2,162.17
10. Loss of income due to illness during treatment in hospital for inpatient	11,292,864.35	118,872.26
11. Loss of income due to illness of outpatient	8,948,134.39	94,190.89
12. Other costs of patient	1,535,815.10	16,166.47
Patient's relative costs		
<i>Direct cost</i>		
<i>Medical</i>		
13. Medical equipments cost(Relative pay for patient)	6,095,053.62	64,158.46
14. Supplement food cost (Relative pay for patient)	2,871,687.31	30,228.29
15. Home nursing cost (Relative pay for patient)	337,761.07	3,555.38
16. Doctor cost and drug cost (Relative pay for patient)	25,315,539.89	266,479.37
<i>Non Medical</i>		
17. Travelling Cost (Relative pay for transportation for patient)	251,524.12	2,647.62
18. Travelling cost of relative pay for transportation visit IP	4,054,996.82	42,684.18
19. Electricity and water cost (Relative pay for patient)	164,541.75	1,732.02
20. Accommodation (Relative pay for patient)	6,663,344.98	70,140.47
<i>Indirect cost</i>		
<i>Non Medical</i>		
21. Total Travelling time cost of Outpatient's relatives	98,053.44	1,032.14
22. Total Travelling time cost of Inpatient's relatives	1,204,237.02	12,676.18
23. Total waiting time cost of out patient's relative	141,560.11	1,490.11
24. Loss of relative's income due to leaving the job to take care the patient	10,634,018.03	111,937.03
25. Other costs of patient's relative	372,522.72	3,921.29
Total cost (summary of cost from 1- 25)	115,512,215.38	1,215,918.06

Table 4.76 ; Cost of the disability victims by alcohol drunk driving from traffic accident: A case study in Bangkok (Only patient cost).

Type of costs	Cost(Baht)	cost/1patient/ 1st year of treatment(Baht)
Patient's costs		
<i>Direct cost</i>		
<i>Medical</i>		
1. Medical equipment cost	5,354,183.99	56,359.83
2. Supplement food cost(for patient)	852,469.83	8,973.37
3. Home nursing	154,186.43	1,623.02
4. Doctor cost and drug cost	27,902,972.33	293,715.50
<i>Non Medical</i>		
5. Travelling Cost (pay for transportation) of patients	187,070.66	1,969.16
6. Electricity and water cost	83,648.60	880.51
7. Accommodation cost	610,106.14	6,422.17
<i>Indirect cost</i>		
<i>Non Medical</i>		
8. Total travelling time cost of Outpatients and Inpatient	180,516.29	1,900.17
9. Total waiting time cost of Outpatient	205,406.41	2,162.17
10. Loss of income due to illness during treatment in hospital for inpatient	11,292,864.35	118,872.26
11. Loss of income due to illness of outpatient	8,948,134.39	94,190.89
12. Other costs of patient	1,535,815.10	16,166.47
Total cost of patient	57,307,374.52	603,235.52

Table 4.77 ; Cost of the disability victims by alcohol drunk driving from traffic accident: A case study in Bangkok (Only patient's relative cost)

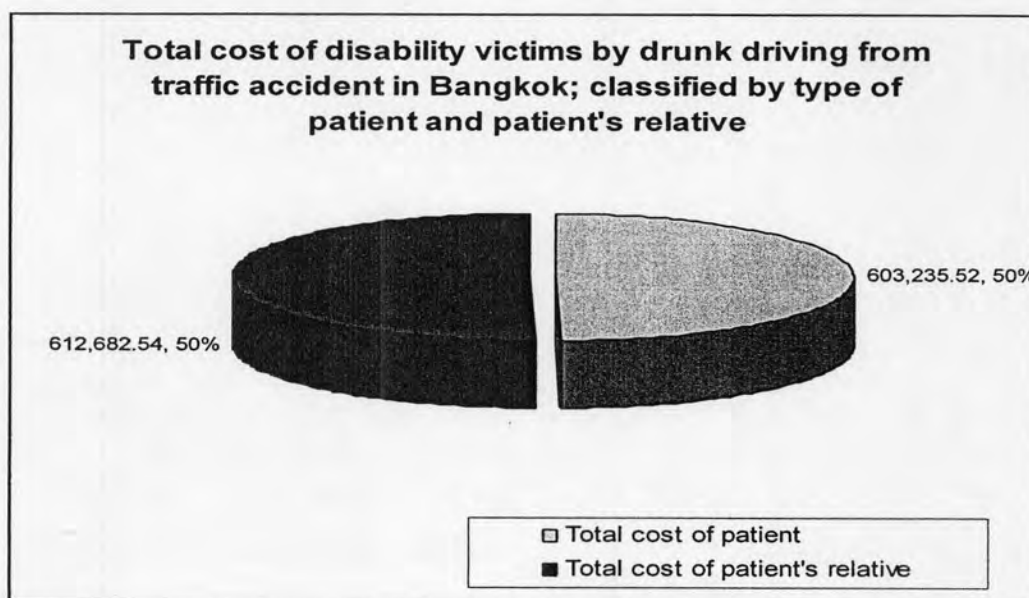
Type of costs	Cost(Baht)	cost/1patient/ 1st year of treatment(Baht)
Patient's relative costs		
<i>Direct cost</i>		
<i>Medical</i>		
13. Medical equipments cost (Relative pay for patient)	6,095,053.62	64,158.46
14. Supplement food cost (Relative pay for patient)	2,871,687.31	30,228.29
15. Home nursing cost (Relative pay for patient)	337,761.07	3,555.38
16. Doctor cost and drug cost (Relative pay for patient)	25,315,539.89	266,479.37
<i>Non Medical</i>		
17. Travelling Cost (Relative pay for transportation for patient)	251,524.12	2,647.62
18. Travelling cost of relative pay for transportation visit IP	4,054,996.82	42,684.18
19. Electricity and water cost (Relative pay for patient)	164,541.75	1,732.02
20. Accommodation (Relative pay for patient)	6,663,344.98	70,140.47
<i>Indirect cost</i>		
<i>Non Medical</i>		
21. Total Travelling time cost of Outpatient's relatives	98,053.44	1,032.14
22. Total Travelling time cost of Inpatient's relatives	1,204,237.02	12,676.18
23. Total waiting time cost of out patient's relative	141,560.11	1,490.11
24. Loss of relative's income due to leaving the job to take care the patient	10,634,018.03	111,937.03
25. Other costs of patient's relative	372,522.72	3,921.29
Total cost of patient's relative	58,204,840.88	612,682.54

