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BASELINE SURVEY OF BASIC HEALTH SERVICE PACKAGE PAID BY HEALTH INSURANCE FUND AND SUB-PACKAGE ON CARE AND TREATMENT SERVICES FOR PEOPLE LIVING WITH HIV/AIDS

Hanoi, December 2016

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ABBREVIATIONS

VSS	Vietnam Social Security
MoH	Ministry of Health
HF	Health Facility
BHSP	Basic Health Service Package
HFG	Health and Finance Governance
HF	Health Facility
HIV	Human Immuno-deficiency Virus
HSPI	Health Strategy and Policy Institute, MoH
USAID	United States Agency for International Development
VAAC	Vietnam Administration of HIV/AIDS Control
WHO	World Health Organization

PART I: INTRODUCTION OF THE BASELINE SURVEY

I. BACKGROUND

The Resolution No. 68/2013 /QH13 on accelerating the implementation of policies and laws on health insurance, toward universal health insurance for the first time mentioned the term "Basic health service package" (BHSP). Paragraph 3, Article 2 of the Resolution No 68/2013/QH13 of the National Assembly has clearly stated that: "As before 2018, the definition of BHSP paid by social health insurance (SHI) should be completed in accordance with various premiums and socio-economic conditions; appropriate measures should be implemented to ensure the drug quality with good prices, to overcome unreasonable disparity in drug prices between provinces, to expand the model of family doctor participating in insurance healthcare as well as to improve regulations on referral in lines with health conditions". The Resolution has been passed by the 13th National Assembly of the Socialist Republic of Vietnam, Session 6 on 29 November 2013. As such, the roadmap to define the BHSP must be completed before 2018.

In 2014, the Law on Health Insurance No. 46/2014/QH13 dated 13 June 2014 of the National Assembly on the amendment and supplement of several articles of the Law on Health Insurance that came into effect since 01 January 2015 has regulated that the basic health service package paid by health insurance including essential health services which are suitable to the liability of the health insurance fund.

The Ministry of Health (MoH) is responsible to develop the BHSP paid by SHI fund. The MoH and stakeholders are to develop and issue a circular on the BHSP covered by the SHI fund in early 2018. The master plan on the development of the BHSP was approved by MoH in the Decision No. 1935/QD-BYT dated 22 May 2015 in which detailing three stages with specific activities in each stage toward the completion of the BHSP by December 2017 to be implemented in 2018 as regulated by the Law on Health Insurance (2014).

The development of BHSP, including sub-package for HIV/AIDS treatment and care for the people living with HIV/AIDS (PLWHA) not only meets the requirements of the Law on Health Insurance and other legislations under the current law, but also appropriate with the objective of the Universal Health Coverage ensuring the equality, efficiency and quality. The health care facilities at different levels will offer standardized services and provide a consistently cost-efficient level of care for all basic health services covered by health insurance under the BHSP. The SHI agency can be proactive in projecting the total expenditure for BHSP so that they can

balance revenues and expenditures of the SHI fund. People who are insured will know their benefits when they seek health examination and treatment services at health facilities. The BHSP is also fundamental for the health sector to develop the master plan for resource mobilization and financial allocation for health care services according to appropriate technical levels and professional areas.

II. NECESSITY OF THE SURVEY IMPLEMENTATION ON THE BHSP AND SUB-PACKAGE ON HIV/AIDS

MoH is currently tasked with proposing a basic health service package (BHSP) to be paid by SHI, meaning that the current benefit package is requested to revise to be basic and affordable by SHI fund. Without a clearly defined "benefit package" and appropriate medical guidelines, the providers are not in a position to offer standardized services and provide a consistently cost-efficient level of care. The need for a SHI-paid BSHP has been also expressly recognized in the newly amended Law on Health Insurance and MoH recently mentioned the introduction of the "benefit package" as a way to rationalize the supply of health services while maintaining or improving the affordability and the quality of care provided to the insured population. Critically, in addition to the clear need for a comprehensive health insurance BHSP, there is now a unique opportunity for the development and the inclusion of a HIV-specific cluster of services to be added in the BHSP and provided to people living with HIV/AIDS (PLWHA) and covered by SHI. Without timely participation to the discussions and decision points around the SHI-paid BHSP, it will be overly difficult and inefficient to address the needs of PLWHA at a later stage, especially if a standard package will be approved without explicit coverage for HIV-related conditions.

MoH underscored the importance of defining a BHSP and criteria to selected pilot provinces. Article 2 in the Resolution No. 68 stipulated that, prior to 2018, the development of the BHSP paid by SHI fund must be completed in balance with premium rates and socio-economic conditions of Vietnam. HFG Vietnam has designed its activities to follow the three phases identified in the Government of Vietnam (GoV) Road Map for updating the SHI Benefit Package as presented in **Figure 1**.

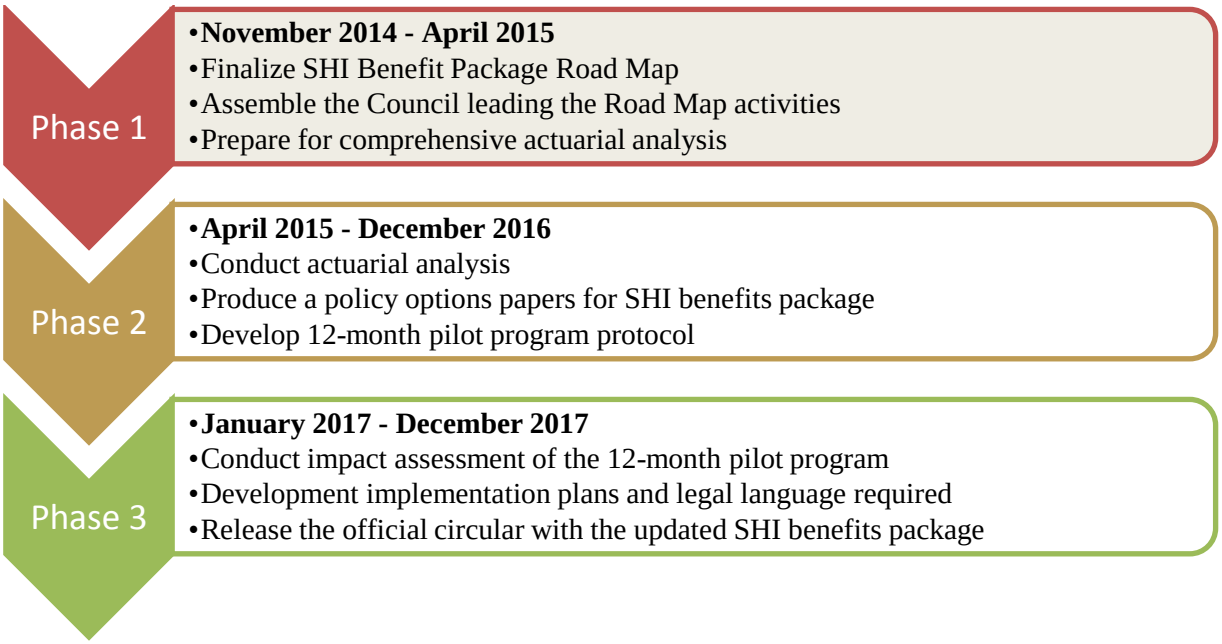
Health Finance and Governance (HFG) Vietnam is well-positioned to provide technical advice to the MoH and the Vietnam Social Security (VSS), having helped support the GoV through understanding the tasks required to update the Benefit Package.

In Phase One, HFG worked with relevant counterparts to develop and disseminate a well-designed set of milestones (the Master Plan), with required steps, technical inputs and participatory process, based on international experience and adapted to

the Vietnamese conditions to lead to a comprehensive health insurance BHSP in the most realistic timeframe. The Master Plan to develop BHSP in Vietnam was prepared by HFG consultants to present to MoH and related stakeholders. It is being approved by MoH leaders, including a series of activities to gain the goals.

Phase Two of this Road Map will require the GoV to identify and evaluate the Benefit Package options against economic, political, and medical priorities. As planned in the Phase 2 of the Master Plan. HFG provided the technical support to conduct the actuarial analysis. The technical protocol of actuarial task was prepared and presented to MoH stakeholders and related development partnerships and absolutely support this activity. Phase Two of the BHSP's Master Plan requires the GoV to identify and evaluate SHI Benefit Package options against economic, political, and public health priorities. This is the critical juncture when the approval for inclusion of HIV services in the BHSP will be hopefully formalized. To contribute to the activities identified in the Master Plan, HFG Vietnam will focus on inclusion of preventive HIV services in the BHSP, the design of appropriate provider-payment methods for HIV and further disseminating evidence on impact and cost of HIV interventions.

Figure 1. Summary of Phases in SHI Benefit Package Master Plan



Source: HFG Project Document

The baseline survey will provide a set of evidence which will be used for the guidelines to support the implementation of Vietnam's BHSP pilot, in which HIV/AIDS sub-package will be in focus. The survey will provide inputs for the BSHP pilot study, which will be followed in order to evaluate the impact of BHSP on the insured members, health facilities, and VSS administrators. Empirical findings and

implementation lessons learned from the BSHP pilot study will be used to develop relevant circulars and to scale up BHSP at the national level.

III. OBJECTIVES OF THE SURVEY

1. General Objective

The baseline survey will provide a set of evidence which will be used for the guidelines to support the implementation of Vietnam's BHSP pilot, in which HIV/AIDS sub-package will be in focus. The survey will examine the relevance and feasibility of BHSP as well as identify the necessary conditions (such as human resources, infrastructure, facilities, supplies, and information/financial/management systems) for successfully implementing BSHP. The survey will provide inputs for the BSHP pilot study, which will be followed in order to evaluate the impact of BHSP on the insured members, health facilities, and VSS administrators. Empirical findings and implementation lessons learned from the BSHP pilot study will be used to develop relevant circular and to scale up BHSP at the national level.

2. Specific Objectives

To implement the aforementioned general objective, this assignment has six (06) specific objectives, as follows:

(1) **Objective 1:** To assess transparency and accountability of key stakeholders (VSS/PSS/health care service providers) in implementing the BHSP.
(2) **Objective 2:** To assess cost containment and efficiency for the VSS/PSS.
(3) **Objective 3:** To assess whether the BHSP matches the available capacity of health facilities and VSS/PSS at various levels to deliver/reimburse the health care services included in the BSHP.
(4) **Objective 4:** To assess whether the SHI members can access and utilize the health care services included in the BHSP, regardless of member category, age, gender, or clinical condition.
(5) **Objective 5:** To assess whether the SHI members are protected from financial risk and catastrophic health expenditures.
(6) **Objective 6:** To assess the insured patients' satisfaction with the current health care services.

3. Expected Results and Key Performance Indicators (KPIs)

Along with six (06) specific objectives of this survey, the following six (06) results of the BSHP are expected, along with their respective key performance indicators (KIPs), as presented in **Table 1**.

Table 1. Expected results and Key Performance Indicators (KPIs)

No.	Quantitative Indicator(s)	Qualitative Indicator(s)
Result 1: Ensure transparency and accountability of key stakeholders (VSS/PSS/health care service providers) in implementing the BHSP		
1.1	For covered health benefits, average number of days between the provider sending the invoice and the date the provider is paid	
1.2		Clear understanding among PSS administrators of roles and responsibilities at provincial levels for administering the benefit package
1.3		Awareness and perception of new benefit package and HIV/AIDS sub-package policies among patients, members, PSS administrators, DoH administrators and health care providers
Result 2: Promote cost containment and efficiency for the VSS/PSS		
2.1	Average PSS expenditures per member, by member category	
2.2	Average PSS expenditures per visit/admission, by member category and type of services	
2.3	Total PSS expenditures on HIV/AIDS care (including services and drugs) as a percentage of total PSS expenditures	
2.4		Perception of healthcare providers and PSS administrators of whether the benefit package improves efficiency and controlling costs
2.5	Value of rejected claims as a proportion of total value of claims sent to PSS	
2.6	Ratio between total expenditure and total revenue of the HI fund over a year	
Result 3: Ensure that the BHSP matches the available capacity of health facilities and VSS/PSS at various levels to deliver/reimburse the health care services included in the BSHP		
3.1	Percentage of health facilities that have required infrastructure for delivering health services listed by MoH according facility type and clinical service group defined by specific package, e.g. HIV/AIDS	
3.2	Percentage of health facilities that have available medicines versus list of selected medicines for delivering health services included in SHI benefit package by facility type and clinical service group defined by specific package, e.g. HIV/AIDS	
3.3	Percentage of health facilities that have required staffing for delivering health services included in SHI benefit package, by facility type and clinical service group defined by specific package, e.g. HIV/AIDS	

No.	Quantitative Indicator(s)	Qualitative Indicator(s)
3.4	Percentage of technical services available versus technical services required for each facility, by facility type and clinical service group defined by specific package, e.g. HIV/AIDS	
3.5	Percentage of health facilities that have clearly defined protocols for delivering health services included in benefit package, by facility type and clinical service group defined by specific package, e.g. HIV/AIDS	
Result 4: Ensure SHI members can access and utilize the health care services included in the BHSP, regardless of member category, age, gender, or clinical condition		
4.1	Average waiting time for members to see a provider for a service covered by the benefit package, by member category, clinical service group, and facility type	
4.2	Average number of visits for conditions covered by the benefit package per patient per annum, by member category, clinical service group, and facility type	
4.3	Number of HIV patients using AIDS-related services	
4.4	Percentage of the insured people who did not use HI cards	
4.5	Percentage of the insured patients who must buy additional drugs and reasons (such as unavailable HI drugs, drugs which are not included in the HI-paid lists, etc.)	
4.6	Percentage of the insured patients who must pay for additional technical services and reasons of this (such as technical services are not covered by HI; are not provided by health facilities, etc.)	
Result 5: Ensure that SHI members are protected from financial risk and catastrophic health expenditures		
5.1	Average per member out-of-pocket payments (i.e., allowances for physicians, charges for on-demand services, purchase of additional medicines, facilities, travel for caring,...) required for services covered by SHI, by member category, clinical service group, and facility level	
5.2	Percentage of members requiring coping strategies due to out-of-pocket payments, by member category, and clinical service group	
5.3	PSS payment as a proportion of total expenses associated with each encounter, by service group, member category	
Result 6: Ensure the insured patients' satisfaction		

No.	Quantitative Indicator(s)	Qualitative Indicator(s)
6.1	Patient satisfaction with health providers and health services received, by member category, clinical service group, and facility type.	

