

CHAPTER IV

RESULTS

This chapter contains the results for:

- 1) Baseline characteristics and socioeconomic profiles
- 2) Health and medication profiles of those receiving services at a community pharmacy
- 3) Illness experience and health utilization prior to pharmacy visits
- 4) Out-of-pocket actual payments, standard medical treatment and ability to pay for services at a community pharmacy
- 5) Impact of out-of-pocket payment on receiving service at a community pharmacy and getting standard medical treatment

4.1 Baseline characteristics and socioeconomic profiles

Of the six groups of symptoms, five groups were present during the data collection period. These were (1) fever/headache, (2) throat/nose symptoms, (3) skin symptoms, (4) joint/back/musculoskeletal pain, and (5) gastrointestinal tract symptoms. Urinary tract symptoms were not found during data collection. There were 304 poor households in total exhibiting the five symptom groups.

Majority was female (79.9%). Their average age was 53.7 years and 79.9% were married. Almost all (99.3%) were aware of their health insurance and most (95.5%) were covered by UC. Up to 45% had a chronic illness. Almost half (49.3%) thought their health status was better than other people in the same age groups. However, 68.6% thought they had worsening health than the previous year (Figure 1). The average number of members in each household was 4.2 (standard deviation-SD 1.5). Most of them (85.9%) completed a primary school education. Majority of occupations was agriculture or farming (61.5%). More than half (59.9%) worked on their own property.

For economic status, the median household monthly expense was 6,528 Baht (USD 192, exchange rate 34 Baht) (interquartile range –IQR 4,945), whereas the median income was 5,575 Baht (IQR 6,575). Nearly all households (99.0%) were built with galvanized iron roofing, tiles, and dried leaves. More than three quarters (77.3%) were indebted and 88.5% were carrying economic burdens for their households. Almost three quarters (71.4%) were borrowing money from others (Med 70,000 Baht; IQR 80,000) during the last 12 months. Less than half (39.1%) owned savings accounts, and the most popular way of saving (54.6%) was through banks or cooperatives. Their savings patterns were inconsistent (71.4%) with the median savings per month per household was as low as 360 Baht (IQR 972.5). Almost three quarters (72.4%) were in worsening financial state as compared to the previous year, with a decrease in agricultural income (70.9%) as the major cause. Among these households, 55.6% had no idea what their financial status would be like in the next year (Table 1).

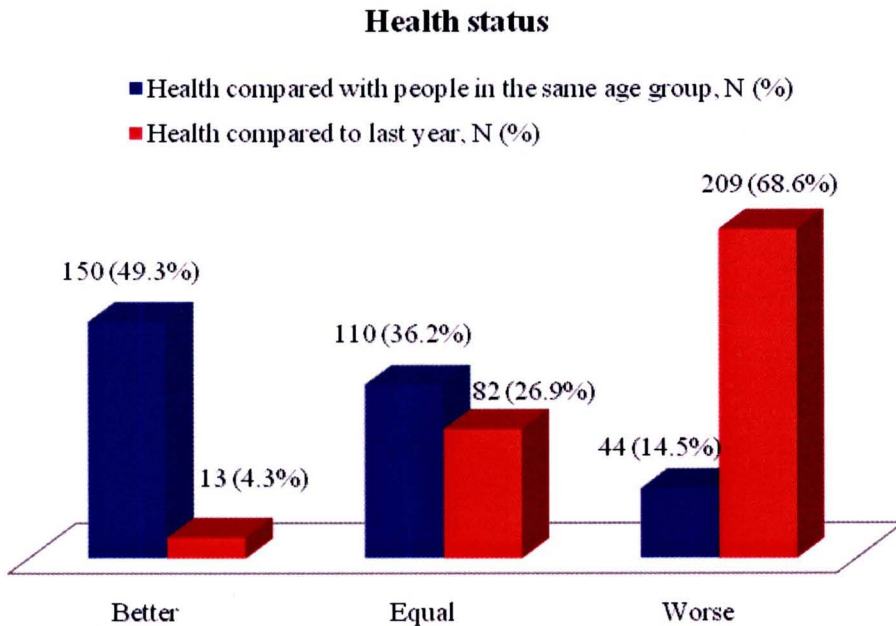


Figure 1 Health status

Table 1 Baseline characteristics and socioeconomic profiles

| Variables | Results |
|------------------------------|-------------|
| Sex, N (%) | |
| Male | 61 (20.1) |
| Female | 243 (79.9) |
| Age [Mean (SD)] | 53.7 (11.7) |
| Marital Status, N (%) | |
| Single | 14 (4.6) |
| Divorced | 47 (15.5) |
| Married | 243 (79.9) |
| Insured status known, N (%) | |
| Known | 302 (99.3) |
| Unknown | 2 (0.7) |
| Insurance, N (%) | |
| No insurance | 2 (0.7) |
| CS | 6 (2.0) |
| SS | 6 (2.0) |
| UC | 288 (95.5) |
| Chronic disease, N (%) | |
| Unknown | 24 (7.9) |
| Did not have chronic disease | 143 (47.0) |
| Had chronic disease | 137 (45.0) |
| - Diabetes | 42 (30.7) |
| - Hypertension | 38 (27.7) |
| - Gastric ulcer | 33 (24.1) |
| - Others | 24 (17.5) |

Table 1 Baseline characteristics and socioeconomic profiles (Cont.)

| Variables | Results |
|-------------------------------------|------------|
| Number of household members, N (%) | |
| 1 | 5 (1.6) |
| 2 | 38 (12.5) |
| 3 | 44 (14.5) |
| 4 | 100 (32.9) |
| 5 | 64 (21.1) |
| 6 | 33 (10.9) |
| ≥ 7 | 20 (6.6) |
| Average [Mean (SD)] | 4.2 (1.5) |
| Level of Education completed, N (%) | |
| No education | 6 (1.9) |
| Kindergarten | 5 (1.6) |
| Primary school | 261 (85.9) |
| Secondary school | 15 (4.9) |
| High school | 15 (4.6) |
| Vocational certificate | 1 (0.3) |
| High vocational certificate | 1 (0.3) |
| Higher college certificate | 1 (0.3) |
| Bachelor' s Degree | 0 (0.0) |