Table 4.78 : Total cost of the disability victims by alcohol drunk driving from traffic accident : A case study in Bangkok ; classified by type of patient and patient's relative.

Type of costs	Cost(Baht)	cost/1patient/ 1st year of treatment(Baht)
Total cost of patient	57,307,374.52	603,235.52
Total cost of patient's relative	58,204,840.88	612,682.54
Total cost (summary of both patient and patient's relative)	115,512,215.38	1,215,918.06

Both of patient and patient's relative are most likely paid by half-half for costs due to patient's disability victim by drunk driving from traffic accident in Bangkok.

Figure 4.4: Total cost of the disability victims by alcohol drunk driving from traffic accident: A case study in Bangkok ; classified by type of patient and patient's relative.



This pie chart shows the value of costs of both patient and patient's relative as cost per 1st year after patient's accident (Baht,%)

Table 4.79; Cost of the disability victims by alcohol drunk driving from traffic accident: A case study in Bangkok (classified only direct costs)

Type of costs	Cost(Baht)	cost/1patient/ 1st year of treatment(Baht)
Direct cost of patient		
<i>Medical</i>		
1. Medical equipment cost	5,354,183.99	56,359.83
2. Supplement food cost(for patient)	852,469.83	8,973.37
3. Home nursing	154,186.43	1,623.02
4. Doctor cost and drug cost	27,902,972.33	293,715.50
<i>Non Medical</i>		
5. Travelling Cost (pay for transportation) of patients	187,070.66	1,969.16
6. Electricity and water cost	83,648.60	880.51
7. Accommodation cost	610,106.14	6,422.17
Direct cost of patient's relative		
<i>Medical</i>		
13. Medical equipments cost(Relative pay for patient)	6,095,053.62	64,158.46
14. Supplement food cost (Relative pay for patient)	2,871,687.31	30,228.29
15. Home nursing cost (Relative pay for patient)	337,761.07	3,555.38
16. Doctor cost and drug cost (Relative pay for patient)	25,315,539.89	266,479.37
<i>Non Medical</i>		
17. Travelling Cost (Relative pay for transportation for patient)	251,524.12	2,647.62
18. Travelling cost of relative pay for transportation visit IP	4,054,996.82	42,684.18
19. Electricity and water cost (Relative pay for patient)	164,541.75	1,732.02
20. Accommodation (Relative pay for patient)	6,663,344.98	70,140.47
Total direct cost	80,899,087.54	851,569.35

Table 4.80 ; Cost of the disability victims by alcohol drunk deriving from traffic accident: A case study in Bangkok (classified only indirect costs)

Type of costs	Cost(Baht)	cost/1patient/ 1st year of treatment(Baht)
Patient Indirect cost		
8. Total travelling time cost of Outpatients and Inpatient	180,516.29	1,900.17
9. Total waiting time cost of Outpatient	205,406.41	2,162.17
10. Loss of income due to illness during treatment in hospital for inpatient	11,292,864.35	118,872.26
11. Loss of income due to illness of outpatient	8,948,134.39	94,190.89
Patient's relative indirect cost		
21. Total Travelling time cost of Outpatient's relatives	98,053.44	1,032.14
22. Total Travelling time cost of Inpatient's relatives	1,204,237.02	12,676.18
23. Total waiting time cost of out patient's relative	141,560.11	1,490.11
24. Loss of relative's income due to leaving the job to take care the patient	10,634,018.03	111,937.03
Total indirect cost	32,704,790.04	344,260.95

Table 4.81: Cost of the disability victims by alcohol drunk driving from traffic accident : A case study in Bangkok (classified by direct and indirect cost)

Patient and patient's relative paid for direct cost by 71% while paid for indirect cost by 29% of total cost due to patient is disability victim by drunk driving from traffic accident in Bangkok.