IV. SURVEY METHODOLOGY

1. Choices of locations, health facilities, and interviewees

1.1. Choices of locations and health facilities

Given 6 provinces/cities (i.e., Hoà Bình, Hà Nội, Thái Bình, Hải Phòng, HCMC and Cần Thơ), locations for the survey in each province/city were chosen to be as representative as possible. In each province/city, we chose 2 districts, using statistical indicators in population and health aspects, which include:

- Population (persons);
- Health infrastructure: number of hospitals; number of regional health facilities; number of commune health centers and equivalent; number of beds in hospitals; number of beds in regional health facilities; and number of beds in commune health centers and equivalent;
- Human resources: number of doctors; number of nurses; number of midwives...

All statistical indicators for each district in each province/city were compared to that province/city's averages. Indicators being equal or higher than the averages were given 1 point, while those being lower than the averages were given 0 point. Then we added all points for each district in each province/city. The two districts with highest points were selected for the survey. An important issue to decide the final locations for the survey was that the selected district should be relatively good information systems in both health and social security sectors, so as to be convenient for data collection. This also means that, in addition to statistics-based choices, advices from local authorities about the locations for the survey were also important. **Appendix I** presents statistics about population and health-related indictors in 4 provinces/cities (i.e., Hoà Bình, Thái Bình, Hải Phòng and Cần Thơ).[1]

In each province/city, the research team consulted with the local health authorities about health facilities to be surveyed. These HFs include:

- At central level, Bạch Mai Hospital (Hanoi) and Chợ Rẫy Hospital (HCMC) were chosen;

[1] In fact, statistics in Hanoi and HCMC did not include those detailed indicators. As such, based on consultations with local health authorities in these two cities, we defined the locations for the survey.

- At provincial level, a general provincial hospital and a private hospital were chosen;
- As district level, 01 general district hospital or district health center was chosen;
- At commune level, 02 commune health centers in each district were selected.

Table 2 shows the list of locations and health facilities which were selected for the baseline survey.

Table 2. List of locations and health facilities for the survey

Prov./City	Central level	Provincial level	District level	Commune level
Hoà Bình		• Provincial General Hospital • Septen Trung Tây Bắc Clinics (private)	Mai Chau Regional General Hospital	Mai Hịch CHC
				Vạn Mai CHC
			Tân Lạc District General Hospital	Ngọc Mỹ CHC
				Phú Cường CHC
Hà Nội	BV Bạch Mai	• Đống Đa General Hospital • Thu Cúc Hospital (private)	Hai Bà Trưng District Health Center	Đồng Tâm CHC
				Bùi Thị Xuân CHC
			Đông Anh District General Hospital	Tiên Dương CHC
				Kim Chung CHC
Thái Bình		• Provincial General Hospital • Phúc Sơn Clinics (private)	Đông Hưng District General Hospital	Đông La CHC
				Đông Tân CHC
			Kiến Xương District Health Center	Vũ Tây CHC
				Quang Hưng CHC
Hải Phòng		• Việt Tiệp General Hospital • 33 Kỳ Đồng Clinics (private)	Đồ Sơn District Health Center	Bàng La CHC
				Hợp Đức CHC
			Thuỷ Nguyên District General Hospital	Dương Quan CHC
				Phục Lễ CHC
HCMC	BV Chợ Rẫy	• Hospital of Tropical Diseases • Hồng Ngọc General Hospital (private)	Thủ Đức District Hospital	Bình Chiểu CHC (belongs to Thủ Đức District's Preventive Care Center)
				Hiệp Bình Chánh CHC belongs to Thủ Đức District's Preventive Care Center)
			District One Hospital	Nguyễn Thái Bình CHC (belongs to District One's Preventive Care Center)
				Bến Thành (belongs to District One's Preventive Care Center)

Prov./City	Central level	Provincial level	District level	Commune level
Cần Thơ		• Cần Thơ City General Hospital • Hoàn Mỹ Cửu Long General Hospital (private)	Thốt Nốt District General Hospital	Tân Hưng CHC
				Trung Nhứt CHC
			Ô Môn District General Hospital	Thới An CHC
				Phước Thới CHC

1.2. Choices of interviewees

Based on the aforementioned KPIs, the interviewees of the baseline survey were as follows:

- Representatives of the Provincial Social Security (PSS) and District Social Security (DSS);
- Representatives of Provincial Department of Health (PoH);
- Representatives of health facilities at all levels (i.e., central, provincial, district, and communal HFs and private HFs)
- The insured patients who had services from the above HFs.

The number of interviewees are presented in **Table 3**.

Table 3. Number of interviewees

3.1. Quantitative survey (Sending questionnaires)						
Organization					**Number of questionnaires for a province/city**	**Total**
PoH					1	6
PSS					1	6
HFs						50
–	*Central level*				*3*	*6*
–	*Provincial level (provincial general hospital and private hospital)*				*6*	*36*
–	*District level*				*6*	*36*
–	*Commune level*				*12*	*72*
				Total		274
3.2. Quantitative (direct) survey with the insured patients						
Type of HF	**Number of HFs**	**Total insured patients**	**Number of the insured patients by research design**	**Total insured patien**	**Number of the insured patients by survey**	**Total insured patients by**

		Non-users of HIV/ AIDS-related services	Users of HIV/ AIDS-related services	Non-users of HIV/ AIDS-related services	Users of HIV/ AIDS-related services	ts by research design	Non-users of HIV/ AIDS-related services	Users of HIV/ AIDS-related services	survey
Central level	2	150	20	300	40	**340**	330	21	**351**
Prov. level	6	100	15	600	90	**690**	652	105	**757**
Dist. Level	12	60	10	720	120	**840**	582	196	**778**
Comm. Level	24	15	5	360	120	**480**	342	53	**395**
Private	6	60	10	360	60	**420**	359	0	**359**
Total	**50**			**2.340**	**430**	**2.770**	**2.265**	**375**	**2.640**

Note: (1) FGDs for health staff at central, provincial and district HFs include those representative from departments for General Health-checkup, Internal Medicine, Surgery, Obstetrics, Pediatrics, Pharmaticals, Finance and Planning, Personnel (total: 8 persons); FGDs with all CHC leader and staff (total: 5 persons); (2) Only chose representatives from 2 communes in 1 province/city as follows: in the same district, if FGD was held in this commune, IDI was held in the other; and (3) FGDs with representative from departments of General Health-checkup, Pharmaticals, Finance and Planning, and Personnel (total: 4 persons).

Source: Own compilations from the surveys

2. Survey Tools

In order to collect data and information for the survey, we built up the survey tools, using the following steps:

- Step 1: Reviewed all available data and information related to the survey themes;
- Step 2: Designed quantitative and qualitative questionnaires;
- Step 3: Piloted both quantitative and qualitative questionnaires in Ha Nam province, in particular in Ha Nam's PoH and Provincial General Hospital.
- Step 4: Held one-day consultation workshop in Hanoi in order to receive further comments and suggestions for the questionnaires;
- Step 5: Completed both questionnaires;
- Step 6: Submitted questionnaires to HFG Project for approval of implementation.

After completing all these stages, we produced 14 tools, of which 7 were for quantitative surveys, while the other 7 were for qualitative surveys (**Table 4**). The detailed information of these tools are presented in **Appendix 2**.

Table 4. List of the tools

QUANTITATIVE SURVEYS		QUALITATIVE SURVEYS	
Name of the file	***Name of tool***	***Name of the file***	***Name of tool***
DL-01_DoH_Eng_FINAL	For collecting data from PoH	DT-01_DoH (IDI)_Eng_FINAL	IDI with PoH

QUANTITATIVE SURVEYS		QUALITATIVE SURVEYS	
Name of the file	***Name of tool***	***Name of the file***	***Name of tool***
DL-02_PSS_Eng_FINAL	For collecting data from PSS	DT-02_PSS & DSS (IDI)_Eng_FINAL	IDIs with PSS and DSS
DL-03a_BVĐK_KCB-CSVC-NL-HIV_Eng_FINAL	For collecting data from HFs (exclude CHCs) about: health check-ups, infrastructure, human resources, and HIV services	DT-03a_BVDK_LanhDao (IDI)_Eng_FINAL	IDIs with leaders of HFs at all levels
DL-03b_TYT_KCB-CSVC-NL-HIV_Eng_FINAL	For collecting data from CHCs about: health check-ups, infrastructure, human resources, and HIV services	DT-03b_BVDK_CBYT (FGD)_Eng_FINAL	FGDs with leaders of HFs (exclude CHCs)
DL-03c_CSYT_Thuoc_Eng_FINAL	For collecting data from all HFs about drugs	DT-03c_TYT (IDI)_Eng_FINAL	IDIs with leaders of CHCs
DL-03d_CSYT_DVKT_Eng_FINAL	For collecting data from all HFs about technical services provided (according to Circular 37)	DT-03d_TYT_CBYT (FGD)_Eng_FINAL	FGDs with staff of CHCs
DL-04_PEI_Eng_FINAL	Patient Exit Interviews (PEIs) with the insured patients at all HFs	DT-03e_TTPC-AIDS_LanhDao (IDI)_Eng_FINAL	IDIs with leaders of HIV Prevention and Control Centers

3. Research Ethics

The research process regarding emotional status was given special consideration to ensure that subjects were protected under the regulations of international research ethics.

All interviewees or their legal representatives had to express consent to participate in the interviews. The interviews were conducted in private to ensure confidentiality and privacy. The interviewees or their legal representatives were told that they could end the interview at any time without penalty and they would receive an allowance of VND 50,000 (Fifty thousand Vietnamese Dong) for their participation in the interview.

The identities of all the participants interviewed and the recorded information on the questionnaire about their relatives, as well as the analysis data were encrypted and kept confidential. Completed questionnaires were kept in the private storage of HFG Project and only persons having authorization can access them.

4. Quality Control and Data Management

4.1. Quantitative Data

Data collection and information were supervised directly or indirectly by research team leader (PI) and other research team members. With the support from team members, PI was in charge of quality of the whole research. PI had close supervision with data collection and information by visiting the sites or connecting with all survey teams. PI decided all issues related to surveys as soon as possible so as to guarantee quality and schedule of surveys. Quality control was implemented by three methods: i) observations of the interviews; ii) re-interviews with the interviewees; and iii) check whether 100% questions were completed.

Before the data entry, all questionnaires were checked. Answers to open-ended questions were checked carefully. The data management team decided which questions needed to be tested needed further information before being transferred to the input data.

Epi-Data software was used for data entry. All completed questionnaires were inputted into the software by double-entry to ensure the accuracy. In particular: (i) All data were inputted through double-entry. Two Epi-Data datasets were independently inputted, confirmed and compared with each other. The results were accepted if the difference was less than 1 percent; (ii) After fixing errors found during the comparison, the data on Epi-Data will be completed; and (iii) Data in the Epi-Data form was then transferred into Stata. Based on the latest questionnaire, the variables were labeled and given a short description. The variables labeled in Epi-Data and transferred to Stata were checked again to ensure the accuracy of the labeling. ***The final dataset is attached to this Report***.

4.2. Qualitative Information

In-depth Interviews (IDIs) and focus group discussions (FGDs) were recorded with the consent of the interviewees. Recorded tapes were collected in the field and recorded in writing. All information was recorded by hand during the interview or group discussion, and then typed to ensure that information was read clearly and fully.

After cleaning information, tape recording was converted to MS-word format for qualitative analysis, including formatting, encryption, classification, sorting information according to subject needs analyzing.

PART II: KEY FINDINGS OF THE SURVEY

I. CURRENT SITUATION OF HEALTH INSURANCE-BASED HEALTH CARE SERVICES IN THE SURVEYED PROVINCES

1. Participation in SHI Scheme

Table 5 presents the current participations in the SHI scheme in the surveyed provinces/cities.

Table 5. Number of SHI participants as of 31 December 2015

Age	HOÀ BÌNH (2015)			HÀ NỘI (2015)			HẢI PHÒNG (2015)		
	Female (person)	Male (person)	Total (person)	Female (person)	Male (person)	Total (person)	Female (person)	Male (person)	Total (person)
0 - 4	812	927	1,739	311,534	362,202	673,736	-	-	-
5-9	24,325	26,796	51,121	257,043	293,561	550,604	-	-	-
10-14	27,122	28,656	55,778	204,095	220,663	424,758	-	-	-
15 - 19	27,438	27,642	55,080	236,069	205,796	441,865	-	-	-
20 - 24	33,321	27,959	61,280	239,626	185,968	425,594	-	-	-
25 - 29	43,868	39,080	82,948	247,725	193,246	440,971	-	-	-
30 - 34	41,015	36,764	77,779	214,132	193,061	407,193	-	-	-
35 - 39	28,459	26,064	54,523	143,235	138,171	281,406	-	-	-
40 - 44	26,554	23,681	50,235	110,630	105,817	216,447	-	-	-
45 - 49	23,359	22,065	45,424	85,765	90,343	176,108	-	-	-
50 - 54	25,013	24,287	49,300	105,997	119,982	225,979	-	-	-
55 - 59	22,973	21,155	44,128	127,313	135,559	262,872	-	-	-
60 - 64	16,073	16,790	32,863	97,429	108,623	206,052	-	-	-
65 - 69	12,879	11,095	23,974	94,415	82,437	176,852	-	-	-
70 - 74	9,984	8,076	18,060	55,011	56,965	111,976	-	-	-
75 - 79	6,989	6,254	13,243	44,754	46,994	91,748	-	-	-
80+	11,89	6,562	18,452	114,174	56,943	171,117	-	-	-
TOTAL	***382,074***	***353,853***	***735,927***	***2,688,947***	***2,596,331***	***5,285,278***	-	-	-
Age	**THÁI BÌNH (2015)**			**TP. HỒ CHÍ MINH (2015)**			**TP. CẦN THƠ (2015)**		
	Female (person)	Male (person)	Total (person)	Female (person)	Male (person)	Total (person)	Female (person)	Male (person)	Total (person)
0 - 4	79,945	88,836	168,781	254,730	232,152	486,882	40,360	44,043	84,403
5-9	65,422	71,450	136,872	266,922	245,996	512,918	38,755	41,537	80,292

10-14	56,185	59,466	115,651	232,718	217,400	450,118	32,076	32,791	64,867
15 - 19	40,478	36,212	76,690	237,011	261,462	498,473	34,484	32,712	67,196
20 - 24	27,840	14,256	42,096	255,713	328,743	584,456	42,751	40,125	82,876
25 - 29	36,592	17,903	54,495	278,335	336,618	614,953	35,619	31,112	66,731
30 - 34	41,013	21,356	62,369	256,805	292,402	549,207	36,320	33,698	70,018
35 - 39	36,577	22,190	58,767	187,084	208,601	395,685	28,562	28,039	56,601
40 - 44	38,696	26,583	65,279	159,505	166,312	325,817	20,924	22,396	43,320
45 - 49	35,096	31,365	66,461	145,499	149,058	294,557	21,674	23,254	44,928
50 - 54	43,394	40,536	83,930	128,534	134,441	262,975	21,121	23,788	44,909
55 - 59	46,117	42,774	88,891	115,814	137,216	253,030	21,348	19,016	40,364
60 - 64	38,617	38,462	77,079	79,500	99,411	178,911	17,410	14,626	32,036
65 - 69	34,984	30,639	65,623	44,968	65,356	110,324	12,032	9,382	21,414
70 - 74	18,870	16,769	35,639	30,595	49,481	80,076	8,293	5,247	13,540
75 - 79	18,017	15,861	33,878	24,812	39,770	64,582	7,450	4,641	12,091
80+	50,710	22,606	73,316	38,902	68,470	107,372	25,615	18,572	44,187
TOTAL	***708,553***	***597,264***	***1,305,817***	***2,737,447***	***3,032,889***	***5,770,336***	***444,794***	***424,979***	***869,773***

Note: - not available

Source: Own calculations and compilations using provided data from PSSs

As presented, the number of participants in terms of gender were quite similar. By age group, for both males and females, the participation rates were quite different. In particular, children (aged 0-14) and older people (aged 60 and over) accounted for 30-40 percent of the total.