Table 1 Baseline characteristics and socioeconomic profiles (Cont.)

| Variables | Results |
|---|-----------------|
| Occupation, N (%) | |
| Unemployed | 12 (3.9) |
| Maid | 16 (5.3) |
| Vendor (mobile stall) | 8 (2.6) |
| Vendor (small stall) | 18 (5.9) |
| Merchant (store) | 6 (1.9) |
| Tuk-tuk driver | 5 (1.6) |
| Foreman | 13 (4.3) |
| On-call worker | 34 (11.2) |
| Agricultural worker/farmer | 187 (61.5) |
| Security guard | 1 (0.3) |
| Temporary employee | 1 (0.3) |
| Permanent employee | 1 (0.3) |
| Others | 2 (0.7) |
| Income/month/household, (Baht) [Med (IQR)] | |
| Income | 5,575 (6,575) |
| Expense/month/household, (Baht) [Med (IQR)] | |
| Food Education /drinks/tobacco | 2,600 (1,500) |
| Education | 900 (1,975) |
| Clothes/Jewelry/Cosmetics | 200 (200) |
| Household products | 300 (200) |
| Charity of donations | 500 (200) |
| Entertainment/reading/religion activities | 30 100) |
| Fuel/transportation | (355 (200) |
| Electricity/water/telephone | 219 (300) |
| Total | 6,527.5 (4,945) |



Table 1 Baseline characteristics and socioeconomic profiles (Cont.)

| Variables | Results |
|--|----------------------|
| Currently indebted, N (%) | 235 (77.3) |
| Feeling the debt burden (n = 235), N (%) | |
| None | 3 (1.3) |
| Mild | 3 (1.3) |
| Moderate | 21 (8.9) |
| Strong | 208 (88.5) |
| Borrowing (prior 12 months), N (%) | 214 (71.4) |
| From 1 source | 152 (70.1) |
| From 2 sources | 65 (29.9) |
| Amount [Med (IQR)] | Baht 70,000 (80,000) |
| Having savings, N (%) | 119 (39.1) |
| Saving methods (n = 119), N (%) | |
| Informal funds | 1 (0.8) |
| Bank/cooperatives | 65 (54.6) |
| Holding cash | 38 (31.9) |
| Others | 16 (13.5) |
| Saving patterns (n = 119), N (%) | |
| Constant | 30 (25.2) |
| Likely to increase | 3 (2.5) |
| Likely to decrease | 1 (0.8) |
| Inconsistent | 85 (71.4) |
| Amount/month [Med (IQR)] | Baht 360 (972.5) |

4.2 Health and medication profiles during pharmacy visits

Majority of those visiting the pharmacy with fevers/headaches (51.7%), skinsymptoms (58.3%), and joint/back/musculoskeletal pain (47.5%) did not have any chronic disease. For those with throat/nose symptoms, there was the same percentage of those with (46.8%) and those without (46.8%) the chronic disease. Most of those who had gastrointestinal tract symptoms had a chronic disease (63.9%), 41.0% had diabetes and 10.3% had hypertension. Up to 41.0% of people suffering from gastrointestinal tract symptoms had gastric ulcers.

Medication initiated by the pharmacy most frequently were indicated for fever/ headaches (68.3%), joint/back/musculoskeletal pain (65.6%), throat/nose symptoms (64.5%), and skin symptoms (63.3%), whereas the common self-requested medication were for gastrointestinal tract symptoms (75.4%). Doctor's prescription brought to the pharmacy were not found, except for gastrointestinal tract symptoms (1.6%). Beyond this, self-requested medication later switched to pharmacist-initiated medication was not found for skin and gastrointestinal symptoms. This was rarely found for joint/back/musculoskeletal pain symptoms (3.3%), fever/headaches symptoms (1.7%), and throat/nose symptoms (1.6%).

Most of those who visited the pharmacies on their own did so for fevers/headaches (98.3%), gastrointestinal tract symptoms (93.4%), skin symptoms (93.3%), throat/nose symptoms (91.9%), and joint/back/musculoskeletal pain (90.2%). Nevertheless, those who bought medication for their family members did so for gastrointestinal tract symptoms (9.8%), followed by throat/nose symptoms (8.1%), skin symptoms (6.7%), gastrointestinal tract symptoms (6.6%), and fevers/headaches (1.7%).

The symptoms causing the most visits within a day of onset were gastrointestinal tract symptoms (70.5%) followed by fever/headache (45.0%). Symptoms that caused people to visit a pharmacy longer than two days after the onset were skin symptoms (68.3%), joint/back/musculoskeletal pain (63.9%), and throat/nose symptoms (45.2%).

Majority had not been treated before the pharmacy visits. These included fevers/headaches symptoms 75.0%, throat/nose symptoms 66.1%, skin symptoms 68.3%, joint/back/musculoskeletal pain symptoms 63.9%, and gastrointestinal tract

symptoms 54.1%. However, 18.3% of the poor households suffering from fever/headache took medication at home. The second most often used treatment before the visits was self-medication bought from pharmacies (9.7%, 11.7%, 14.8% and 39.3% respectively). However, the least often used treatment for all symptoms before the visits was medications bought from grocery stores and traditional/herbal medicine store. Medical treatment at government facilities showed that the fever/headaches symptoms did not go to primary care unit; this was rather the least often used treatment for throat/nose symptoms (8.1%), skin symptoms (1.7%), joint/back/musculoskeletal pain (1.6%), and gastrointestinal tract symptoms (1.6%). Treatment was not sought at general/regional/university hospitals for skin symptoms. This was the least often used treatment for fevers/headaches (1.7%), throat/nose symptoms (1.6%), joint/back/musculoskeletal pain (4.9%), and gastrointestinal tract symptoms (3.3%). However, the least often used treatment before the visits was treatment at district hospitals or others (fevers/headaches symptoms 0.0%, throat /nose symptoms 1.6%, skin symptoms 0.0%, joint/back/musculoskeletal pain 1.6%, and gastrointestinal tract symptoms 1.6%). Only skin symptoms (1.7%) and joint/back/musculoskeletal pain (1.6%) were treated at private medical clinics.