Type of costs	Cost(Baht)	cost/1patient/ 1st year of treatment(Baht)
Total direct cost	80,899,087.54	851,569.35
Total indirect cost	32,704,790.04	344,260.95
Total direct and indirect costs	1,195,830.30	1,195,830.30
Total other costs (both patient and patient's relative)	1,908,337.82	20,087.76
Total cost (summary of both patient and patient's relative)	115,512,215.38	1,215,918.06

Figure 4.5: Cost of the disability victims by alcohol drunk driving from traffic accident : A case study in Bangkok: classified by direct and indirect cost (per 1 person in 1st year after patient's accident)

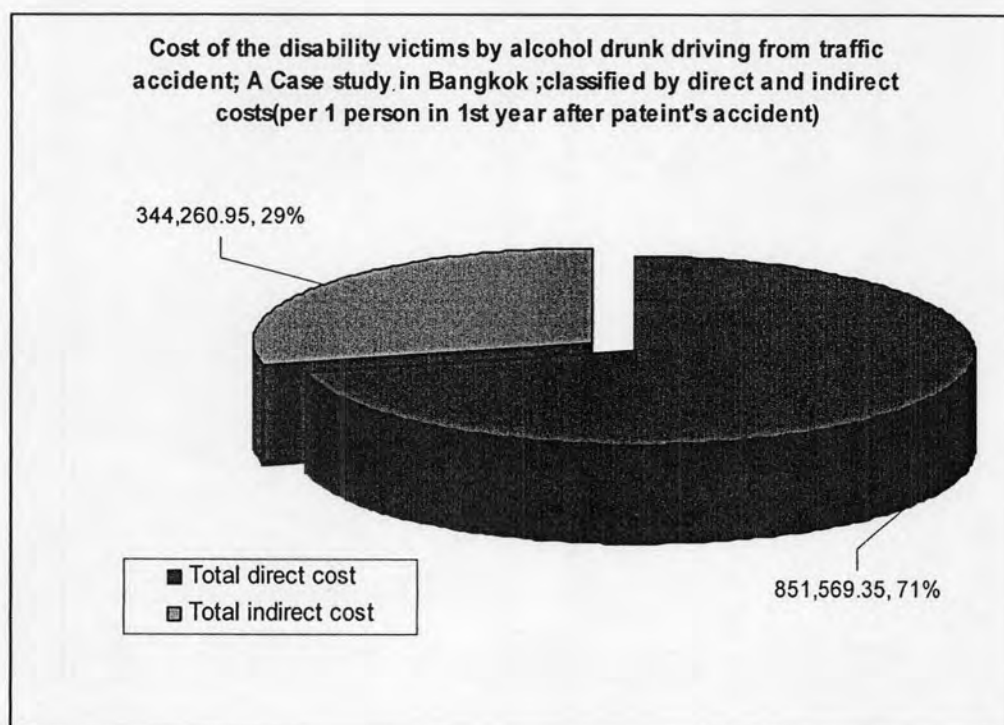


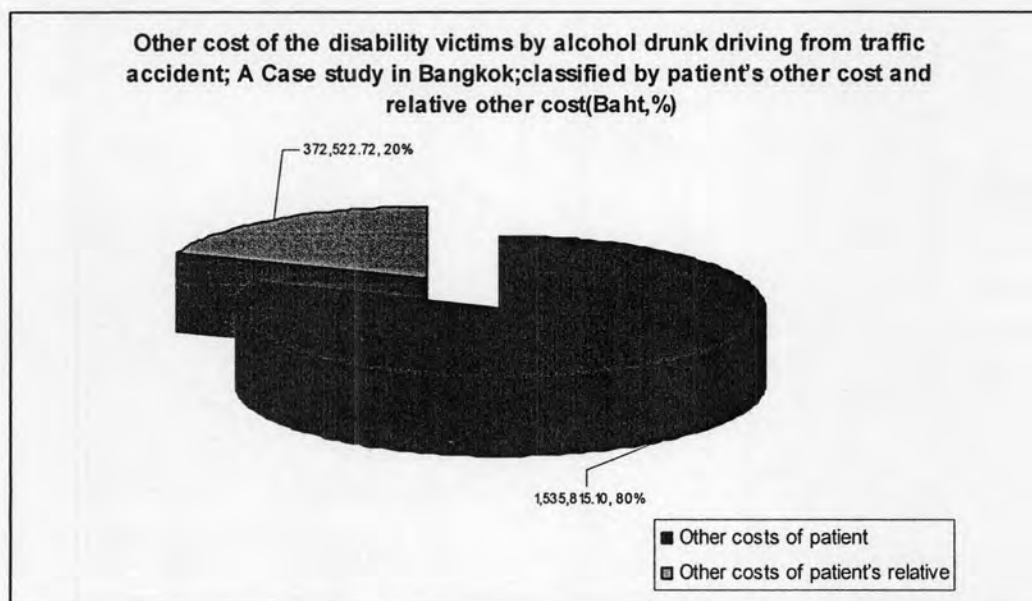
Table 4.82; Other cost of the disability victims by alcohol drunk driving from traffic accident : A case study in Bangkok (classified by patient's other cost and relative other cost)