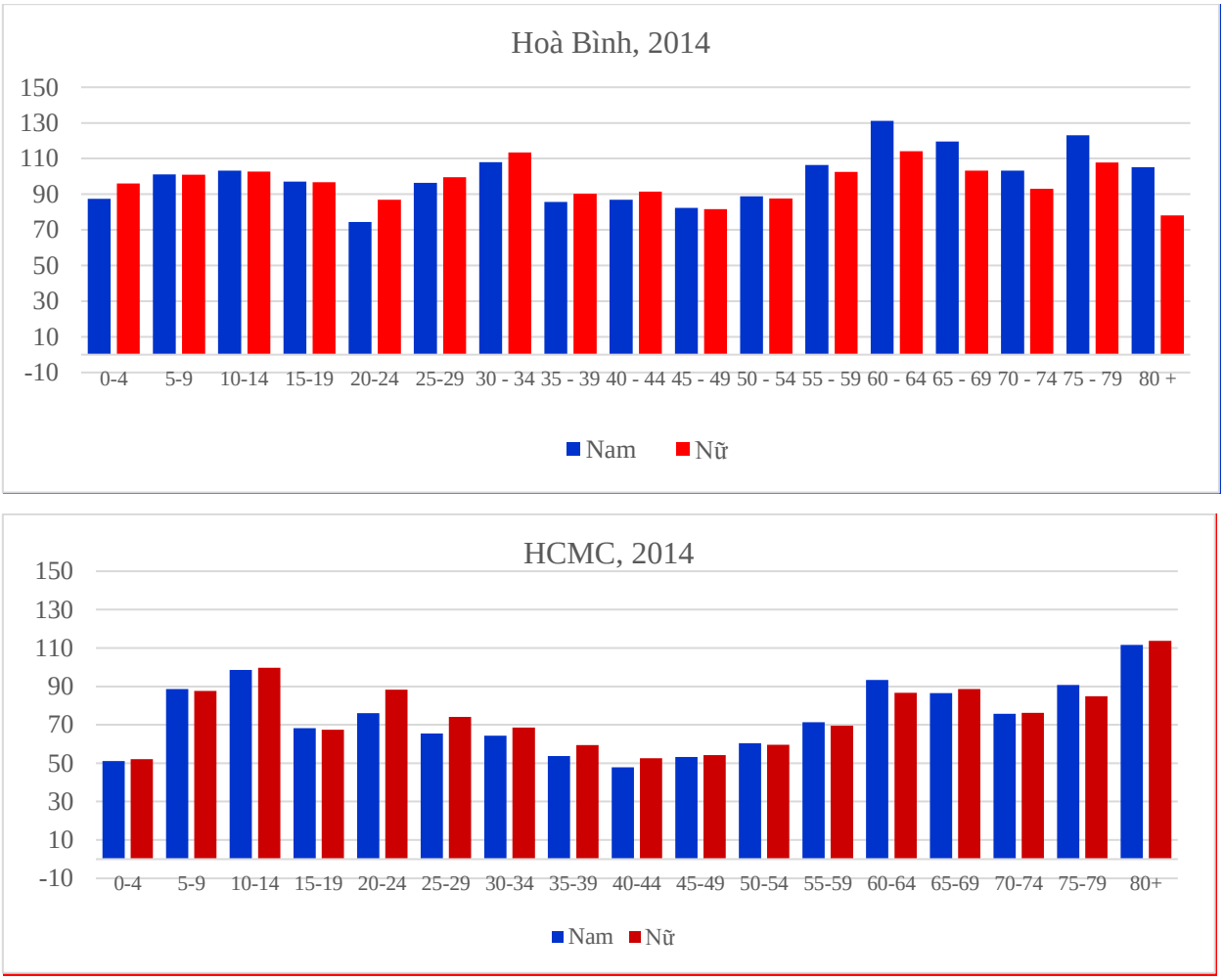
Among provinces/cities, however, there were significant differences when going through different age groups (**Figure 2**).[2] Specific age group participation rate is measured by the number of SHI participants as a percentage of the population in that age group. As can be seen, the overall participation rate in Hoà Bình was really high (about 95 percent of the total population in 2015) and rates were quite similar between age groups, while HCMC had lower overall participation rate and there were differences between age groups. One of the key factors here was that Hoà Bình had a high rate of participants who were beneficiaries of various social assistance programs and they got free SHI; in contrast, in HCMC, only children and older people had quite high participation rates while many working-age groups, especially those aged 25-49, had lower participation rates. Such a situation is quite popular in many other provinces/cities in Vietnam (ISMS, 2016).[3] This implies some policy issues:

[2] Due to no available data on population in 2015, the results in Figure 2 were based on the results from actuarial analysis of health insurance-paid health care services which was conducted by HFG and MoH's DPF in 2015-16. Three provinces/cities were overlapped between two studies, i.e., Hoà Bình, Hanoi, và TP. HCM.

[3] ISMS (Institute of Social and Medical Studies). 2016. "Study on the current situation of organization of registering for health insurance-covered primary health care, preconditions and the balance between the capacity

(1) those SHI uncovered groups of people needs to be promoted so as to participate in the SHI scheme and thus reach universal coverage, especially those working in informal sector; (2) those people are usually healthy, so that their participation will help contribute more financial sources for SHI fund; and (3) age-structure participation is different between provinces, and this means health care needs are different, and as such requirements in health care system and health facilities between provinces are different.

Figure 2. Participation rates by sex and age group



Note: One of the key factors leading to the results being higher than 100% was that statistics for population was at 1 April while the number of participants was at 31 December in the same year. Thus, differences made the participation rate higher than 100%.

Source: HFG and MoH (2016) – Actuarial analysis of health insurance-paid health care services

2. Provision of Healthcare Services

Table 6 shows the information about the registered SHI cards at various health facilities in the studied provinces/cities. There were significant differences between

of health facilities and the number, the subject of the insured registering for health insurance-covered primary health care". A commission research project for Department of Health Insurance, MoH under financial support from the World Bank.

level of care and between provinces. In 4 provinces/cities with lower number of SHI participants (i.e., Hoà Bình, Thái Bình, Hải Phòng and Cần Thơ), district level HFs had the highest number of SHI participants to register for primary care. Provincial level (except Hà Nội and HCMC) had about one-third of the total registered SHI cards.

Table 6. The number of registered SHI cards for primary care

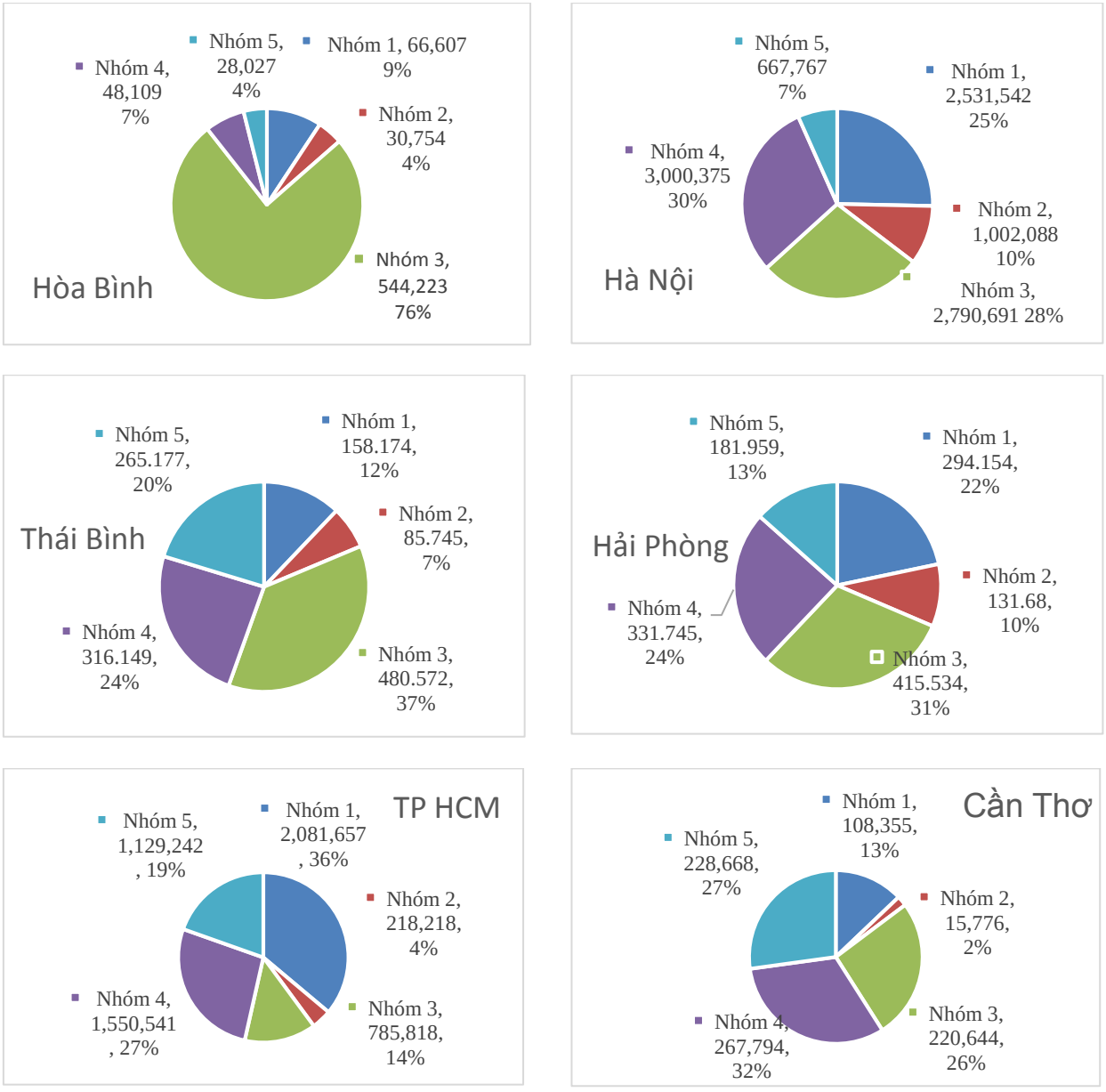
Level of care	Hòa Bình	Hà Nội	Thái Bình	Hải Phòng	HCMC	Cần Thơ
Central and equivalent	158,555	1,741,032	714,659	481,545	930,623	337,762
District and equivalent	530,878	-	334,941	800,094	3,285,896	357,899
Commune and equivalent	7,881	1,023,873	160,706	12,549	111,400	132,451

Note: - not available

Source: Own compilations from PSS' provided data

In terms of 5 member groups (which were defined in the Joint Circular 41/2014/BYT-BTC), **Figure 3** presents data from the studied provinces/cities.

Figure 3. Proportion of participants by member group



Source: Own compilations from PSS' provided data

Except Hoà Bình, data from other provinces/cities indicate that Group 4 (such as those living in poor and near-poor households, whose SHI premium is supported by government budget) account for the highest proportion (with an average rate of 25 percent of the total insured, in which in Hà Nội and Cần Thơ this group accounted for more than 30 percent). Except HCMC, Group 3 (whose SHI premium is paid by government budget) also had really high proportion, especially in Hoà Bình with 76 percent. In the two biggest cities, i.e., Hà Nội and HCMC, Group 1 (whose SHI premium is paid by both employers and employees) had relatively high rates of participation (respectively 25 percent and 36 percent of the total insured). Group 2 (whose SHI premium is paid by social insurance organizations) had the lowest proportion in all the studied provinces/cities. Among the surveyed provinces/cities, only Cần Thơ had high rate of participation for Group 5 (whose participation is household-based) (about 27 percent) while others had low participation rate for this group (less than 10 percent). It is clear that socio-economic development level is a key factor explaining differences in SHI scheme participation of the people in the studied provinces/cities.

Table 7 shows the statistics for the numbers of outpatient (OP) visits and inpatient (IP) admissions by level of care in the studied provinces/cities. In IP services, there were significant differences between provinces/cities in all levels of care: In Hoà Bình and Thái Bình, district level accounted for the majority of admissions, while in other provinces/cities, provincial level did (about 3-4 times of that at district level). Such different situations mean that health care services were provided differently between provinces/cities, in which provincial level or district level played the major role. In OP services, district and commune levels played more important roles. In regard to private care, there were substantial differences between the studied provinces/cities in both OP and IP services, in which Hà Nội and HCMC had much higher number of visits and admissions compared to the other. This implies important signal in allocating SHI cards registered for primary care in each province/city in terms of level of care.

Table 8 presents for the numbers of outpatient (OP) visits and inpatient (IP) admissions by SHI member group in the studied provinces/cities. The same as statistics for the member group, the number of visits and admissions for these groups were quite similar. For instance, in Cần Thơ, the number of visits and admissions for Group 5 were the highest, while in Hà Nội and HCMC those numbers for Group 2 and Group 3 were the highest.