Many poor households when using a community pharmacy had not been referred to a hospital because the symptoms were considered not so serious (fevers/headaches symptoms 98.3%, throat/nose symptoms 95.2%, skin symptoms 100%, joint/back/musculoskeletal pain 100%, and gastrointestinal tract symptoms 98.4%). Upon the treatments, fevers/headaches and skin issues were the symptoms that mostly got medicines according to the standard treatment protocols (71.7% and 56.7% respectively). On a contrary, the treatment for throat/nose symptoms, joint/back/musculoskeletal pain, and gastrointestinal tract symptoms were mostly below standard treatments (62.9%, 86.9% and 93.4% respectively). Treatment above the standard was rarely received (Table 2).

Table 2 Health and medication profiles of those receiving services at a community pharmacy (n = 304)

| Health profiles | N (%) | | | | |
|--|----------------------|-------------------------|------------------|--|------------------------------------|
| | Fevers/ Headaches | Throat/Nose Symptoms | Skin Symptoms | Joint/back/ Musculoskeletal pain | Gastrointestinal tract Symptoms |
| Chronic disease | | | | | |
| Unknown | 5 (8.3) | 4 (6.5) | 6 (10.0) | 6 (9.8) | 3 (4.9) |
| Did not have chronic disease | 31 (51.7) | 29 (46.8) | 35 (58.3) | 29 (47.5) | 19 (31.2) |
| Had chronic disease | 24 (40.0) | 29 (46.8) | 19 (31.7) | 26 (42.6) | 39 (63.9) |
| Diabetes | 9 (37.5) | 4 (13.8) | 5 (26.3) | 8 (30.8) | 16 (41.0) |
| Hypertension | 10 (41.7) | 15 (51.7) | 5 (26.3) | 4 (15.4) | 4 (10.3) |
| Gastric ulcer | 2 (8.3) | 3 (10.3) | 6 (31.6) | 6 (23.1) | 16 (41.0) |
| Others | 3 (12.5) | 7 (24.1) | 3 (15.8) | 8 (30.8) | 3 (7.7) |
| Type of service | | | | | |
| Self-requested medication | 18 (30.0) | 21 (33.9) | 22 (36.7) | 19 (31.2) | 46 (75.4) |
| Self-requested later changed to pharmacist- initiated medication | 1 (1.7) | 1 (1.6) | 0 (0.0) | 2 (3.3) | 0 (0.0) |
| pharmacist-initiated medication | 41 (68.3) | 40 (64.5) | 38 (63.3) | 40 (65.6) | 14 (22.9) |
| Doctor's prescription brought to pharmacy | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 1 (1.6) |
| Community pharmacy visitation | | | | | |
| Visited by oneself | 59 (98.3) | 57 (91.9) | 56 (93.3) | 55 (90.2) | 57 (93.4) |
| Visited by person buying medication for family member | 1 (1.7) | 5 (8.1) | 4 (6.7) | 6 (9.8) | 4 (6.6) |
| Duration of illness before visiting community pharmacy | | | | | |
| 1 day | 27 (45.0) | 10 (16.1) | 12 (20.0) | 6 (9.8) | 43 (70.5) |
| 2 days | 27 (45.0) | 24 (38.7) | 7 (11.7) | 16 (26.2) | 3 (4.9) |
| > 2 days | 6 (10.0) | 28 (45.2) | 41 (68.3) | 39 (63.9) | 15 (24.6) |
| Treatment before visiting community pharmacy | | | | | |
| None | 45 (75.0) | 41 (66.1) | 41 (68.3) | 39 (63.9) | 33 (54.1) |
| Medicine found at home | 11 (18.3) | 4 (6.5) | 1 (1.7) | 1 (1.6) | 0 (0.0) |
| Medicine from drug store | 2 (3.3) | 6 (9.7) | 7 (11.7) | 9 (14.8) | 24 (39.3) |
| Medicine from grocery store | 1 (1.7) | 3 (4.8) | 0 (0.0) | 1 (1.6) | 0 (0.0) |
| Traditional/herbal | 0 (0.0) | 1 (1.6) | 9 (15.0) | 1 (1.6) | 0 (0.0) |
| Primary care unit | 0 (0.0) | 5 (8.1) | 1 (1.7) | 1 (1.6) | 1 (1.6) |
| General/Regional/University hospital | 1 (1.7) | 1 (1.6) | 0 (0.0) | 3 (4.9) | 2 (3.3) |

Table 2 Health and medication profiles of those receiving services at a community pharmacy (n = 304) (Cont.)

| Health profiles | N (%) | | | | |
|---------------------------------|------------------|----------------------|---------------|---------------------------------|---------------------------------|
| | Fevers/Headaches | Throat/Nose Symptoms | Skin Symptoms | Joint/back/Musculoskeletal pain | Gastrointestinal tract Symptoms |
| Clinic | 0 (0.0) | 0 (0.0) | 1 (1.7) | 5 (8.2) | 0 (0.0) |
| District hospital and others | 0 (0.0) | 1 (1.6) | 0 (0.0) | 1 (1.6) | 1 (1.6) |
| Referral status | | | | | |
| Not referred | 59 (98.3) | 59 (95.2) | 60 (100.0) | 61 (100.0) | 60 (98.4) |
| Referred | 1 (1.7) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) |
| Referred but rejected | 0 (0.0) | 3 (4.8) | 0 (0.0) | 0 (0.0) | 1 (1.6) |
| Standard treatment level | | | | | |
| Standard treatment | 43 (71.7) | 22 (35.5) | 34 (56.7) | 8 (13.1) | 4 (6.6) |
| Lower than standard treatment | 16 (26.7) | 39 (62.9) | 25 (41.7) | 53 (86.9) | 57 (93.4) |
| Higher than standard treatment | 1 (1.6) | 1 (1.6) | 1 (1.6) | 0 (0.0) | 0 (0.0) |

4.3 Illness experience and health utilization prior to pharmacy visits

An average number of services within a month prior to pharmacy visits was once a month. Majority (89.8%) of those who did not seek care from health facilities had a prior visit once. Most of those who did not seek care from health facilities had joint and musculoskeletal symptoms (38.7%), respiratory tract symptoms (26.3%), other symptoms (fever, headache, itching) (25.6%), and gastrointestinal tract symptoms (9.5%). Most poor households (67.2%) did not stop their regular works, but whereas 39.2% did, usually taking one day off (35.6%). Most of them (83.9%) received medical treatment, of which 76.5% did not go to a government hospital (Table 3).