Type of costs	Cost(Baht)	cost/1patient/ 1st year of treatment(Baht)
Other costs of patient	1,535,815.10	16,166.47
Other costs of patient's relative	372,522.72	3,921.29
Total other costs (both patient and patient's relative)	1,908,337.82	20,087.76

Due to other cost cannot contain in any direct or indirect cost because of they're difficult to classified as direct or indirect cost so it may show separately.

The result found that there're 80% of total other cost are from patient while 20% comes from patient's relative.

Figure 4.6: Other cost of the disability victims by alcohol drunk driving from traffic accident : A case study in Bangkok: classified by patient's other cost and relative other cost (Baht, %)



This pie chart shows the value of costs of both patient and patient's relative as cost per 1st year after patient's accident (Baht,%)

Table 4.83: Cost of the disability victims by alcohol drunk driving from traffic accident : A case study in Bangkok (classified only medical costs)

Type of costs	Cost(Baht)	cost/1patient/ 1st year of treatment(Baht)
<i>Patient's Medical cost</i>		
1. Medical equipment cost	5,354,183.99	56,359.83
2. Supplement food cost(for patient)	852,469.83	8,973.37
3. Home nursing	154,186.43	1,623.02
4. Doctor cost and drug cost	27,902,972.33	293,715.50
<i>Patient's relative Medical cost</i>		
13. Medical equipments cost(Relative pay for patient)	6,095,053.62	64,158.46
14. Supplement food cost (Relative pay for patient)	2,871,687.31	30,228.29
15. Home nursing cost (Relative pay for patient)	337,761.07	3,555.38
16. Doctor cost and drug cost (Relative pay for patient)	25,315,539.89	266,479.37
Total medical costs	68,883,854.47	725,093.22

Table 4.84: Cost of the disability victims by alcohol drunk driving from traffic accident : A case study in Bangkok (classified only non medical costs)

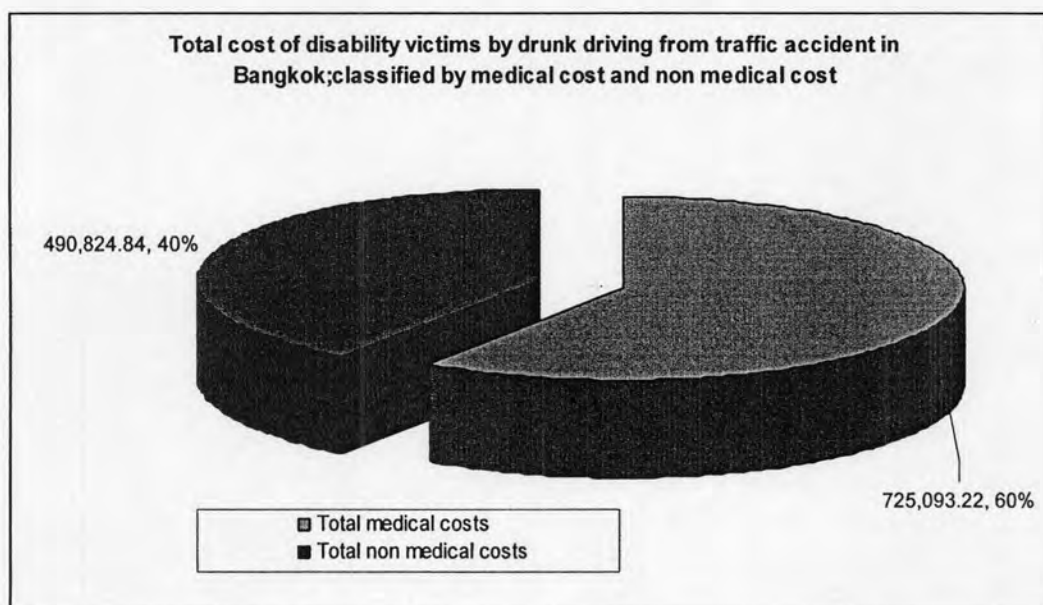
Type of costs	Cost(Baht)	cost/1patient/ 1st year of treatment(Baht)
<i>Patient Non Medical</i>		
5. Travelling Cost (pay for transportation) of patients	187,070.66	1,969.16
6. Electricity and water cost	83,648.60	880.51
7. Accommodation cost	610,106.14	6,422.17
8. Total travelling time cost of Outpatients and Inpatient	180,516.29	1,900.17
9. Total waiting time cost of Outpatient	205,406.41	2,162.17
10. Loss of income due to illness during treatment in hospital for inpatient	11,292,864.35	118,872.26
11. Loss of income due to illness of outpatient	8,948,134.39	94,190.89
12. Other costs of patient	1,535,815.10	16,166.47
<i>Patient's relative Non Medical</i>		
17. Travelling Cost (Relative pay for transportation for patient)	251,524.12	2,647.62
18. Travelling cost of relative pay for transportation visit IP	4,054,996.82	42,684.18
19. Electricity and water cost (Relative pay for patient)	164,541.75	1,732.02
20. Accommodation (Relative pay for patient)	6,663,344.98	70,140.47
21. Total Travelling time cost of Outpatient's relatives	98,053.44	1,032.14
22. Total Travelling time cost of Inpatient's relatives	1,204,237.02	12,676.18
23. Total waiting time cost of out patient's relative	141,560.11	1,490.11
24. Loss of relative's income due to leaving the job to take care the patient	10,634,018.03	111,937.03
25. Other costs of patient's relative	372,522.72	3,921.29
Total non medical costs	46,628,360.93	490,824.84