Table 7. Numbers of OP visits and IP admissions by level of care

Province/City		Hòa Bình	Hà Nội	Thái Bình	Hải Phòng	HCMC	Cần Thơ
Cat.	**Level of care**						
Inpatience	Provincial or equivalent	28,360	441,947	106,451	206,214	835,933	139,414
	District or equivalent	84,687	124,058	129,037	58,070	292,803	50,110
	Commune or equivalent	-	-	-	-	-	-
	Private	-	22,846	2,854	7,215	88,600	14,511
	Total	113,047	666,163	238,342	271,499	1,217,336	204,035
Outpatience	Provincial or equivalent	57,797	2,243,931	753,924	735,728	3,038,818	940,570
	District or equivalent	546,088	1,103,407	341,332	593.312	6,361,596	976,028
	Commune or equivalent	234,503	998,240	384,752	6,348	398,121	211,575
	Private	18,712	110,773	114,557	193,605	1,640,688	16,879
	Total	857,100	1,990,514	1,594,565	1.528.993	11,439,223	2,145,052

Note: - : Not available

Source: Own compilations from PSS' provided data

Table 8. Total numbers of OP visits and IP admissions by membership group

Province/City		Hòa Bình	Hà Nội	Thái Bình	Hải Phòng	HCMC	Cần Thơ
Membership							
Inpatience	Group 1	10,366	118,342	25,981	-	245,979	18,047
	Group 2	11,632	112,912	25,960	-	60,857	4,238
	Group 3	80,189	294,227	123,345	-	397,458	94,263
	Group 4	3,608	53,306	17,632	-	98,984	16,529
	Group 5	7,252	87,376	46,464	-	414,058	70,958
Outpatience	Group 1	87,187	359,931	167,036	-	2,474,207	209,859
	Group 2	109,874	471,727	210,018	-	991,657	98,141
	Group 3	368,407	573,370	699,738	-	1,617,377	569,530
	Group 4	26,616	239,370	254,113	-	1,027,292	273,180
	Group 5	55,543	346,116	442,440	-	5,328,690	994,342

Note: - : Not available

Source: Own compilations from PSS' provided data

Table 9 shows total costs paid by health insurance by level of care, while **Table 10** presents total costs paid by health insurance by member groups.

Table 9. Total costs paid by health insurance by level of care

Province/City		Hòa Bình	Hà Nội	Thái Bình	Hải Phòng	HCMC	Cần Thơ
	Level of care						
Inpatience	Provincial or equivalent	163,605,660,806	1,055,553,130,210	316,560,156,534	607.172.695.549	3,178,183,978,996	411,297,364,300
	District or equivalent	117,279,970,158	146,351,075,209	126,481,450,976	40.436.774.564	451,869,453,920	25,575,291,323
	Commune or equivalent	-	-	-	-	-	-
	Private	-	68,488,222,677	4,191,451,191	9.731.686.526	288,250,698,978	25,602,353,000
	Total	280,885,630,964	1,270,392,428,096	447,233,058,701	647,609,663,718	3,918,304,131,894	462,475,008,623
Outpatience	Provincial or equivalent	24,143,416,414	747,220,078,505	183,486,196,417	179,918,885,214	1,203,180,562,006	201,970,588,789
	District or equivalent	100,427,911,737	143,704,681,461	71,354,916,195	89.618.299.816	1,144,566,762,485	72,049,442,655
	Commune or equivalent	15,006,573,241	63,865,697,521	7,140,058,117	659.551.903	24,173,225,246	7,034,516,564
	Private	6,802,781,597	26,235,656,246	17,788,763,957	31.144.118.597	384,809,199,955	5,113,269,000
	Total	146,380,682,989	981,026,113,733	279,769,934,686	301,340,855,530	2,756,729,749,692	286,167,817,006

Note: - : Not available

Source: Own compilations from PSS' provided data

Table 10. Total costs paid by health insurance by membership group

Province/City		Hòa Bình	Hà Nội	Thái Bình	Hải Phòng	HCMC	Cần Thơ
	Member						
Inpatience	Group 1	19,585,865,627	225,852,289,225	25,981	-	510,961,707,114	34,381,426,990
	Group 2	109,874	526,435,597,866	25,96	-	328,524,530,787	17,179,496,193
	Group 3	368,407	682,045,096,370	123,345	-	1,340,167,492,640	216,048,081,107
	Group 4	26,616	100,992,189,136	17,632	-	232,549,409,527	28,048,972,502
	Group 5	55,543	270,972,374,936	46,464	-	1,506,100,991,826	166,817,031,831
Outpatience	Group 1	15,102,607,158	61,488,248,521	167,036	-	433,571,132,156	25,690,774,077
	Group 2	35,933,591,295	166,306,219,148	210,018	-	355,504,523,174	25,350,194,998
	Group 3	67,676,789,049	128,840,595,676	699,738	-	447,035,996,094	88,466,348,215
	Group 4	3,359,476,091	29,351,102,208	254,113	-	173,810,760,395	21,766,144,755
	Group 5	9,301,646,155	65,277,587,633	442,44	-	1,346,807,337,873	124,894,354,961

Note: - : Not available

Source: Own compilations from PSS' provided data

Statistic distributions for both tables are quite similar to those in distributions for OP visits and IP admissions by level of care as discussed above. By level of care, Table 9 indicates that provincial level had the highest cost for IP admissions, while district and commune levels had the highest cost for OP admissions. Similarly, by membership group, there were differences between provinces/cities: in Hà Nội and HCMC, Group 2 and Group 3 had the highest costs for both IP and OP cares, while in Cần Thơ Group 5 had the highest costs for both types of care.

II. Key Performance Indicators: Results from the Baseline Survey

1. Result 1: Ensure transparency and accountability of key stakeholders (VSS/PSS/health care service providers) in implementing the BHSP

Indicator 1.1. For covered health benefits, average number of days between the provider sending the invoice and the date the provider is paid

Table 11 presents the average number of days for processing payments between PSS and HFs. In general, all provinces/cities followed the payment processes within 30 or 40 days.

Table 11. Average number of days for PSS to pay for health facilities

Level of care	Hòa Bình	Hà Nội	Thái Bình	Hải Phòng	HCMC	Cần Thơ
Provincial or equivalent	30	-	40	-	-	30
District or equivalent	30	-	40	-	-	30
Commune or equivalent	30	-	40	-	-	30

Note: - : Not available

Source: Own compilations from PSS' provided data

Indicator 1.2: Clear understanding among PSS administrators of roles and responsibilities at provincial levels for administering the benefit package

IDIs with PSS/DSS authorities indicated that their understandings of the basic health service package (BHSP) were quite diverse.

> "BHSP can be understood in this way: We are now having a number of packages with different methods of payments for different departments in a health facility. And thus, we need to have a full package with necessary services. If the current packages have abundant and unnecessary services, we will move these." [IDI with a PSS representative]

> "BHSP includes basic services to help patients survived, and it is the most popular package for treatment. For instance, what in a package for appendix operation should be defined and applied for the whole country. It

should have different components which are at least to treat a specific disease. Of course, BHSP can include some advanced packages but it should ensure that the insured patients do not need to pay more." [IDI with a DSS representative]

Roles and responsibilities of PSS/DSS in implementing the BHSP:

"To facilitate all health facilities to get paid. And supervision is to make sure about benefits and quality of care for patients, and this is clear in the contracts. Popularization is just an activity, and we will collaborate with PoH to promote this BHSP. If we have defined packages, it would be easier for payments and administrative procedures. The most important thing to conduct BHSP is consensus from higher-level administrators." [IDI with a PSS representative]

"With a function to supervise, VSS needs to get advised about costs and relevant prices. Once all is approved, VSS will not need to supervise about professional activities; rather, it will ensure rights and benefits for the insured." [IDI with DSS representative]

Indicator 1.3: Awareness and perception of new benefit package and HIV/AIDS sub-package policies among patients, members, PSS administrators, DoH administrators and health care providers

Though, as above, PSS/DSS authorities understood the BHSP differently, they all agreed about benefits of the BHSP, especially in terms of providing HIV-related services:

"BHSP should provide basic services to ensure treatment procedures and guarantee rights and benefits of the insured. Health sector should ensure sufficient services and their quality, while social security sector is in charge of payments. Thus, packages for specific diseases are needed. HIV-related packages are also needed, as people living with HIV should be also treated equally as other people. However, as up to now drugs and other costs have been covered by donors' funding, we need to consider SHI-paid HIV packages. At least some drugs and tests as regulated in Circular 15." [IDI with a PoH representative]

"BHSP in general and HIV/AIDS-related packages in particular are convenient for considering costs. They are also convenient for patients, especially HIV patients, to know about their benefits. BHSP should include list of technical services, drug costs, and test costs. HIV/AIDS-related packages should also have some additional costs for transportation of samples and drugs for preventive care. Thus, it would be much more convenient for BHSP where HIV-related package is integrated, and this would help to improve prescriptions from doctors as well as provide better quality of care to patients." [IDI with a representative from PoH]

"BHSP helps to balance the costs that patients must pay, so that it makes payments easier. BHSP in advanced countries shows that it ensures benefits for people... BHSP should be based on diseases, thus demands from patients" [IDI with a representative of a central-level hospital]

> "BHSP should include all costs for consumables, equipment, etc… In general, it should include all costs along with specific technical services…. Category of technical services, tools and equipment, health-checkup fee, drugs, etc should be included to define a package. In the coming time, there will be no national program for HIV people, so HIV-related packages in BHSP need to be considered, so as to provide sufficient and quality services to HIV people." [IDI with a representative of a provincial-level hospital]

"We should have packages since they will be convenient to follow in service provision. With packages, we know about upper and lower bounds for health care services to treat specific diseases. For example, if we know how much for a package for appendix operation, we will follow the package strictly. For HIV patients, we need to take into account some costs related to consumables… and HIV needs to get frequent treatments so we need to consider packages carefully in regard to funding." [IDI with a DSS representative]

> "We need to define BHSP carefully; for instance, we are now having tens of thousands of services along with levels of care and grades for health facilities…, and as such packages should be defined differently according these conditions… MoH should define a standard BHSP along with basic prices for drugs so that all health facilities can follow. Or MoH can provide regulations on BHSP along with drug prices and list of consumables so that all provinces can apply. Prices may be different, but list of services should be the same. For HIV patients, costs will be high at the final stage so universal coverage should be reached in order to share costs; otherwise, health facilities will not be willing to take this package." [IDI with a leader of a private polyclinics].

2. Result 2: Promote cost containment and efficiency for the VSS/PSS

Indicator 2.1: Average PSS cost per member, by member category

Table 12 shows the average cost per card in the studied provinces/cities.

Table 12. Average cost per card by member group and type of care

	Member	Hòa Bình	Hà Nội	Thái Bình	Hải Phòng	HCMC	Cần Thơ
Total (VND)	Group 1	520,793.20	113,504.16	387,020.11	-	5,971,479.76	554,401.74
	Group 2	2,565,080.94	691,298.39	1,497,653.51	-	7,977,480.37	2,695,847.57
	Group 3	481,993.33	290,568.07	706,648.69	-	3,718,908.90	1,380,116.52
	Group 4	207,644.67	43,442.33	169,002.57	-	1,285,343.84	186,020.29
	Group 5	941,461.22	503,543.84	544,333.05	-	10,758,505.94	1,275,698.33
Inpatience (VND)	Group 1	294,051.16	89,215.30	256,688.64	-	3,230,377.35	317,303.56
	Group 2	1,396,660.85	525,338.69	869,889.66	-	3,831,413.27	1,088,964.01
	Group 3	357,638.45	244,400.08	463,136.36	-	2,788,692.42	979,170.43
	Group 4	137,814.16	33,659.86	81,491.16	-	735,569.02	104,740.85
	Group 5	609,579.60	405,788.81	315,672.87	-	5,679,606.42	729,516.29
Outpatience (VND)	Group 1	226,742.04	24,288.85	130,331.47	-	2,741,102.41	237,098.19
	Group 2	1,168,420.09	165,959.70	627,763.85	-	4,146,067.10	1,606,883.56
	Group 3	124,354.89	46,167.99	243,512.33	-	930,216.48	400,946.09
	Group 4	69,830.51	9,782.48	87,511.41	-	549,774.82	81,279.43
	Group 5	331,881.62	97,755.04	228,660.18	-	5,078,899.52	546,182.04

Note: - : Not available

Source: Own compilations from PSS' provided data

In general, in all provinces/cities, Group 2 had the highest average cost per card, and followed by Group 5. The difference between groups was about 3-5 times. This is an important information to define the root causes of the SHI fund imbalance in regard to SHI membership groups.

Indicator 2.2: Average PSS cost per visit/admission, by member category and type of services

Table 13 presents the average cost per visit/admission by membership group and types of care. In all the studied provinces/cities, in both IP and OP services, Group 2 still had the highest average cost, and it was about 1.5-2 times compared to the other groups. In particular, average cost per one IP admission was much higher than that for one OP admission, especially in Hà Nội and HCMC.

Table 13. Average cost per visit/admission by member group and type of care

	Member	Hòa Bình	Hà Nội	Thái Bình	Hải Phòng	HCMC	Cần Thơ
Total (VND)	Group 1	355,585.92	600,787.70	387,020.11	-	347,230.98	263,583.24
	Group 2	649,239.54	1,184,905.24	1,497,653.51	-	649,900.20	415,414.21
	Group 3	584,739.63	934,634.04	706,648.69	-	887,022.26	458,749.08
	Group 4	330,518.05	445,350.12	169,002.57	-	360,799.81	171,948.81
	Group 5	420,198.00	775,677.43	544,333.05	-	496,784.52	273,830.27
Inpatience (VND)	Group 1	1,889,433.30	1,908,471.12	256,688.64	-	2,077,257.44	1,905,104.84
	Group 2	3,692,650.27	4,662,352.96	869,889.66	-	5,398,303.08	4,053,680.08
	Group 3	2,427,204.09	2,318,091.46	463,136.36	-	3,371,846.82	2,291,971.20
	Group 4	1,837,611.23	1,894,574.52	81,491.16	-	2,349,363.63	1,696,955.20
	Group 5	2,355,858.74	3,101,222.02	315,672.87	-	3,637,415.51	2,350,926.35
Outpatience (VND)	Group 1	173,220.86	170,833.43	130,331.47	-	175,236.40	122,419.22
	Group 2	327,043.63	352,547.59	627,763.85	-	358,495.45	258,303.82
	Group 3	183,701.15	224,707.60	243,512.33	-	276,395.67	155,332.20
	Group 4	126,220.17	122,618.13	87,511.41	-	169,193.14	79,676.93
	Group 5	167,467.48	188,600.32	228,660.18	-	252,746.42	125,605.03

Note: - : Not available

Source: Own compilations from PSS' provided data

Indicator 2.3: Total PSS cost on HIV/AIDS care (including services and drugs) as a percentage of total PSS cost

Table 14. Total PSS cost on HIV/AIDS care

	Hòa Bình	Hà Nội	Thái Bình	Hải Phòng	HCMC	Cần Thơ
Total PSS cost on HIV/AIDS care (including services and drugs) as a percentage of total PSS cost	n.a	n.a	n.a	n.a	n.a	n.a

Note: As HIV/AIDS-related programs are funded by international donors, and separated statistics for HIV/AIDS and non-HIV/AIDS patients are not available so no information is availble.