The main reasons for not choosing a government hospital were minor sickness (74.7%) and long waiting time (53.3%). The treatment chosen included self-medication (77.3%) with a median expense of 20 Baht (IQR 33.8), followed by private clinic visits (17.1%) with a median expense of 260 Baht (IQR 100) (Table 4).

For those who received services at government hospitals (23.5%), they went to a primary health care unit (48.2%) or to a general /regional/university hospital

(44.4%). All of them (100 %) who received service at a government hospital did not pay out-of-pocket for treatment, because were covered by the UC scheme and used a gold (health insurance) card. The median of expenditures for round trip transportation from house to the hospital was 20 Baht (IQR 40 Baht) (Table 5).

Approximately 16% of the households did not receive medical treatment. The main reason was financial problem (36.4%). The remaining 63.6% was having no time to buy medicinal drugs or herbs (57.1%) and other reasons, such as feeling minor sickness (42.9%) (Table 6).

The majority (90.8%) had not been admitted to hospitals in 12 months prior to the pharmacy visit. For those who have been hospitalized, the average number of admissions was one time. Most of them (82.1%) went to a general, regional, or university hospital, whereas 17.9% went to a district hospital. The average length of stay was 2.2 days (SD 0.8). Nobody had to pay out-of-pocket for the care received because they were covered by UC scheme. The median expense for a round-trip transportation to the hospitals was 60 Baht (IQR 200) (Table 7).

Table 3 Illness experiences and the use of health services prior to pharmacy visits

| Variables | Results |
|---|------------|
| Received service at a community pharmacy within one month prior to this pharmacy visit (n = 304), N (%) | |
| None | 134 (44.1) |
| 1-15 times | 170 (55.9) |
| Average [Mean (SD)] | 1 (0) |
| Suffered illness but did not seek care from health facility, N (%) | |
| 137 (45.1%) | |
| Number of times illness was suffered but care was not sought from health facility (n = 137), N (%) | |
| 1 time | 123 (89.8) |
| ≥ 2 times | 14 (10.2) |
| Average [Mean (SD)] | 2 (0) |

Table 3 Illness experiences and the use of health services prior to pharmacy visits (Cont.)

| Variables | Results |
|---|------------|
| Symptoms who suffered an illness (n = 137), N (%) | |
| Respiratory tract | 36 (26.3) |
| Gastrointestinal tract | 13 (9.5) |
| Musculoskeletal and joint | 53 (38.7) |
| Other | 35 (25.6) |
| Work routine (n = 137), N (%) | |
| Stopped work routine | 45 (32.9) |
| 1 day | 16 (35.6) |
| 2 days | 14 (31.1) |
| ≥ 3 days | 15 (33.3) |
| Average days off [Mean (SD)] | |
| Did not stop | 92 (67.2) |
| Medical treatment (n = 137), N (%) | |
| Yes | 115 (83.9) |
| No | 22 (16.1) |
| Details of medical treatment (n = 115), N (%) | |
| Government hospital | 27 (23.5) |
| Non-government hospital | 88 (76.5) |



Table 4 Recent illness experience and medical expense at non-government hospital
(N = 88)

| Variables | Results |
|--|-------------|
| Reasons for not going to government hospital, N (%) | |
| Minor sickness | 56 (74.7) |
| Long waiting time | 40 (53.3) |
| Method of treatment if they did not go to government hospital, N (%) | |
| Self-medication | 68 (77.3) |
| Average (Baht) [Mean (SD)] | 27.1 (20.9) |
| Median (Baht) [Med (IQR)] | 20 (33.8) |
| Traditional medicine | 2 (2.3) |
| Average (Baht) [Mean (SD)] | 0 (0) |
| Private clinic | 15 (17.1) |
| Average (Baht) [Mean (SD)] | 318 (212.2) |
| Median (Baht) [Med (IQR)] | 260 (100) |
| Other | 4 (4.6) |

Table 5 Recent illness experience and medical expense at the government facilities
(N = 27)

| Variables | Results, N (%) |
|--|----------------|
| Those treated at government facilities | |
| Primary care unit | 13 (48.2) |
| District hospital | 2 (7.4) |
| General/Regional/University hospital | 12 (44.4) |
| Paid out-of-pocket for government services | |
| No | 27 (100) |
| Reasons for not paying out-of-pocket | |
| Covered by UC (Gold card) | 25 (92.6) |
| Other | 2 (7.4) |
| Round trip transportation to government facility | |
| Average (Baht) [Mean (SD)] | 27 (47.9) |
| Median (Baht) [Med (IQR)] | 20 (40) |

Table 6 Recent Illness experience without any medical treatment

| Variables | Results |
|---|-----------|
| Did not get medical treatment due to financial problem (n =22), N (%) | |
| Yes | 8 (36.4) |
| No | 14 (63.6) |
| Other reasons for not getting medical treatment (n =14), N (%) | |
| No time to buy drugs or herbs | 8 (57.1) |
| Other (minor sickness) | 6 (42.9) |