Table 4.85: Cost of the disability victims by alcohol drunk driving from traffic accident : A case study in Bangkok (classified by medical and non medical costs)

Type of costs	Cost(Baht)	cost/1patient/ 1st year of treatment(Baht)
Total medical costs	68,883,854.47	725,093.22
Total non medical costs	46,628,360.93	490,824.84
Total cost (summary of both patient and patient's relative)	115,512,215.38	1,215,918.06

The result found that there're 60% of total cost of the disability victims by alcohol drunk driving from traffic accident : A case study in Bangkok are from medical cost while 40% comes from non medical cost.

Figure 4.7: Cost of the disability victims by alcohol drunk driving from traffic accident : A case study in Bangkok (classified only non medical costs)



This pie chart shows the value of costs of both patient and patient's relative as cost per 1st year after patient's accident (Baht,%)

Table 4.86 ; Cost of the disability victims by alcohol drunk driving from traffic accident: A case study in Bangkok

Top 5 of the highest cost components

Type of costs (rank)	Cost(Baht)	cost/1patient/ 1st year of treatment(Baht)
4.Doctor cost and drug cost(1)	27,902,972.33	293,715.50
16.Doctor cost and drug cost (Relative pay for patient) (2)	25,315,539.89	266,479.37
10. Loss of income due to illness during treatment in hospital for Inpatient(3)	11,292,864.35	118,872.26
24.Loss of relative's income due to leaving the job to take care the patient (4)	10,634,018.03	111,937.03
11.Loss of income due to illness of Outpatient(5)	8,948,134.39	94,190.89

Value of doctor and drug cost of patient pay is the most highest cost by value 293,715.50 Baht per 1 person in 1st year after patient's accident, follow by the Doctor cost and drug cost (Relative pay for patient) , Loss of income due to illness during treatment in hospital for inpatient, .Loss of relative's income due to leaving the job to take care the patient and Loss of income due to illness of outpatient.

Table 4.87; Cost of the disability victims by alcohol drunk driving from traffic accident :A case study in Bangkok (summary only patient cost with its statistic).

Patient's cost	1.medical equipment cost	2.suppliment food cost (patient)	3.home nursing (patient)	4.Doctor and drug costs(patient pay)	5.travelling cost(patient pay themselves)	6.electricity and water(patient)	7.accommodation	8.total travelling time cost of IP	9.total waiting time cost of OP	10.loss income due to illness of IP	11.loss income due to illness of OP	12.other cost of patient	Patient's total cost
total	5354184	852469.8	154186.4	27902972	187070.7	83648.6	610106.1	180516.3	205406.4	11292864	8948134	1535815	57307375
average per 1 person	56359.83	8973.367	1623.015	293715.5	1969.165	880.5116	6422.17	1900.171	2162.173	118872.3	94190.89	16166.47	603235.5
Mean	56359.83	8973.367	1623.015	293715.5	1969.165	880.5116	6422.17	1900.171	2162.173	118872.3	94190.89	16166.47	
Median	0	0	0	0	0	0	0	224.4907	204.538	32262.26	31370.24	0	
Maximum	375031.5	641119.2	36225.86	3104566	21105.01	10350.55	345008.2	18650.45	24191.42	1055393	672603.7	603764.3	
Minimum	0	0	0	0	0	0	0	0	0	0	0	0	
Std. Dev.	84651.55	66334.4	5868.88	676354.3	4598.083	2071.831	37749.39	4074.971	4354.272	219013.4	149372.8	79423.53	
Observations	95	95	95	95	95	95	95	95	95	95	95	95	