Source: Own compilations from PSS' provided data

In all the studied provinces/cities, information for the indicator 2.3 is not available due to no available statistics.

Indicator 2.4: Perception of healthcare providers and PSS administrators of whether the benefit package improves efficiency and controlling costs

> "BHSP helps to provide sufficient services and avoid overuses of services in health care. For the quality of health care, BHSP may help to provide more consultations to patients using historical information, as well as limit the use of high technical services. Rights of patients can be ensured." [IDI with a representative of PSS]
>
> > "Basically procedures will be the same, but BHSP will help facilitate payments from social security organizations to health facilities because BHSP has clear regulations on packages. Relationship between both sides will be more transparent. Fund management will be better, so that fund imbalance will be well managed." [IDI with a representative of a DSS]
>
> "It will be a revolution for inspection activities if BHSP is implemented. Costs will be controlled more easily, and we do not need to review everything as we are doing now. Under specific packages, health facilities must follow; otherwise, they have to pay for themselves. With regulated packages, there will be no conflicts between related stakeholders." [IDI with a representative of a DSS]

Indicator 2.5: Value of rejected claims as a proportion of total value of claims sent to PSS

Table 15 shows the statistics of the refused amount to be paid by PSS and it was as a percent of the total claimed amount. Only two cities did have these pieces of information (i.e., Hà Nội and Hải Phòng). In Hà Nội, the rate of refused payment was low at all levels of care (less than 0.6 percent) but it was high for private clinics (approximately 28 percent). In Hải Phòng, the rate of refused payment was was high for commune level (about 10.2 percent) while they were low for the other levels of care.

Table 15. Amount and rate of refused payments by PSS

Level of care		Hòa Bình	Hà Nội	Thái Bình	Hải Phòng	HCMC	Cần Thơ
Provin ce	Total amount refused (VND)	-	6,371,041,626	-	6,151,762,470	-	-
	Rate of refusal (%)	-	0.35%	-	0.78%	-	-
Distri ct	Total amount refused (VND)	-	1,616,057,317	-	2,314,906,148	-	-
	Rate of refusal (%)	-	0.55%	-	1.75%	-	-
Commu ne	Total amount refused (VND)	-	183,938,052	-	74,818,656	-	-
	Rate of refusal (%)	-	0.29%	-	10.19%	-	-
v - a	Total amount refused (VND)	-	26,401,843,577	-	1,143,117,415	-	-

Level of care		Hòa Bình	Hà Nội	Thái Bình	Hải Phòng	HCMC	Cần Thơ
	Rate of refusal (%)	-	27.82%	-	2.72%	-	-

Note: - : Not available

Source: Own compilations from PSS' provided data

Indicator 2.6: Ratio between total expenditure and total revenue within a year

Table 16 presents Ratio between total expenditure and total revenue within the year 2015. Ratio being smaller than 1 means total expenditure was smaller than total revenue, and vice versa. In the studied provinces/cities, Hà Nội had a quite balance between total expenditure and total revenue, while Cần Thơ showed a contrast situation, and other provinces/cities had total expenditures being lower than total revenues.

Table 16. Ratio between total expenditure and total revenue in 2015

	Hòa Bình	Hà Nội	Thái Bình	Hải Phòng	HCMC	Cần Thơ
Ratio between total expenditure and total revenue	0,9484	1	0,9915	0,9723	0,824	1,0945

Source: Own compilations from PSS' provided data

3. Result 3: Ensure that the BHSP matches the available capacity of health facilities and VSS/PSS at various levels to deliver/reimburse the health care services included in the BSHP

Construction and approval of BHSP are important in ensure equality in health care for all citizens, particularly the insured, and ensure accessibility for the insured to BHSP. In order to reach such aims, health facilities, especially those at primary level, should have enough capacities to provide sufficient and quality services within BHSP.

Service provision capacity of a health facility is evaluated by inputs and performance. Inputs include: organization, human resources, infrastructure, tools and equipment, and drugs. Performance is presented by number of services provided; provided technical services as a percent of the regulated number of technical services.

First, about organization and human resources. There were 45 health facilities to be surveyed, of which 9 were provincial-level hospitals, 6 district hospitals, 3 district health centers, 3 private hospitals, 1 private polyclinics and 22 CHCs. **Table 17** presents some information about size, professional level of the surveys HFs.

Table 17. General information about the surveyed health facilities

No.	Indicator	Provincial level	District level	Private	Commune level
1	Number of facilities	9	11	3	22
2	Planned number of beds	553 (130-1000)	234 (92-400)	197 (45-300)	-
3	Actual number of beds	764 (225-1585)	285 (97-450)	197 (45-300)	-
4	Number of departments	23.9 (9-39)	14 (10-18)	11 (7-15)	-
5	Grade of facility				
	1	6	-	-	-
	2	2	4	-	-
	3	3	2	-	-

Note: - : Not available

Source: Own complilations from PSS' provided data

In terms of number of beds, the total planned number of beds is an important indicator to reflect hospital size as well as (for public hospitals) to get budget (according to the number of beds). The planned number of beds is different between the surveyed health facilities, even with those in the same level of care. At provincial level, the average number of beds was 553, in which the highest number was 1,000 while the smallest number was 130. Difference at district hospitals was also high, with the range from 92 beds to 400 beds. For private HFs, difference was also high between them, from 45 beds to 300 beds. Table 17 also shows that, in public hospitals, the actual number of beds was much higher than the planned number of beds, and difference in provincial-level HFs was higher than that for district-level HFs. At the same time, private HFs did not distinguish between the planned number and the actual number, and thus they had only one indicator.

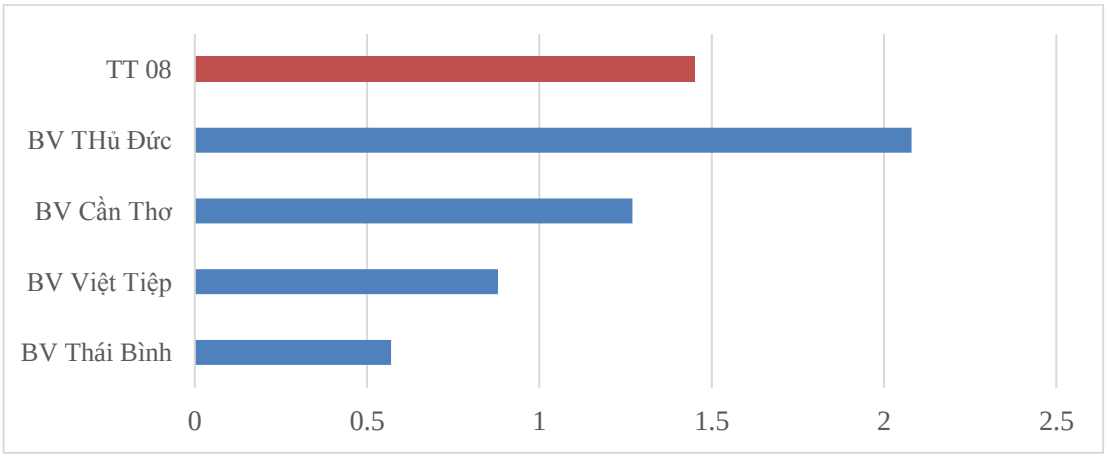
The number of departments, including Clinics and Paraclinics, to some extent reflects professional capaity of hospital. On average, a provincial-level hospital had 24 professional departments (for the surveyed provicial-level HFs, this number varied from 9 to 39; a district-level hospital had 14 professional departments (for the surveyed provicial-level HFs, this number varied from 10 to 18. In private health facilities, this number varied from 7 to 15.

Information about hospital grading shows inconsistency between level of care and grading. The same provicial level, but hospitals are graded from 1 to 3. In 6 district hospitals, there were 4 grade-2 hospitals, and 2 grade-3 hospitals. Under such a situation, regulations using mixed grading and level of care have made various difficulties in service provision.

In order to evaluate indicators for human resources, the survey used some indicators applied in the Circular 23/2005, which grades hospitals along with

regulations on the number of staff as mentioned in Circular 08/2007. Most of the surveyed HFs did not meet the requirements of the Circular 08/2007. In Hòa Bình, the Provincial General Hospital reached only about 50% of the requirement with 1.4-1.5 persons/bed (for a Grade-2 general hospital). District hospitals reached only 30% of the requirement with 1.1-1.2 persons/bed (for a Grade-3 hospital). In Hà Nội, all provincial and district hospitals reached less than 50% of the requirement. Among the Grade-1 hospitals, only Thủ Đức General Hospital had higher staff-bed ratio than the requirement of Circular 08/2007, while the other did have much lower ratio than the requirement (**Figure 4**).

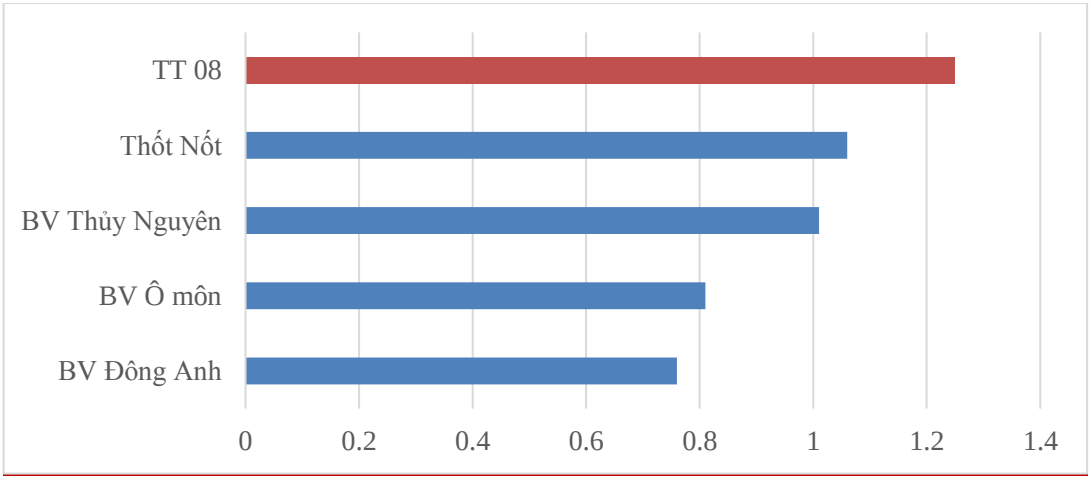
Figure 4. Number of staff per bed, compared to standard in C08 for Grade 1 hospitals



Source: Own complilations from health facilities' provided data

All Grade-2 hospitals in this survey did not meet the requirements on human resources according to the Circular 08 (**Figure 5**).

Figure 5. Number of staff per bed, compared to standard in C08 for Grade 1 hospitals



Source: Own complilations from health facilities' provided data

Table 18 provides information about human resources of the surveyed provincial hospitals. The data show that there were substantial differences in human resources in terms of number and structure. About staff-bed ratio, Cần Thơ and HCMC had higher ratios than did those of other provinces/cities in the north. Cần Thơ also had the highest number of doctors per bed. Hòa Bình general hospital had the lowest indicators for human resources, and could not ensure appropriate number and structure of human resources. Indicators for Thái Bình were also lower than those of other three provinces/cities. All provincial general hospitals had high score for the number of staff who directly served patients (more than 75%).

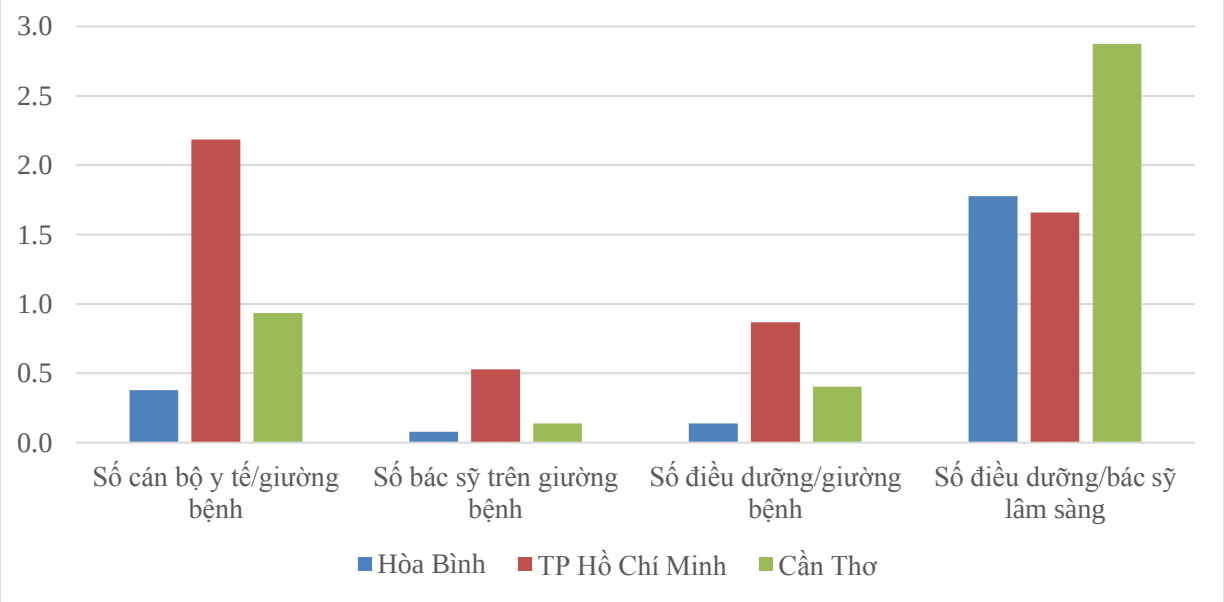
Table 18. Some indicators on human resources of provincial hospitals

	Hòa Bình	Hà Nội	Thái Bình	TP. HCM	Cần Thơ
Number of staff per bed	0.51	0.76	0.57	1.05	1.27
Number of doctors per bed	0.13	0.18	0.15	0.17	0.30
Number of nurses per bed	0.24	0.35	0.28	0.48	0.53
Nurses/Doctors ratio	1.61	1.96	1.92	2.89	1.78
Percent of staff who directly serve patients	84.82	85.86	79.09	75.73	76.03

Source: Own complilations from health facilities' provided data

Comparing human resouces of district hospitals between provinces/cities shows that those in HCMC had more advanced status than that of those in other provinces/cities (**Figure 6**). District hospitals in Hòa Bình had lowest values for all studied indicators.