Table 7 Recent hospital admissions in 12 months prior to the pharmacy visits (N = 304)

| Variables | Results |
|---|---------------|
| Prior of 12 months prior to pharmacy visit, N (%) | |
| Admitted | 28 (9.2) |
| Not admitted | 276 (90.8) |
| Number of times admitted to hospital for illness, N (%) | |
| 1 time | 22 (78.6) |
| 2 times | 3 (10.7) |
| 3 times | 3 (10.7) |
| Last facility admitted to, N (%) | |
| District hospital | 5 (17.9) |
| General/Regional/University hospital | 23 (82.1) |
| Length of stay when admitted, N (%) | |
| 1 day | 6 (21.4) |
| 2 days | 11 (39.3) |
| ≥ 3 days | 11 (39.3) |
| Average (day) [Mean (SD)] | 2.2 (0.8) |
| Median (day) [Med (IQR)] | 2 (1) |
| Round trip transportation, N (%) | |
| Average (Baht) [Mean (SD)] | 149.6 (291.5) |
| Median (Baht) [Med (IQR)] | 60 (200) |
| Paid out-of-pocket for treatment when admitted, N (%) | |
| Didn't pay out-of-pocket | 28 (100) |
| Reasons for not paying out-of-pocket, N (%) | |
| Covered by UC (Gold card) | 28 (100) |

4.4 Out-of-pocket payments, standard medical treatment and ability to pay for services

The median (IQR) out-of-pocket payments for drugs for fevers/headaches, throat/nose symptoms, skin symptoms, joint/back/musculoskeletal pain and gastrointestinal tract symptoms were Baht 25.0 (37.0), 39.0 (30.5), 40.0 (30.0), 30.0 (20.0) and 30.0 (15.0), respectively. The median (IQR) standard treatment expenditure for these symptoms were Baht 30.0 (50.0), 25.0 (37.0), 35.0 (20.0), 60.0 (15.0) and 170.0 (0.0), respectively. The expenditures for the standard treatments were higher than the actual payments in every symptom, except for the throat/nose and skin symptoms. People with gastrointestinal tract symptoms paid for the medications according to the standard at the price of 170.0 Baht (IQR 0.0), followed by those with joint/back/musculoskeletal pain ([Median (IQR); 60.0 (15.0)]. The median of the maximum ability to pay for standard treatment for every symptom was 100 Bath (Figure 2 and Table 8). Those who were not able to pay for the standard treatment mostly suffered from gastrointestinal tract symptoms (63.6%), followed by throat/nose symptoms (25.5%), and fever/headache (13.8%) (Figure 3 and Table8). The highest gap between the ability to pay and the standard treatment cost was equal to the median of 81.0 Baht (IQR 51.0), for gastrointestinal tract symptoms (Table 8).

Most of the poor households could afford up to twice the amount of money expected to treat their illnesses (fever/headache 86.2%, throat/nose symptoms 87.3%, skin symptoms 88.7%, joint/back/musculoskeletal pain 87.3% and gastrointestinal tract symptoms 94.6%). The expense bid up to twice the amount of money expected for the treatment was highest for throat/nose symptoms (mean 79.2 Baht, SD 42.8), followed by skin symptoms at 73.8 Baht (SD 43.8), fever/headaches at 68.9 Baht (46.9), joint/back/musculoskeletal pain at 66.0 Baht (26.7), and gastrointestinal tract symptoms at 60.7 Baht (37.6). When the payment bid went up to four times of the expected amount, nearly half of those with fevers/headaches, throat/nose symptoms and skin symptoms could afford (48.0%, 47.9%, and 48.9% respectively). For the remaining groups, joint/back/musculoskeletal pain was accounted by 56.3% and gastrointestinal tract symptoms were 57.7%. The mean payment bidding up to four times the amount of money expected to treat the illness was highest for throat/nose symptoms at 133.6 Baht (SD 94.5), then joint/back musculoskeletal pain at 119.9

Baht (50.2), skin symptoms at 114.2 Baht (SD 83.0), gastrointestinal tract symptoms at 105.3 Baht (80.9), and fevers/headaches at 93.2 Baht (64.4) (Table 9).

When asked about coping strategies, most of those seeking external funding turned to their relatives for financial help (fevers/headaches 70.9%, throat/nose symptoms 65.5 %, skin symptoms 43.4%, joint/musculoskeletal/back pain 54.6%, and gastrointestinal tract symptoms 61.8%); another solution was not buying drugs and going to hospitals instead (Table 9)

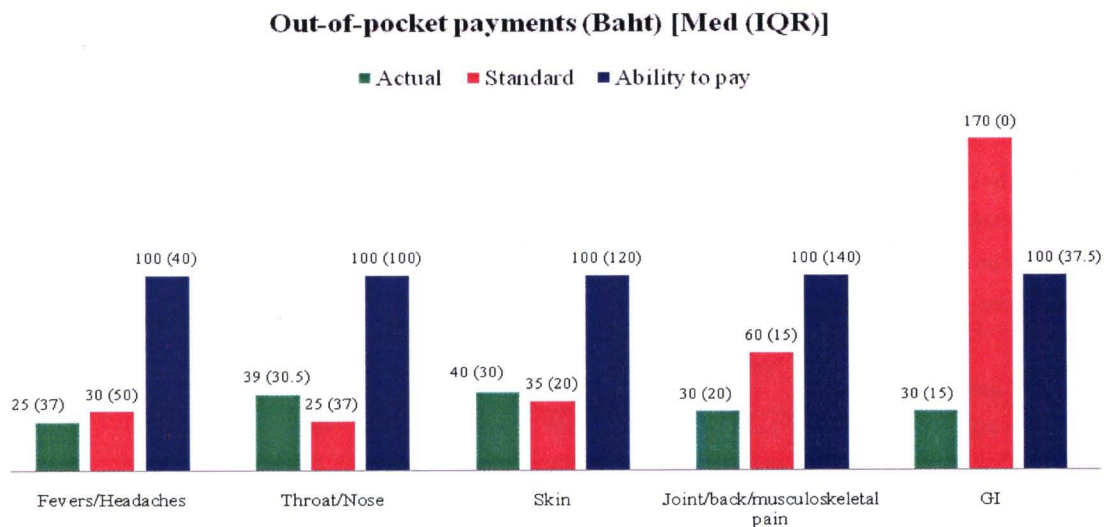


Figure 2 Out-of-pocket payments, standard medical treatment and ability to pay for services