**Table 4.88 ; Cost of the disability victims by alcohol drunk driving from traffic accident;
A case study in Bangkok (summary only patient's relative cost with its statistic).**

Patient's relative cost	13.medical equipment (relative pay)	14.suppliment food cost (relative)	15.home nursing (relative)	16.Doctor and drug costs(relative)	17.travelling cost(relative's pay for patient)	18.travelling cost of relative pay for transportation visit IP during admit in hospital	19.electricity and water (relative)	20.accommodation (relative)	21.total travelling time cost of OP relative	22.total travelling time cost of IP relative	23.total waiting time cost of OP relative	24.Loss of relative's income due to leaving the job to take care the patient	25.other cost of patient's relative	Total Patient's relative cost
total	6095054	2871687	337761.1	25315540	251524.1	4054997	164541.7	6663345	98053.44	1204237	141560.1	10634018	372522.7	58204841
average per 1 person	64158.46	30228.29	3555.38	266479.4	2647.622	42684.18	1732.018	70140.47	1032.141	12676.18	1490.106	111937	3921.292	612682.5
Mean	64158.46	30228.29	3555.38	266479.4	2647.622	42684.18	1732.018	70140.47	1032.141	12676.18	1490.106	111937	3921.292	
Median	23579.42	0	0	54177.57	1399.115	18934.13	1248.393	0	342.2078	3823.287	511.7126	0	0	
Maximum	652396.4	353296.1	97938.05	1970093	19484.15	469158.5	9431.767	1969197	12174.5	254401.8	23370.29	744796.6	233185.8	
Minimum	0	0	0	0	0	0	0	0	0	0	0	0	0	
Std. Dev.	115742.2	59217.27	14100.22	398438.5	3781.293	64486.74	1965.891	297733.9	1954.531	31633.9	3540.146	170756	24542.34	
Observations	95	95	95	95	95	95	95	95	95	95	95	95	95	

**Table 4.89 ; Cost of the disability victims by alcohol drunk driving from traffic accident : A case study in Bangkok
All of cost components both patient cost and relative cost and estimation for cost in Bangkok and Thailand.**

Total cost of disability victims(patient and relative) in 1st year after accident(Baht)		115,512,215.38 Baht		
Average per 1 person 1,215,918.06		Total cost of disability victims (patient and relative) in 1st year after accident in Bangkok.(Baht).	Number of disability victim in Bangkok x 1,783*	2,167.98
		Total cost of disability victims (patient and relative) in 1st year after accident in Thailand.(Baht).	Number of disability victim in Thailand x 100,000**	121,591
Mean	1,215,918			
Median	805,773.9			
Maximum	4,454,716			
Minimum	63,671.41			
Std. Dev.	1,082,189			
Observations	95			

* Number of disability victims by drunk driving from traffic accident in Bangkok are 1,783 by the calculation on Chapter 3 (page 23)

** Number of disability victims by drunk driving from traffic accident in Thailand are 100,000 by the estimation from Taejing Siripanich M.D.(2008) see also Chapter 3 (page 23)

Discussion

General discussion from the research result

The average compensation per 1 patient in 1st year of treatment which the disability victims received is 345,539.60. This compensation can be assumed as patient's income of the first year after the accident of disability victim.

But for the cost that the patient must spend for their own treatment during the first year after date of accident found that they must spend at least 603,235.52 Baht per 1 person per first year after accident only them self. So, it's may not enough and could makes possible to the patients suffered about the financial to support their medical treatments. So they need relative to take care and help them support for high costs.

Moreover the average in Total cost of the disability victims by alcohol drunk driving from traffic accident: A case study in Bangkok from the result of this study by summarise of all cost components is 1,215,918.06 Baht per person in 1st year after patient's accident can tell the cost that disability and relative have to spend "at least" in first year of patient's treatment.

To study the factors affecting to the total cost of the disability victims by alcohol drunk driving from traffic accident: A case study in Bangkok may need the OLS method to find the relations of the cost and factors.

Factor affecting to the total cost of the disability victims by alcohol drunk driving from traffic accident : A case study in Bangkok per person in first year after patient's accident

About the result from regression model to test what're a factors affecting to the Total cost of the disability victims by alcohol drunk driving from traffic accident: A case study in Bangkok.

According to the data collection, researcher found that there're many factors that have most likely affect to the total cost by OLS method.