Figure 6. Indicators of human resources in district health facilities



Source: Own complilations from health facilities' provided data

Second, about infrastructure. Infrastructure conditions of the surveyed HFs were evaluated by indicators on electricity, water, hygene, waste processing, transportation of patients, and IT application in hospital management. All surveyed HFs had national grids. Electricity cut, however, happened at all levels of care (provincial, district, and commune) (**Table 19**). While all provincial and district HFs had alternative electricity sources, only 50% of the surveyed commune-level HFs had alternative electricity sources. For clean water, only 1 of 4 surveyed commune-level HFs in tỉnh Hòa Bình could ensure clean water for health care services. In other 5 provinces/cities, clean water could be frequently used.

Table 19. Number of more than 2-hour electricity cuts within recent 3 months

Level of care	Hòa Bình	Hà Nội	Thái Bình	Hải Phòng	TP.HCM	Cần Thơ
Province	2	1	5	6	0	4
District	12	0	0	-	1	7
Commune	5.5	3	4	3	-	1.33

Note: - : Not available

Source: Own complilations from health facilities' provided data

About 7 out of 9 surveyed provincial HFs and 4out of 6 surveyed district HFs had waste processing system. The surveyed CHCs in Thái Bình and Hải Phòng did not have waster processing system; rather wastes were pooled into the public system. Only 2 district HFs had incinerators, and all other surveyed HFs had contracts with environmental companies to process solid wastes. Even a CHC in Hòa Bình burned solid wastes directly.

The application of information technology in management was paid attention: most of the surveyed HFs had Local Area Network (LAN) (8 out of 9 provincial HFs, and 5 out of 6 district HFs).

Third, about supply of drugs. Timely and sufficient supply of quality drugs is imporant to service provision. The surveys used WHO's method in evaluating availability of drugs at HFs. According to this method, a list of 30 drugs was built using specific conditions and principles, and this list was used in this baseline survey. The results (**Table 20**) show that rate of health facilities having enough drugs as required in Hòa Bình was rather low, even provincial HFs with less than 70% of the drugs in the survey list. HCMC had the highest rate of health facilities having enough drugs as required. At commune level, rate of health facilities having enough drugs as required was low, ranging from 40% to 57%.

Table 20. Rate of health facilities having enough drugs as required

Level of care	Hòa Bình	Hà Nội	Thái Bình	Hải Phòng	TP.HCM	Cần Thơ

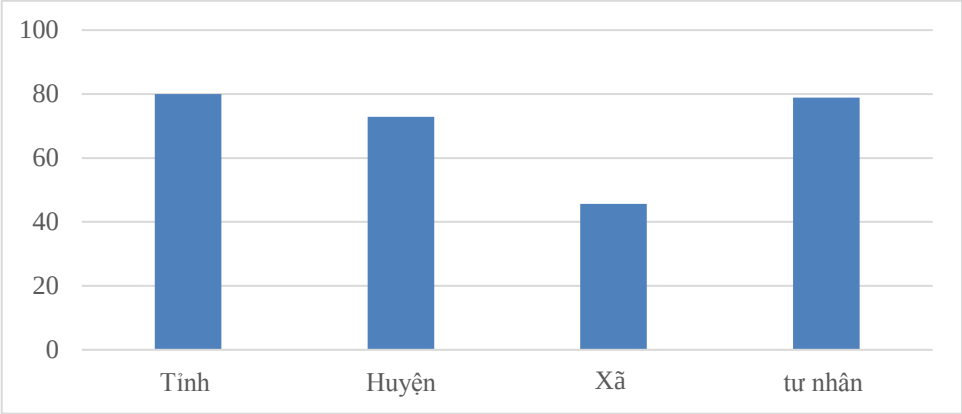
Province	68.33	76.67	76.67	90	91.67	-
District	60.00	83.33	65.00	-	83.33	76.67
Commune	39.17	56.67	43.33	40	55.83	44.17

Note: - : Not available

Source: Own complilations from health facilities' provided data

Figure 7 shows differences in the rate of health facilities having enough drugs as required: private HFs had a rate as equal as that of provincial-level hospitals.

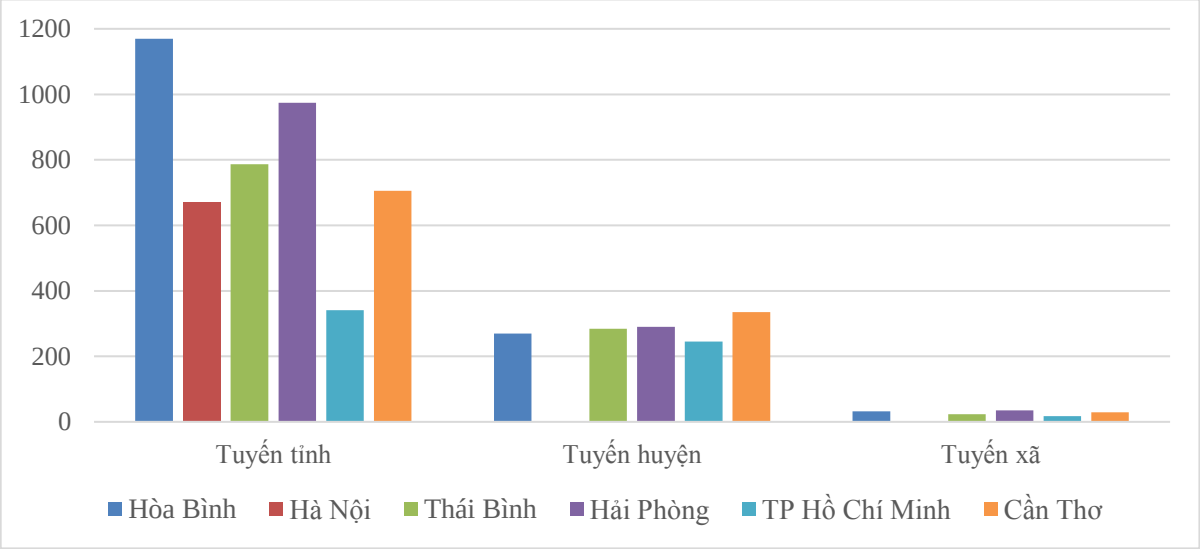
Figure 7. Rate of health facilities having enough drugs as required, by level of care



Source: Own complilations from health facilities' provided data

Fourth, about capacity of technical service provision. Capacity is measured by the number of technical services provided compared to the required number of technical services respective to level of care for HFs. **Figure 8** shows the number of technical services currently provided at the surveyed HFs. As can be seen, the respective numbers for HFs at district and commune levels were low.

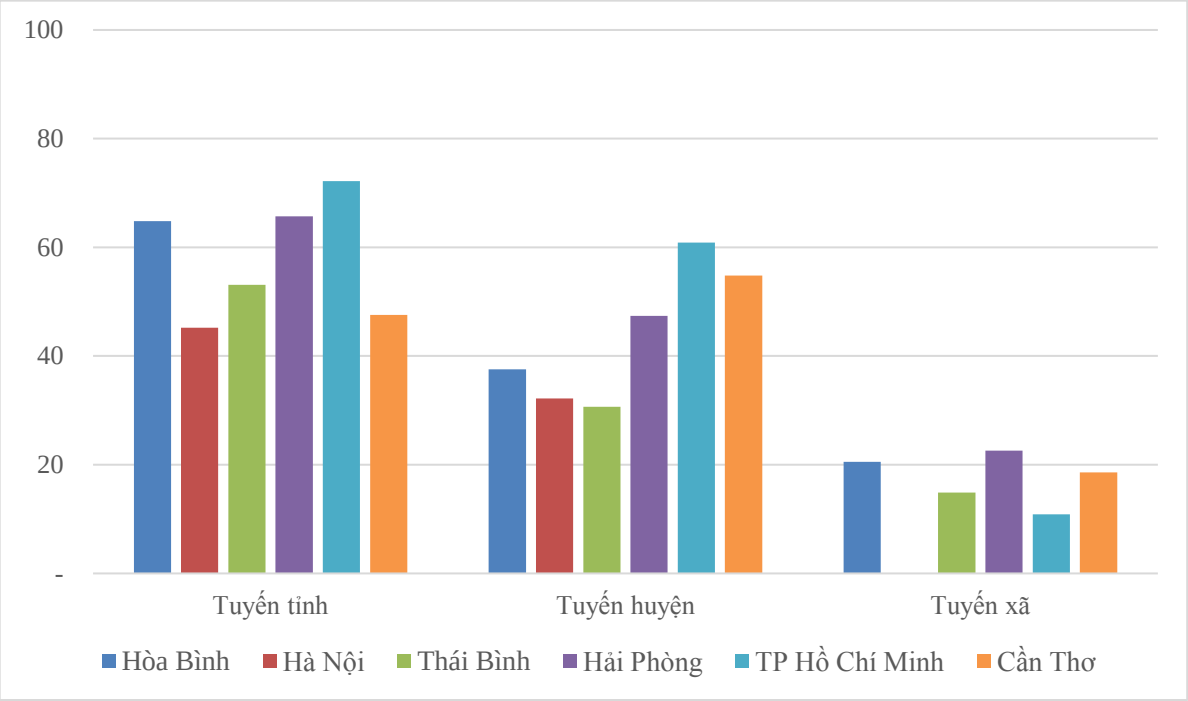
Figure 8. Number of technical services provided in the surveyed health facilities



Source: Own complilations from health facilities' provided data

Comparing to the number of technical services in Circular 43/2013, the rates of technical services provided among the required technical services in Hòa Bình for HFs at all levels of care are presented in **Figure 9**. The survey results show the capacity of technical service provision in CHCs, especially in Hòa Bình. On average, the surveyed CHCs could provide only 18% of the required list of services for commune-level HFs as listed in Circular 43/2013. The surveyed district HFs could provide less than 50% of the required list. In general, capacity of technical service provision of the HFs at primary care level was quite weak.

Figure 9. Percent of the provided technical services compared to requirements in C43/2013 in the surveyed health facilities



Source: Own complilations from health facilities' provided data

4. Result 4: Ensure SHI members can access and utilize the health care services included in the BHSP, regardless of member category, age, gender, or clinical condition

Indicator 4.1: Average waiting time for members to see a provider for a service covered by the benefit package, by member category, clinical service group, and facility type

Table 21 presents results from the surveys with the insured patients at health facilities at all levels of care, which were about the time for waiting to get serviced. In this table, patients include those used and did not use HIV/AIDS-related services. Along with these two groups of patients, various indicators were evaluated using membership group and levels of care. In general, patients (both users and non-users of HIV/AIDS-related services) had different waiting times between health facilities, in

which those having services at CHCs had the lowest waiting time, whileas those having services at central-level health facilities had the highest waiting time. In the same level of care, waiting time was also different among membership groups. It is noteworthy, however, that we should be careful when comparing the waiting times between membership groups since they had different sample sizes, and that patients had different services in their healthcare.

Table 21. Average waiting time for getting services (minutes)

Non-users of HIV-related services	Group 1 N=109	Group 2 N=518	Group 3 N=428	Group 4 N=1118	Group 5 N=0	Total N=2.173
The nearest CHC	5	8	13	12	-	11
The nearest district HF	36	33	30	38	-	36
The nearest provincial HF	29	34	39	45	-	40
The nearest central HF	49	77	72	99	-	8
The nearest private HF	-	8	13	14	-	14
The current HF	32	33	39	37	-	36
Users of HIV-related services	**Nhóm 1 N=0**	**Nhóm 2 N=43**	**Nhóm 3 N=11**	**Nhóm 4 N=130**	**Nhóm 5 N=0**	**Total N=184**
The nearest CHC	--	10	0	9	--	9
The nearest district HF	--	87	75	31	--	50
The nearest provincial HF	--	32	3	38	--	35
The nearest central HF	--	--	--	--	--	--
The nearest private HF	--	--	--	--	--	--
The current HF*	--	70	46	30	--	41

Note: * Waiting time was high due to the fact that Hòa Bình had 40 HIV patients (of which 30 patients were from Mai Châu Regional General Hospitals, and 10 were from Hòa Bình Provincial General Hospital), in which 23 at Mai Châu Regional General Hospitals waited for more than 2 hours.

- : Not available

Source: Own complilations from health facilities' provided data

Indicator 4.2: Average number of visits for conditions covered by the benefit package per patient per annum, by member category, clinical service group, and facility type

Table 22 shows the average number of visits per year per one insured person, which was calculated by the number of visits/admissions divided by the number of SHI cards in terms of level of care and membership group. The results show that average numbers of different membership groups were different, but did not show a clear trend for such differences. For all membership groups, it is noted that commune level in Hoà Bình had the higher average number of visits/admissions compared to other

levels of care in this province, as well as commune level health facilities in other provinces/cities.

Table 22. Average number of visits/admissions per year per one insured

Level of care	Member	Hòa Bình	Hà Nội	Thái Bình	Hải Phòng	HCMC	Cần Thơ
Provincial level	Group 1	7.47	0.87	1.13	-	No data of cards by level of care	2.09
	Group 2	7.22	4.18	2.72	-	-	7.44
	Group 3	2.49	1.91	1.13	-	-	5.42
	Group 4	-	0.45	0.29	-	-	1.02
	Group 5	-	3.47	7.36	-	-	5.82
District level	Group 1	1.60	No data of card at district level	1.41	-	-	1.91
	Group 2	6.31	-	2.77	-	-	3.97
	Group 3	7.16	-	4.30	-	-	3.58
	Group 4	1.07	-	7.13	-	-	1.15
	Group 5	5.23	-	0.73	-	-	4.06
Commune level	Group 1	5.40	2.09	2.63	-	-	5.32
	Group 2	6.45	2.28	2.90	-	-	1.16
	Group 3	5.52	0.76	1.85	-	-	1.41
	Group 4	4.01	0.76	4.09	-	-	1.25
	Group 5	5.33	2.00	7.66	-	-	5.15
Private	Group 1	1.37	No data of card	0.87	-	-	No data of card
	Group 2	8.08	-	2.82	-	-	-
	Group 3	10.95	-	1.82	-	-	-
	Group 4	0.47	-	0.49	-	-	-
	Group 5	2.81	-	2.42	-	-	-

Note: - : Not available

Source: Own complilations from PSS' provided data

Indicator 4.3: Number of HIV patients using AIDS-related services

In all the studied provinces/cities, no data for this indicator.

Table 23. Số bệnh nhân HIV sử dụng các dịch vụ có liên quan tới HIV/AIDS

	Hòa Bình	Hà Nội	Thái Bình	Hải Phòng	HCMC	Cần Thơ
Number of HIV patients using AIDS-related services (persons)	-	-	-	-	-	-

Note: As HIV/AIDS-related programs are funded by international donors, and separated statistics for HIV/AIDS and non-HIV/AIDS patients are not available so no information is availble.