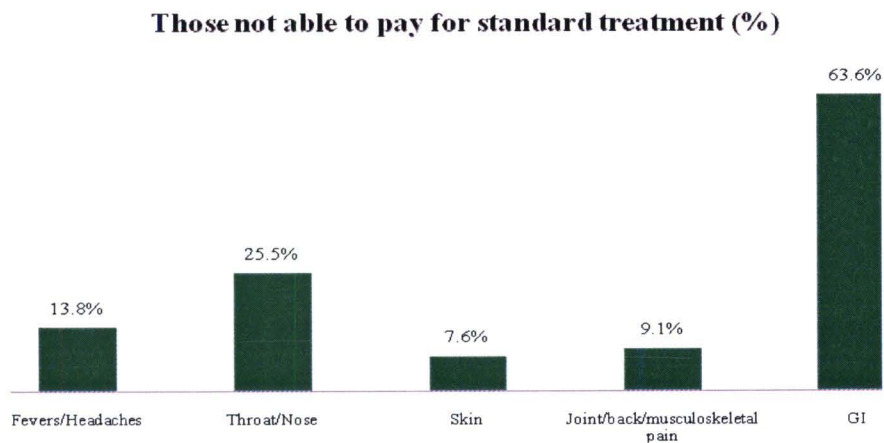


Figure 3 Those not able to pay for standard treatment (%)



Table 8 Out-of-pocket payments, standard medical treatment and ability to pay for services

| Groups of symptoms | Out-of-pocket payments | | | | | | Those not able to pay for standard treatment (%) | Gap between ability to pay and standard treatment | |
|--|------------------------|--------------|--------------------|----------------|------------------|---------------|--|---|-----------------|
| | Actual payment | | Standard treatment | | Ability to pay | | | Mean (SD) | Med (IQR) |
| | Mean (SD) | Med (IQR) | Mean (SD) | Med (IQR) | Mean (SD) | Med (IQR) | | | |
| | | | | | | | | | |
| Fevers/Headaches (N = 60) | 33.9 (23.3) | 25 (37) | 46.8 (38.6) | 30.0 (50.0) | 139.1 (168.5) | 100 (40) | 13.8 | -54.6 (41.8) | -48.0 (33.3) |
| Throat/nose symptoms (N = 62) | 37.9 (21.6) | 39 (30.5) | 65.6 (42.8) | 25.0 (37.0) | 175.3 (202.9) | 100 (100) | 25.5 | -31.6 (29.5) | -16.5 (52.5) |
| Skin symptoms (N = 60) | 37.4 (21.3) | 40 (30) | 46.8 (31.2) | 35.0 (20.0) | 177.8 (286.1) | 100 (120) | 7.6 | -53.8 (30.9) | -57.5 (56.3) |
| Joint/back/musculoskeletal pain (N = 61) | 32.4 (12.9) | 30 (20) | 54.3 (17.5) | 60.0 (15.0) | 144.7 (119.5) | 100 (140) | 9.1 | -19.8 (6.1) | -20.0 (10.5) |
| Gastrointestinal tract symptoms (N = 61) | 31.4 (20.3) | 30 (15) | 142.5 (55.7) | 170.0 (0.0) | 133.7 (159.7) | 100 (37.5) | 63.6 | -92.9 (29.4) | -81 (51.0) |

Table 9 Ability to pay for treatment and coping strategies for solving drug cost burden

*Number of samples in each group: Fevers/headaches=58, Nose/throat symptoms= 55, Skin symptoms=53, Joint/musculoskeletal/back pain=55, and Gastrointestinal tract symptoms = 55

| | N (%) | | | | |
|---|-----------------------|------------------------------|-------------------|---|--|
| | Fevers/ headaches* | Throat/ nose symptoms* | Skin symptoms* | Joint/ musculoskeletal/back pain* | Gastrointestinal tract symptoms* |
| Ability to pay for treatment of illness | | | | | |
| Able to pay twice the expected amount | 50 (86.2) | 48 (87.3) | 47 (88.7) | 48 (87.3) | 52 (94.6) |
| Mean (SD), Baht | 68.9 (46.9) | 79.2 (42.8) | 73.8 (43.8) | 66.0 (26.7) | 60.7 (37.6) |
| Able to pay 4 times the expected amount | 24 (48.0) | 23 (47.9) | 23 (48.9) | 27 (56.3) | 30 (57.7) |
| Mean (SD), Baht | 93.2 (64.4) | 133.6 (94.5) | 114.3 (83.0) | 119.9 (50.2) | 105.3 (80.9) |
| Unable to pay twice but able to pay 1.5 times the expected amount | 0 (0.0) | 2 (28.6) | 0 (0.0) | 1 (14.3) | 1 (33.3) |
| Coping strategies for solving drug cost burden [N (%)] | | | | | |
| 1. Took loans with interest | 7 (12.1) | 11 (20.0) | 8 (15.1) | 19 (34.6) | 11 (20.0) |
| 2. Got loans from relatives or other interest-free | 41 (70.9) | 36 (65.5) | 23 (43.4) | 30 (54.6) | 34 (61.8) |
| 3. Sold household possessions | 2 (3.5) | 1 (1.8) | 7 (13.2) | 3 (5.5) | 6 (0.9) |
| 4. Sold property | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) |
| 5. Others (Not buying drugs and going to a hospital) | 10 (17.2) | 12 (21.8) | 18 (33.9) | 10 (18.2) | 7 (12.7) |

4.5 Impact of out-of-pocket payment and standard medical treatment

When the impact of out-of-pocket payment for the standard treatment was greater than the impact of actual payment, both daily consumption/living and personal savings were affected (Figure 4). If the standard treatments were paid out of pocket, people would rely on household savings (63.5%), whereas (54.6%) were unable to save. The second largest impact was on daily consumption and living (35.2%), of which 32.2% would decrease the regular consumption and 8.2% skipped meals. Approximately 33.2% had no impact. Approximately one-fifth (21.7%) had to seek external funding, of which 20.4% was obtained from relatives and others interest-free loans. Regarding the actual payment, majority (62.2%) were not affected; whereby savings reduction was 35.9% and reduced daily consumption and living was 15.1% (details shown in Table 10).