Estimation Equation:

$$\text{COST} = C(1)*\text{AGEAC} + C(2)*\text{BFINC} + C(3)*\text{COMPEN} + C(4)*\text{EDU} + C(5)*\text{RBFINC} + C(6)*\text{RELATIVE} + C(7)*\text{SEV} + C(8)$$

Where,

COST is The total cost of the disability victims by alcohol drunk driving from traffic accident : A case study in Bangkok per person in first year after patient's accident

AGEAC is Age of patient at year of patient's accident

BFINC is Patient's Income before accident per person per month

COMPEN is Compensation that patient's received in 1st year after accident

EDU is the level of patient's education
 RBFINC is Relative's income before patient's accident / person / month
 RELATIVE is the number of patient's relative (if no relative = 0)
 SEV is Level of severity of disability (use data from disability book
 which issued by National Office for empowerment of persons
 with Disability or NEP.)

Table 4.90: OLS regression result

Dependent Variable: COST				
Method: OLS				
Sample: 95				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
AGEAC	-11533.08	10620.67	-1.085909	0.2806
BFINC	32.69102	3.967787	8.239108	0.0000***
COMPEN	0.114450	0.100508	1.138716	0.2580
EDU	-56609.54	48659.97	-1.163370	0.2479
RBFINC	-16.35644	5.430855	-3.011762	0.0034***
RELATIVE	-534600.3	287792.5	-1.857590	0.0667*
SEV	44655.87	106908.4	0.417702	0.6772
C	1182454.	583021.2	2.028149	0.0457**
R-squared	0.656577	F-statistic		18.05648
Adjusted R-squared	0.620215	Probability (F-statistic)		0.000000

Note:

* Means significant when use Prob. at 0.10 (10% error)

** Means significant when use Prob. at 0.05 (5% error)

*** Means significant when use Prob. at 0.01 (1% error)

The result of regression

Substituted Coefficients:

COST = -11533.08046*AGEAC + 32.69102351*BFINC + 0.1144502593*COMPEN
 t-Statistic (-1.085909) (8.239108) (1.138716)
 - 56609.54382*EDU - 16.35644108*RBFINC - 534600.2676*RELATIVE
 t-Statistic (-1.163370) (-3.011762) (-1.857590)
 + 44655.87478*SEV + 1182453.628
 t-Statistic (0.417702) (2.028149)

Note: Significant for t-stat is between -1.96 to 1.96
 (When use allowance of error = 0.05)

Explanation from the model;

1. According to the result of regression found that there're 2 of independent variables that significant (prob < 0.05) when use 0.05 of significant there're

- BFINC (Patient's Income before accident per person per month)
- RBFINC(Relative's income before patient's accident per person per month)

And constant of this regression (C) is significant at prob.>0.05 too.

2. According to the result there're 5 independent variables that insignificant (prob. > 0.05) when use 0.05 of significant there're

- AGEAC(Age of patient at year of patient's accident)
- COMPEN(Compensation that patient's received in 1st year after accident)
- EDU(The level of patient's education)
- RELATIVE(the number of patient's relative (if no relative = 0))
- SEV(Level of severity of disability (use data from disability book which issued by National Office for empowerment of persons with Disability or NEP.)

In the result, RELATIVE is very interesting because the prob. value is 0.0667 (nearly to 0.05) ,so if use 0.10 of significant or collect more observations for enlarge the sample size it'll be significant.

From the equation when substitute all coefficients in, it can explain about the relations between Cost and all variable that;

1. $-11533.08046 * AGEAC$ means if let's another variables as the constants, if increase the age of patient at year of patient's accident by 1 year it'll *decrease* (negative coefficient)the cost of disability victims by drunk driving from traffic accident by 11,533.08 Baht ,but from the regression result this variable is not significant ,so can ignore this variable.

2. $32.69102351 * BFINC$ means if let's another variables as the constants, if increase the number Patient's Income before accident per person per month by 1 Bath it'll *increase* (positive coefficient)the cost of disability victims by drunk driving from traffic accident by 32.69 Baht.(significant)

3. $0.1144502593 * COMPEN$ means if let's another variables as the constants, if increase the value of compensation that patient's received in 1st year after accident by 100 Bath it'll *increase* (positive sign) the cost of disability victims by drunk driving from traffic accident by 11.44 Baht. But from the regression result this variable is not significant ,so can ignore this variable.