Source: Own complilations from PSS' provided data

Indicator 4.4: Percentage of the insured people who did not use HI cards at the registered health facilities for primary care

Table 24 presents the results from the survey, which are about the percentage of the insured people who did not use HI cards at the registered health facilities for primary care. There were differences between the studied provinces/cities: Hoà Bình had the highest rate (19.5%) while Thái Bình and Hải Phòng had the lowest rates (the same, and at 8.9%).

Table 24. Percentage of the insured people who did not use HI cards at the registered health facilities for primary care

Tuyến	Hòa Bình	Hà Nội	Thái Bình	Hải Phòng	HCMC	Cần Thơ
Percentage of the insured people who did not use HI cards at the registered health facilities for primary care	19.5	17.8	8.9	8.9	17.7	10.0

Source: Own complilations from PEIs at health facilities

Providing more detailed causes for not using SHI cards in the registered, **Table 25** shows various reasons by users and non-users of HIV/AIDS-related services. For the non-users of HIV/AIDS-related services, there were no differences in using cards for OP and IP services. The reason "Quality of care at the health facility is not good enough" accounted for the majority, followed by the reason "Inconvenient transportation". In contrast, for the users of HIV/AIDS-related services, the main reason was "Long waiting time, and complicated procedures" (about 38.3%).

Table 25. Usage of SHI cards in health care services

NON-USERS OF HIV/AIDS-RELATED SERVICES						
INPATIENCE	**Group 1 N=50**	**Group 2 N=149**	**Group 3 N=62**	**Group 4 N=221**	**Group 5 N=0**	**Total N=482**
When healthcare is needed, do you go to the SHI registered health facility for primary care? Yes	78	89.3	90.3	85.1	-	86.3
Why didn't you use the SHI registered health facility for primary care?						
Long waiting time, and complicated procedures	0	0	0	17.6	-	9
Discriminated	0	0	0	0	-	0
Quality of care at the health facility is	30	23.5	33.3	18.2	-	22.7

not good enough						
Inconvenient transportation	40	11.8	33.3	21.2	-	22.7
OUTPATIENCE	**Group 1 N=59**	**Group 2 N=369**	**Group 3 N=366**	**Group 4 N=897**	**Group 5 N=0**	**Total N=1691**
When healthcare is needed, do you go to the SHI registered health facility for primary care? Yes	84.7	89.2	90.2	91.6	-	90.5
Why didn't you use the SHI registered health facility for primary care?						
Long waiting time, and complicated procedures	11.1	8.1	20.6	20	-	16.7
Discriminated	0	0	0	1.4	-	0.7
Quality of care at the health facility is not good enough	55.6	45.9	29.4	30	-	35.3
Inconvenient transportation	33.3	16.2	17.6	31.4	-	24.7
USERS OF HIV/AIDS-RELATED SERVICES						
BOTH INPATIENCE & OUTPATIENCE	**Group 1 N=0**	**Group 2 N=43**	**Group 3 N=11**	**Group 4 N=130**	**Group 5 N=0**	**Total N=184**
When healthcare is needed, do you go to the SHI registered health facility for primary care? Yes	-	62.8	54.5	68.2	-	66.1
Why didn't you use the SHI registered health facility for primary care?						
Long waiting time, and complicated procedures	-	62.5	54.5	68.2	-	38.3
Discriminated	-	0	0	12.8	-	8.3
Quality of care at the health facility is not good enough	-	6.3	0	2.6	-	3.3
Inconvenient transportation	-	0.0	20.0	23.1	-	16.7

Source: Own calculations from PEIs at health facilities

Indicator 4.5: Percentage of the insured patients who must buy additional drugs

The results from PEIs about the percentage of the insured patients (non-users of HIV/AIDS-related services) who must by additional drugs are presented in **Table 26**, disaggregated by type of services (inpatience and outpatience) and membership group. For inpatience, the rate was 20 percent, while for outpatience it was 17 percent. In both inpatience and outpatience, Group 3 had the highest rate, followed by Group 1.

Table 26. Percentage of the insured patients who must buy additional drugs

Inpatience	Group 1	Group 2	Group 3	Group 4	Group 5	Total
%	20.0	22.8	32.3	19.0	-	22.0
Outpatience	**Group 1**	**Group 2**	**Group 3**	**Group 4**	**Group 5**	**Total**
%	20.3	16.3	22.1	14.6	-	16.8

Note: This table did not include users of HIV/AIDS-related services. The main reason for this was the number of users was too small to be disaggregated. –Number of observations for Group 5 was too small.

Source: Own calculations from PEIs at health facilities

Indicator 4.6: Percentage of the insured patients who must pay for additional technical services

Table 27 presents the percentage of the insured patients (non-users of HIV/AIDS-related services) who must by additional technical services. About 9.1 percent of the inpatients and 3.1 percent of outpatients must buy additional technical services. The same as the situation of buying additional drugs, Group 3 and Group 1 had higher rates of buying additional technical services, compared to other groups.

Table 27. Percentage of the insured patients who must buy additional technical services

Inpatience	Group 1	Group 2	Group 3	Group 4	Group 5	Total
%	10.0	8.7	16.1	7.2	-	9.1
Outpatience	**Group 1**	**Group 2**	**Group 3**	**Group 4**	**Group 5**	**Total**
%	1.7	1.6	3.6	3.7	-	3.1

Note: This table did not include users of HIV/AIDS-related services. The main reason for this was the number of users was too small to be disaggregated. –Number of observations for Group 5 was too small.

Source: Own calculations from PEIs at health facilities

5. Result 5: Ensure that SHI members are protected from financial risk and catastrophic health expenditures.

Indicator 5.1: Average per member out-of-pocket payments (i.e., allowances for physicians, charges for on-demand services, purchase of additional medicines, facilities, travel for caring...) required for services covered by SHI, by member category, clinical service group, and facility level

Table 28 shows the results of out-of-pocket (OOP) payments of the insured patients by type of care and membership group, while **Table 29** presents respective results by type of care and level of care. Table 28 indicates that, in both IP and OP services and in all membership group, payment for additional drugs accounted for the majority of OOP payments for additional drugs and technical services, while transportation and lodging costs accounted for about 80-90% of OOP payments for non-drugs and non-technical services. By type of care, however, OOP payments for all categories (additional drugs and technical services, and transportation, lodging) in

IP were much higher than those for OP. Such a situation could be explained by the fact that IP patients usually have more serious diseases and need to stay in health facilities longer than do OP patients.

Table 28. Average OOP payments of the insured patients, by type of care and membership group

INPATIENCE (Unit: VND)	**Group 1 N=42**	**Group 2 N=127**	**Group 3 N=52**	**Group 4 N=179**	**Group 5 N=0**	**Total N=400**
Average payments to buy additional drugs and technical services out of the current health facility						
- For additional drugs	19,738	134,328	148,955	281,001	-	189,860
- For additional technical services (such as tests, X-ray…)	7,857	51,235	97,512	99,613	-	74,223
- For consumables	2,405	12,119	17,780	120,417	-	60,331
- Other	-	1,857	55,400	25,056	-	18,848
Average payment for other categories						
- Transportation	155,769	644,864	485,854	677,994	-	587,401
- Lodging	467,051	985,835	588,258	758,789	-	775,941
- Gift/additional money for health staff…	-	47,679	102,273	95,952	-	71,319
- Other	35,250	100,000	11,364	118,416	-	90,517
OUTPATIENCE (Unit: VND)	**Group 1 N=51**	**Group 2 N=331**	**Group 3 N=308**	**Group 4 N=816**	**Group 5 N=1**	**Total N=1507**
Average payments to buy additional drugs and technical services out of the current health facility						
- For additional drugs	8,400	64,205	55,662	45,638	-	50,506
- For additional technical services (such as tests, X-ray…)	-	819	1,688	2,710	-	1,992
- For consumables	-	332	-	202	-	182
- Other	-	302	16	284	-	224
Average payment for other categories						
- Transportation	20,020	73,970	49,623	59,390	-	59,366
- Lodging	6,765	12,443	12,174	16,231	-	14,271
- Gift/additional money for health staff…	-	-	1,797	-	-	368
- Other	-	52	183	64	-	84

Note: This table did not include users of HIV/AIDS-related services. The main reason for this was the number of users was too small to be disaggregated. –Number of observations for Group 5 was too small.

Source: Own calculations from PEIs at health facilities

Similarly, Table 29 shows that, in both IP and OP services, the insured patients at central-level health facilities had much higher OOP payments than did their

counterparts at health facilities in other levels of care. OOP payments for additional drugs and transportation and lodging accounted for the majority in the total OOP payments.

Table 29. Average OOP payments of the insured patients, by type of care and level of care

INPATIENCE (Unit: VND)	**Central N=65**	**Provincial N=148**	**District N=157**	**Commune N=1**	**Private N=32**	**Total N=403**
Average payments to buy additional drugs and technical services out of the current health facility						
- For additional drugs	123,339	384,984	72,008	-	-	188,425
- For additional technical services (such as tests, X-ray…)	201,587	107,606	5,987	-	1,313	73,665
- For consumables	330,422	17,936	643	-	-	59,876
- Other	302	42,637	7,771	-	-	18,707
Average payment for other categories						
- Transportation	1,793,107	512,492	198,056	-	512,969	586,653
- Lodging	1,396,509	920,570	483,697	-	539,063	775,794
- Gift/additional money for health staff…	44,231	128,889	42,877	-	-	70,929
- Other	180,392	85,259	40,876	-	191,563	90,019
OUTPATIENCE (Unit: VND)	**Central N=207**	**Provincial N=392**	**District N=387**	**Commune N=252**	**Private N=273**	**Total N=1511**
Average payments to buy additional drugs and technical services out of the current health facility						
- For additional drugs	188,652	55,459	12,648	6,079	32,374	50,372
- For additional technical services (such as tests, X-ray…)	2,860	648	2,703	-	4,066	1,987
- For consumables	1,256	38	-	-	-	182
- Other	-	-	413	417	264	223
Average payment for other categories						
- Transportation	264,010	57,483	13,931	3,401	20,974	59,213
- Lodging	60,073	13,275	6,044	1,635	4,074	14,233
- Gift/additional money for health staff…	-	1,279	132	-	-	367
- Other	244	33	79	-	117	83

Note: This table did not include users of HIV/AIDS-related services. The main reason for this was the number of users was too small to be disaggregated. –: Number of observations for Group 5 was too small.

Source: Own calculations from PEIs at health facilities

Table 30 summarizes the results of OOP payments for additional drugs, technical services, transportation, and lodging as a percent of the total OOP payment and the

total healthcare cost. There are 3 indicators to be calculated here: (i) Rate of OOP payments within the health facilities (after getting paid by SHI); (ii) Rate of OOP payments for transportation and lodging in the total OOP payment – this shows indirect financial burden in health care; and (iii) Rate of OOP payments in the total cost for health care – this indicates the overall burden in health care.

In regard to (i), there were substantial differences by type of care and level of care. In particular, the rate of OOP payment within the health facilities was about 48 percent for IP services and 31 percent for OP services. These rates were quite similar to those in the National Health Accounts – NHA (MoH, 2016). By level of care, the rate reduced gradually from high level (central or equivalent) to low level (commune or equivalent). The rate at private health facilities was exceptionally high (about 80%), and one of the key factors was that benefit coverage of SHI for them has been limited.

For (ii), the trend was quite similar by level of care. However, there were differences between IP and OP services with the respective rate was at 33.7 percent and 41.4 percent. The rate for private health facilities was low, and this might be because of close locations so that patients had more convenient and low transportation and lodging, compared to other HFs.

With (iii), the results were quite similar as those in (i), in which the rate for IP services was much higher than that for OP services (42.5% compared to 32.5%), and the rate tended to decrease from high level of care to low level of care. The rate for private HFs was still very high.

Table 30. Some main OOP payments as a percent of total OOP and total healthcare cost

	OOP within the HF as a % of total OOP	***OOP for transportation and lodging as a % of total OOP***	***Total OOP as a % of total healthcare cost***
By type of care			
Inpatience	47.73%	33.74%	42.52%
Outpatience	30.97%	41.39%	32.48%
By level of care			
Central	47.49%	36.26%	42.19%
Provincial	30.48%	38.09%	37.08%
District	38.55%	42.01%	33.79%
Commune	18.96%	42.49%	33.01%
Private	80.03%	16.27%	58.63%

Note: This table did not include users of HIV/AIDS-related services. The main reason for this was the number of users was too small to be disaggregated.

Source: Own calculations from PEIs at health facilities

Indicator 5.2: Percentage of members requiring coping strategies due to out-of-pocket payments, by member category, and clinical service group

Table 31 shows the situation where the insured patients must look for alternative sources to pay for OOP. By membership group, about 82 percent of IP patients and nearly 98 percent of OP patients had to seek for financial sources to pay for OOP. The similar situation could be also found in regard to level of care.

Table 31. Rate of the insured patients who sought for financial sources to pay OOP

By membership group						
INPATIENCE	**Group 1 N=42**	**Group 2 N=127**	**Group 3 N=52**	**Group 4 N=179**	**Group 5 N=0**	**Total N=400**
%	92.9	75.6	80.8	83.8	-	81.8
OUTPATIENCE	**Group 1 N=51**	**Group 2 N=331**	**Group 3 N=308**	**Group 4 N=816**	**Group 5 N=1**	**Total N=1507**
%	100.0	95.2	99.4	97.8	-	97.6
By level of care						
INPATIENCE	**Central N=65**	**Provincial N=148**	**District N=157**	**Commune N=1**	**Private N=32**	**Total N=403**
%	75.4	80.4	82.2	-	96.9	81.6
OUTPATIENCE	**Central N=207**	**Provincial N=392**	**District N=387**	**Commune N=252**	**Private N=273**	**Total N=1511**
%	90.8	98.2	99.0	98.4	99.3	97.6

Note: This table did not include users of HIV/AIDS-related services. The main reason for this was the number of users was too small to be disaggregated. –: Number of observations for Group 5 was too small.

Source: Own calculations from PEIs at health facilities

Indicator 5.3: PSS payment as a proportion of total expenses associated with each encounter, by service group, member category

Table 32 shows SHI payment as a percent of the total cost for health care of the insured patients, disaggregated by type of care, membership group, and level of care. In both membership group and level of care, SHI payment rate for OP services was higher than that for IP services. Group 2 and Group 3 had higher SHI payment rate than did other groups, while HFs at commune level had higher SHI payment rate than did other HFs in other levels of care.