By groups of the symptoms, the impacts of out-of-pocket payments for standard medical treatment affected the daily consumption and living and savings more than the actual visitation. This means that the out-of-pocket payments for the standard treatment would have more impact than the actual payment for all groups of symptoms. Nevertheless, actual payment during the visits had no impacts more often than out-of-pocket payment for the standard treatment.

Regarding savings, the most affected group was gastrointestinal tract symptoms (80.3%), followed by throat/nose symptoms (62.9%), joint/back/musculoskeletal pain (62.3%), skin symptoms (56.7%) and fevers/headaches (55.0%). The impact on savings was mostly an inability to save due to gastrointestinal tract symptoms (67.2%), then throat/nose symptoms (54.8%), fevers/headaches (53.3%), joint/back/musculoskeletal pain (50.8%), and skin symptom (46.7%).

Regarding out-of-pocket payments for standard medical treatment, the effects on daily life were less than the impact on savings. The group of symptoms with the most impact was gastrointestinal tract symptoms (62.3%), then joint/back/musculoskeletal pain (39.3%), throat/nose symptoms (35.5%), and fevers/headaches (20.0%). The group of symptoms with least impact on daily life, if paying out-of-pocket for standard medical treatment, was the skin symptoms (18.3%). Decreased consumption had the greatest effect on daily life (gastrointestinal tract symptoms 55.7%, joint/musculoskeletal/back pain 37.7%, throat/nose symptoms 32.3%, skin symptoms 18.3%, and fevers/headaches

16.7%), then skipping meals (gastrointestinal tract symptoms 16.4%, throat/nose symptoms 9.7%, joint/back /musculoskeletal pain 6.6%, fevers/headaches 6.7% and skin symptoms 1.7%).

If the households had to pay for the standard medical treatment, all groups of symptoms showed a minimal impact except for the gastrointestinal symptoms, of which 55.7% saying an impact on savings and on daily lives. The most common coping strategy if ones need to pay for the standard treatment was seeking external funding from relatives or other people interest-free. The symptoms for which this method was used the most was the gastrointestinal tract symptoms (50.8%), followed by throat/nose symptoms 20.9%, joint/back/musculoskeletal pain 14.8%, fevers/headaches 10.0% and skin symptoms 5.0% (Table 11).

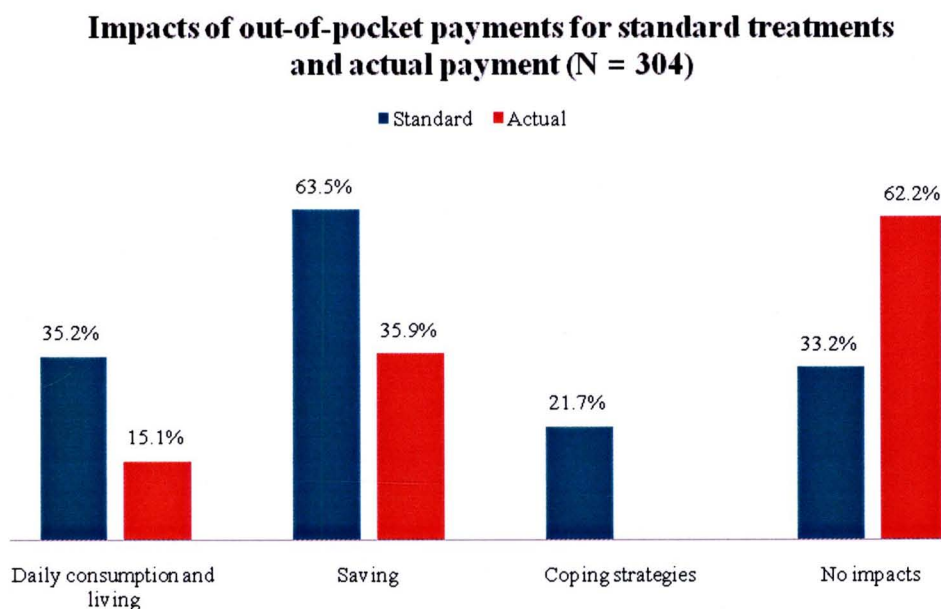


Figure 4 Impacts of out-of-pocket payments for standard treatments and actual payment

Table 10 Impacts of out-of-pocket payments for standard treatments and actual payment (n = 304)

| Impact | [N (%)] | |
|---|-----------------------------------|-------------------------------|
| | Standard treatment ^(a) | Actual payment ^(b) |
| 1. Daily consumption and living | 107 (35.2) | 46 (15.1) |
| 1.1 Decreased consumption | 98 (32.2) | 44 (14.5) |
| 1.2 Dropped out from school | 2 (0.7) | 1 (0.3) |
| 1.3 Skipped meals | 25 (8.2) | 6 (1.9) |
| 2. Saving | 193 (63.5) | 109 (35.9) |
| 2.1 Decreased savings | 72 (23.7) | 93 (30.6) |
| 2.2 Unable to save | 166 (54.6) | 84 (27.6) |
| 3. Coping strategies | 66 (21.7) | N/A* |
| 3.1 Took loans with interest | 11 (3.6) | N/A* |
| 3.2 Got loans from relatives or other interest-free | 62 (20.4) | N/A* |
| 3.3 Sold household possessions | 8 (2.6) | N/A* |
| 3.4 Sold property | 0 (0.0) | N/A* |
| 4. No impacts | 101 (33.2) | 189 (62.2) |