4. $-56609.54382 \cdot \text{EDU}$ means if let's another variables as the constants, if increase the level of patient's education 1 level higher it'll *decrease* (negative sign) the cost of disability victims by drunk driving from traffic accident by 56,609.54 Baht. But from the regression result this variable is not significant, so can ignore this variable.
5. $-16.35644108 \cdot \text{RBFINC}$ means if let's another variables as the constants, if increase the number of Relative's income before patient's accident per person per month by 1 Bath it'll *decrease* (negative sign) the cost of disability victims by drunk driving from traffic accident by 16.35 Baht. (significant)
6. $-534600.2676 \cdot \text{RELATIVE}$ means if let's another variables as the constants, if increase the number of Relative's Income before patient's accident by 1 person it'll *decrease* (negative sign) the cost of disability victims by drunk driving from traffic accident by 534600.27 Baht But from the regression result this variable is not significant at prob. 0.05 but nearly to 0.05 so if we use significant at 0.10 it'll be significant.
7. $44655.87478 \cdot \text{SEV}$ means if let's another variables as the constants, if increase the level of patient's severity 1 level higher (more serious disability) it'll *increase* (positive sign) the cost of disability victims by drunk driving from traffic accident by 44,655.87 Baht. But from the regression result this variable is not significant, so can ignore this variable.
8. 1182453.628 means if let's another variables as the constants, the cost of disability victims by drunk driving from traffic accident are 1,182,453.69 Baht (significant)
9. From the R-squared value, this estimated equation can be explained the relations of factors and Cost by 65.66 %.

Conclusion of regression result;

According to the result of regression may explain the factors that affecting to the total cost of disability victims by drunk driving from traffic accident : A case study in Bangkok which make the cost become higher or lower depends on 2 significant variables ,there're Patient's income before accident per person per month ,Relative's income before patient's accident per person per month.

Because if the patients who have higher income before accident they may spend the money on the drug and medical treatment more for better hospital, better quality of drug and service or even the medical equipment facilities more than patients who have lower income before accident.

And if patient's income per month before accident is higher it'll make the cost that patient's pay as the indirect cost higher too. Because of the indirect costs are included in total cost of disability victim (total cost have both direct and indirect cost) it may conclude that if patient have income before accident more and have to forgone the income or loss of income due to received medical treatment as inpatient, lost their work day or have to leaving the job due to disability for patient it'd have total cost of disability victims more than patient who have low income.

But for the relative's income before patient's accident it might help to support the patient's cost. according from the regression result show the negative number of coefficient it means that if increase the income before accident of patient's relative per month it'll decrease the total cost of disability victim, or can assume that the relative's income before patient accident is important to support patient as the substitution of some parts of patient's cost, such as if relative who take care have high income they might have more chance to help or afford the patient for patient's costs due to disability more.

Moreover for the relative's income before patient's accident .if relatives have high income they might take a responsible to get the insurance or provide the good health benefit for patient. and might get the compensation more after the accident than people who're poor that's no insurance so it can possible to safe the cost for patient.

if use 0.1 significant for patient who have relative to take care the cost of disability victims by drunk driving from traffic accident may likely decrease a lot if have one more relative to take care. It can help a lot to patients for decreasing the cost. So, it's good for patients who have the relative to get a lower cost of disability victims more than patient who take care themselves.

Policy implication

According to the relation of OLS for factors affecting to the cost of disability victim found that the government should create , launch the project ,implement the policy to help disability victims and their relative by;

1. Patient who have high income can have high cost for the first year after accident .government should lend hand to afford them by giving the health benefit or provide the compensation for the patient who have income or employed before but have to leave the job and unemployed due to disability more.

Patient who have to leave the job, the government should pay them for compensation as the different rate due to different income of patient's income per month. because patient who have higher income before accident will loss their income in the future that they should get more than patient who have lower income. So government should pay by using the income before accident of patient as the factor to decide how much government should pay for support the patient.

2. Patient who have no relative may have a chance to get higher cost more than patient who have relative take care, so government should focus on the patient who take care themselves without patient's relative more. by implement the programme to help such as give them the health benefit to get free medical treatment in a public hospital by using disability card. Discount the tax that patient's need to pay for government or leave them not pay for tax. Provide the discount for purchasing the medicine in the pharmacy (some of the drug that's not include in the health scheme and patient need to pay out of pocket) or provide free medical equipment to patient who don't have relative.

Provide the free service for disability as a discount rate for taxi, discount rate or free ticket for transportation by BMTA (bus), or BTS (sky train) or MRT (subway) to make the patients are more comfortable and safe their travelling cost. Because in travelling cost those patients pay for transportation, there're expensive with large amount of money per each round trip patient and relative spend.

3. For relative who take care the disability victims may suffer with the cost s that they need to support for treatment and living cost both of themselves and disability. so the government or related organisation should fund the compensation or implement the policy to help patient who take care disability by drunk driving such as discount for the tax for patient's relative, provide the compensation to patient's relative who take care disability as same as the money that government give to elderly, family who have children during their education, people have to take care parents.

4. Collect the fund from sin tax or increase alcohol tax and divided some of money from that to help and support both of disability victims and their relative more (nowadays there're 500 Baht /month that government give to disability as compensation , it should be more due to high living cost now).