^a more than one answer was possible

^b more than one answer was possible

*N/A = not applicable

Table 11 Comparison of impact of out-of-pocket payment for standard medical treatment and for actual payment by groups of symptoms (n = 304)

*Number of samples in each group: Fevers/headaches=60, Throat/nose symptoms = 62, Skin symptoms=60, Joint/musculoskeletal/back pain=61, and Gastrointestinal tract symptoms = 61

| Group of symptoms | [N (%)] | | | | | | | | | |
|---------------------------------|------------------|---------------------|----------------------|---------------------|------------------|---------------------|---------------------------------|---------------------|----------------------------------|---------------------|
| | Fevers/Headaches | | Throat/Nose Symptoms | | Skin symptoms | | Joint/Musculoskeletal/back pain | | Gastro-intestinal tract symptoms | |
| Impact | Std ^a | Actual ^b | Std ^a | Actual ^b | Std ^a | Actual ^b | Std ^a | Actual ^b | Std ^a | Actual ^b |
| 1. Daily consumption and living | 12 (20.0) | 5 (8.3) | 22 (35.5) | 9 (14.5) | 11 (18.3) | 9 (15.0) | 24 (39.3) | 12 (19.7) | 38 (62.3) | 11 (18.0) |
| 1.1 Decreased consumption | 10 (16.7) | 5 (8.3) | 20 (32.3) | 9 (14.5) | 11 (18.3) | 9 (15.0) | 23 (37.7) | 11 (18.0) | 34 (55.7) | 10 (16.4) |
| - Entertainment | 2 (3.3) | 0 (0.0) | 6 (9.7) | 4 (6.5) | 4 (6.7) | 2 (3.3) | 8 (13.1) | 4 (6.7) | 8 (13.1) | 3 (4.9) |
| - Gambling | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | (3.3) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) |
| - Clothing | 0 (0.0) | 0 (0.0) | 6 (9.7) | 3 (4.8) | 3 (5.0) | 0 (0.0) | 8 (13.1) | 5 (8.2) | 6 (9.8) | 3 (4.9) |
| - Education | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 1 (1.6) |
| - Facilities | 11 (18.3) | 5 (8.3) | 13 (20.9) | 6 (9.7) | 8 (13.3) | 7 (11.7) | 16 (26.2) | 6 (9.8) | 28 (45.9) | 5 (8.2) |
| - Others | 2 (3.3) | 1 (1.7) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 1 (1.6) | 3 (4.9) |
| 1.2 Dropped out from school | 0 (0.0) | 0 (0.0) | 1 (1.6) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 1 (1.6) | 1 (1.6) | 0 (0.0) |
| 1.3 Skipped meals | 4 (6.7) | 1 (1.7) | 6 (9.7) | 0 (0.0) | 1 (1.7) | 0 (0.0) | 4 (6.6) | 3 (4.9) | 10 (16.4) | 2 (3.3) |
| 2. Savings | 33 (55.0) | 22 (36.7) | 39 (62.9) | 26 (41.9) | 34 (56.7) | 27 (45.0) | 38 (62.3) | 17 (22.9) | 49 (80.3) | 17 (22.9) |
| 2.1 Decreased saving | 7 (11.7) | 17 (28.3) | 20 (32.3) | 25 (40.3) | 11 (18.3) | 22 (36.7) | 15 (24.6) | 14 (22.9) | 19 (31.2) | 15 (24.6) |

Table 11 Comparison of impact of out-of-pocket payment for standard medical treatment and for actual payment by groups of symptoms (n = 304) (cont.)

*Number of samples in each group: Fevers/headaches=60, Throat/nose symptoms=62, Skin symptoms = 60, Joint/musculoskeletal/back pain=61, and Gastrointestinal tract symptoms=61

| Group of symptoms | [N (%)] | | | | | | | | | |
|--|------------------|---------------------|----------------------|---------------------|------------------|---------------------|---------------------------------|---------------------|----------------------------------|---------------------|
| | Fevers/Headaches | | Throat/Nose Symptoms | | Skin symptoms | | Joint/Musculoskeletal/back pain | | Gastro-intestinal tract symptoms | |
| Impact | Std ^a | Actual ^b | Std ^a | Actual ^b | Std ^a | Actual ^b | Std ^a | Actual ^b | Std ^a | Actual ^b |
| 2.2 Unable to save | 32 (53.3) | 18 (30.0) | 34 (54.8) | 20 (32.3) | 28 (46.7) | 22 (36.7) | 31 (50.8) | 12 (19.7) | 41 (67.2) | 12 (19.7) |
| 3. Coping strategies | 6 (10.0) | N/A* | 14 (22.6) | N/A* | 3 (5.0) | N/A* | 9 (14.8) | N/A* | 34 (55.7) | N/A* |
| 3.1 Took loans with interest | 1 (1.7) | N/A* | 4 (6.5) | N/A* | 0 (0.0) | N/A* | 1 (1.6) | N/A* | 5 (8.2) | N/A* |
| 3.2 Got loans from relatives or others interest-free | 6 (10.0) | N/A* | 13 (20.9) | N/A* | 3 (5.0) | N/A* | 9 (14.8) | N/A* | 31 (50.8) | N/A* |
| 3.3 Sold household possessions or pets | 2 (3.3) | N/A* | 0 (0.0) | N/A* | 0 (0.0) | N/A* | 1 (1.6) | N/A* | 5 (8.2) | N/A* |
| 3.4 Sold property | 0 (0.0) | N/A* | 0 (0.0) | N/A* | 0 (0.0) | N/A* | 0 (0.0) | N/A* | 0 (0.0) | N/A* |
| 4. No impacts | 27 (45.0) | 28 (63.3) | 22 (35.5) | 34 (54.8) | 24 (40.0) | 32 (53.3) | 20 (32.8) | 43 (70.5) | 8 (13.1) | 42 (68.9) |

^aStd; Standard treatment (more than one answer was possible) ^bActual; actual payment (more than one answer was possible) *N/A; not applicable