Table 32. SHI payment as a percent of the total cost for healthcare

By membership group						
INPATIENCE	**Group 1 N=42**	**Group 2 N=127**	**Group 3 N=52**	**Group 4 N=179**	**Group 5 N=0**	**Total N=400**
%	51.6	65.6	66.5	44.3	-	54.7
OUTPATIENCE	**Group 1 N=51**	**Group 2 N=331**	**Group 3 N=308**	**Group 4 N=816**	**Group 5 N=1**	**Total N=1507**
%	85.8	82.5	85.2	68.8	-	75.8
By level of care						
INPATIENCE	**Central N=65**	**Provincial N=148**	**District N=157**	**Commune N=0**	**Private N=32**	**Total N=402**
%	45.0	59.8	59.6	-	27.4	54.7

OUTPATIENCE	Central N=207	Provincial N=392	District N=387	Commune N=252	Private N=273	Total N=1511
%	62.4	75.8	80.3	85.0	71.2	75.8

Note: This table did not include users of HIV/AIDS-related services. The main reason for this was the number of users was too small to be disaggregated. –: Number of observations for Group 5 was too small.

Source: Own calculations from PEIs at health facilities

6. Result 6: Ensure the insured patients' satisfaction

Table 33 shows the results from PEIs at different health facilities at all levels of care, type of care and users and non-users of HIV/AIDS-related services. In general, in all categories, rates of 'very satisfied' and 'satisfied' were more than 80 percent, especially those for guidance and reception. Rates of 'very satisfied' and 'satisfied' for providing information about rights and responsibilities of the insured were also very high. Satisfaction rate, however, decreased from high level to low level of care, in which HFs at central level had lower satisfaction rate than did HFs in lower levels of care.

Table 33. Satisfaction/Dissatisfaction rate of the insured with healthcare services

Non-users of HIV-related services						
INPATIENCE	**Central N=97 (%)**	**Provincial N=194 (%)**	**District N=173 (%)**	**Private N=41 (%)**	**Commune N=2 (%)**	**Total N=507 (%)**
About guidelines, receptions, emergency services to patients (detailed, strict procedures, ordered, and convenient)						
Very satisfied/Satisfied	53.61	76.29	86.71	100	-	77.32
Normal	37.11	20.62	10.98	0	-	18.93
Very dissatisfied/Dissatisfied	9.28	3.09	2.31	0	-	3.75
Not applicable	0	0	0	0	-	0
Infrastructure of health facility to serve patients (bed, room, individual utensils, disabled-friendly)						
Very satisfied/Satisfied	47.42	67.01	78.61	100	-	69.82
Normal	35.05	26.8	15.61	0	-	22.49
Very dissatisfied/Dissatisfied	17.53	6.19	5.78	0	-	7.69
Not applicable	0	0	0	0	-	0
Environment to take care of patients (Clean, neat and fresh health check/treatment rooms)						
Very satisfied/Satisfied	50.52	78.87	82.66	100	-	76.53
Normal	32.99	16.49	13.87	0	-	17.36
Very dissatisfied/Dissatisfied	16.49	4.64	3.47	0	-	6.11
Not applicable	0	0	0	0	-	0
Rights and benefits of patients (to be provided with full information, respected to individual rights, well received to respond all requests)						

Very satisfied/Satisfied	60.82	75.26	82.66	100	-	76.92
Normal	29.9	22.16	16.18	0	-	19.92
Very dissatisfied/Dissatisfied	9.28	2.06	1.16	0	-	2.96
Not applicable	0	0.52	0	0	-	0.2
OUTPATIENCE	**Central N=233 (%)**	**Provincial N=458 (%)**	**District N=409 (%)**	**Private N=318 (%)**	**Commune N=340 (%)**	**Total N=1758 (%)**
About guidelines, receptions, emergency services to patients (detailed, strict procedures, ordered, and convenient)						
Very satisfied/Satisfied	76.82	74.45	70.9	92.14	89.12	79.98
Normal	21.03	22.05	23.23	7.55	10.29	17.29
Very dissatisfied/Dissatisfied	2.15	3.49	5.38	0.31	0.29	2.56
Not applicable	0	0	0.49	0	0.29	0.17
Infrastructure of health facility to serve patients (bed, room, individual utensils, disabled-friendly)						
Very satisfied/Satisfied	71.24	71.62	61.61	85.53	72.65	71.96
Normal	23.18	25.11	29.58	13.52	20.59	22.92
Very dissatisfied/Dissatisfied	5.15	2.84	5.38	0.94	6.76	4.15
Not applicable	0.43	0.44	3.42	0	0	0.97
Environment to take care of patients (Clean, neat and fresh health check/treatment rooms)						
Very satisfied/Satisfied	69.96	77.07	72.86	89.62	85.88	79.12
Normal	24.03	20.74	22.98	10.06	13.24	18.32
Very dissatisfied/Dissatisfied	4.29	1.31	3.67	0.31	0.88	1.99
Not applicable	1.72	0.87	0.49	0	0	0.57
Rights and benefits of patients (to be provided with full information, respected to individual rights, well received to respond all requests)						
Very satisfied/Satisfied	74.68	73.14	75.79	90.57	88.5	80.08
Normal	24.03	22.05	18.34	9.12	10.62	16.9
Very dissatisfied/Dissatisfied	1.29	4.59	5.87	0.31	0.88	2.96
Not applicable	0	0.22	0	0	0	0.06
Users of HIV/AIDS-related services						
OUTPATIENCE	**Central N=15 (%)**	**Provincial N=98 (%)**	**District N=194 (%)**	**Private N=0 (%)**	**Commune N=53 (%)**	**Total N=360 (%)**
About guidelines, receptions, emergency services to patients (detailed, strict procedures, ordered, and convenient)						
Very satisfied/Satisfied	73.33	89.80	89.18	-	94.34	89.44
Normal	26.67	10.20	10.82	-	5.66	10.56
Very dissatisfied/Dissatisfied	-	-	-	-	-	-

Not applicable	-	-	-	-	-	-
Infrastructure of health facility to serve patients (bed, room, individual utensils, disabled-friendly)						
Very satisfied/Satisfied	73.33	66.33	77.84	-	77.36	74.44
Normal	26.67	26.53	18.04	-	20.75	21.11
Very dissatisfied/Dissatisfied	-	2.04	1.03	-	1.89	1.39
Not applicable	-	5.10	3.09	-	-	3.06
Environment to take care of patients (Clean, neat and fresh health check/treatment rooms)						
Very satisfied/Satisfied	80.00	70.41	85.05	-	84.91	80.83
Normal	20.00	28.57	13.92	-	13.21	18.06
Very dissatisfied/Dissatisfied	-	1.02	1.03	-	-	0.83
Not applicable	-	-	-	-	1.89	0.28
Rights and benefits of patients (to be provided with full information, respected to individual rights, well received to respond all requests)						
Very satisfied/Satisfied	73.33	89.80	89.69	-	96.23	90.00
Normal	26.67	10.20	9.28	-	3.77	9.44
Very dissatisfied/Dissatisfied	-	-	0.52	-	-	0.28
Not applicable	-	-	0.52	-	-	0.28

Note: – Not available or sample size was too small to be disaggregated.

Source: Own calculations from PEIs at health facilities

Table 34 presents the satisfaction rate of the insured patients by membership group. The same as above, there were no significant differences in satisfaction rates between membership groups. On average, the satisfaction rate was about 95 percent for all categories.

Table 34. Satisfaction rate of the insured patients, by membership group

Non-users of HIV/AIDS-related services						
INPATIENCE	**Group 1 N=50**	**Group 2 N=149**	**Group 3 N=62**	**Group 4 N=221**	**Group 5 N=0**	**Total N=482**
About guidelines, receptions, emergency services to patients (detailed, strict procedures, ordered, and convenient)						
Very satisfied/Satisfied	74	81.88	72.58	76.47	-	77.39
Normal	26	15.44	20.97	19	-	18.88
Very dissatisfied/Dissatisfied	0	2.68	6.45	4.52	-	3.73
Not applicable	0	0	0	0	-	0
Infrastructure of health facility to serve patients (bed, room, individual utensils, disabled-friendly)						
Very satisfied/Satisfied	68	75.84	59.68	68.78	-	69.71
Normal	28	17.45	30.65	22.17	-	22.41
Very dissatisfied/Dissatisfied	4	6.71	9.68	9.05	-	7.88

Not applicable	0	0	0	0	-	0
Environment to take care of patients (Clean, neat and fresh health check/treatment rooms)						
Very satisfied/Satisfied	72	80.54	70.97	76.02	-	76.35
Normal	26	14.09	17.74	17.65	-	17.43
Very dissatisfied/Dissatisfied	2	5.37	11.29	6.33	-	6.22
Not applicable	0	0	0	0	-	0
Rights and benefits of patients (to be provided with full information, respected to individual rights, well received to respond all requests)						
Very satisfied/Satisfied	66	81.21	70.97	77.83	-	76.76
Normal	30	16.78	22.58	19.46	-	20.12
Very dissatisfied/Dissatisfied	4	2.01	6.45	2.26	-	2.9
Not applicable	0	0	0	0.45	-	0.21
OUTPATIENCE	**Group 1 N=59**	**Group 2 N=369**	**Group 3 N=366**	**Group 4 N=897**	**Group 5 N=1**	**Total N=1692**
About guidelines, receptions, emergency services to patients (detailed, strict procedures, ordered, and convenient)						
Very satisfied/Satisfied	71.19	79.4	78.69	80.82	-	79.73
Normal	23.73	17.34	18.31	16.83	-	17.49
Very dissatisfied/Dissatisfied	5.08	3.25	3.01	2.12	-	2.66
Not applicable	0	0	0	0.22	-	0.12
Infrastructure of health facility to serve patients (bed, room, individual utensils, disabled-friendly)						
Very satisfied/Satisfied	69.49	72.36	74.32	70.79	-	71.87
Normal	23.73	21.95	21.86	24.19	-	23.17
Very dissatisfied/Dissatisfied	5.08	5.42	3.83	3.34	-	3.96
Not applicable	1.69	0.27	0	1.67	-	1
Environment to take care of patients (Clean, neat and fresh health check/treatment rooms)						
Very satisfied/Satisfied	79.66	76.42	81.42	79.04	-	79.02
Normal	16.95	20.05	16.39	18.84	-	18.5
Very dissatisfied/Dissatisfied	3.39	2.98	1.91	1.34	-	1.89
Not applicable	0	0.54	0.27	0.78	-	0.59
Rights and benefits of patients (to be provided with full information, respected to individual rights, well received to respond all requests)						
Very satisfied/Satisfied	77.97	80.76	79.51	79.46	-	79.72
Normal	13.56	16.26	16.94	17.97	-	17.21
Very dissatisfied/Dissatisfied	8.47	2.98	3.55	2.46	-	3.02
Not applicable	0	0	0	0.11	-	0.06
Users of HIV/AIDS-related services						

OUTPATIENCE	Group 1 N=0	Group 2 N=43	Group 3 N=9	Group 4 N=127	Group 5 N=0	Total N=179
About guidelines, receptions, emergency services to patients (detailed, strict procedures, ordered, and convenient)						
Very satisfied/Satisfied	-	93.02	100	92.13	-	92.74
Normal	-	6.98	0	7.87	-	7.26
Very dissatisfied/Dissatisfied	-				-	
Not applicable	-				-	
Infrastructure of health facility to serve patients (bed, room, individual utensils, disabled-friendly)						
Very satisfied/Satisfied	-	88.37	88.89	72.44	-	77.09
Normal	-	6.98	0	22.05	-	17.32
Very dissatisfied/Dissatisfied	-	0	11.11	2.36	-	2.23
Not applicable	-	4.65	0	3.15	-	3.35
Environment to take care of patients (Clean, neat and fresh health check/treatment rooms)						
Very satisfied/Satisfied	-	93.02	100	81.1	-	84.92
Normal	-	6.98	0	17.32	-	13.97
Very dissatisfied/Dissatisfied	-	0	0	1.57	-	1.12
Not applicable	-	-	-	-	-	
Rights and benefits of patients (to be provided with full information, respected to individual rights, well received to respond all requests)						
Very satisfied/Satisfied	-	95.35	100	91.34	-	92.74
Normal	-	2.33	0	8.66	-	6.7
Very dissatisfied/Dissatisfied	-	0	0	0	-	0
Not applicable	-	2.33	0	0	-	0.56

Note: – Not available or sample size was too small to be disaggregated.

Source: Own calculations from PEIs at health facilities

APPENDICES

Appendix I: Provincial statistics for selecting districts

Table A 1. Statistics of Hoa Binh, 2014

Nam of district	Population (persons)	Number of hospitals	Number of regional health facilities	Number of CHCs and equivalent…	Number of hospital beds	Number of beds in regional health facilities	Number of beds in CHCs and equivalent…	Doctor	Physician	Nurse	Midwives	Pharmacist	Middle-degree pharmacist	Assistant pharmacist
Hòa Bình city	92,754	4	2	15	980	10	53	324	173	372	57	25	79	8
Dist. Đà Bắc	53,106	1	2	20	120	10	80	30	79	63	27	2	10	2
Dist. Mai Châu	54,333	1	2	23	150	10	92	37	72	67	33	0	8	8
Dist. Kỳ Sơn	32,170	1	1	10	70	5	36	20	60	27	19	1	11	2
Dist. Lương Sơn	93,125	1	2	20	100	15	80	43	95	64	22	2	30	6
Dist. Cao Phong	42,507	1	1	13	100	25	52	17	60	45	21	1	18	1
Dist. Kim Bôi	109,427	1	2	28	150	10	112	48	125	86	24	0	26	3
Dist. Tân Lạc	81,860	1	2	24	150	10	96	33	89	68	31	3	38	1
Dist. Lạc Sơn	137,737	1	3	29	140	15	119	31	127	81	33	1	22	8
Dist. Lạc Thủy	58,182	1	2	15	100	10	65	33	76	54	24	2	8	8
Dist. Yên Thủy	62,151	1	2	13	120	10	55	30	68	41	27	1	18	5
Total	**817,352**	**14**	**21**	**210**	**2180**	**130**	**840**	**646**	**1024**	**968**	**318**	**38**	**268**	**52**

Source: Statistical Yearbook 2014 of Hoa Binh Province

Table A 2. Statistics of Hanoi, 2014

Nam of district	Population (persons)	Number of hospitals	Number of regional health facilities	Number of CHCs and equivalent…	Number of hospital beds	Number of beds in regional health facilities	Number of beds in CHCs and equivalent…	Doctor	Physician	Nurse	Midwives	Pharmacist	Middle-degree pharmacist	Assistant pharmacist
Ba Đình	243.6													
Hoàn Kiếm	157.7													
Tây Hồ	156.6													
Long Biên	273.1													
Cầu Giấy	256.3													
Đống Đa	407.7													
Hai Bà Trưng	312.3													
Hoàng Mai	363.0													
Thanh Xuân	270.9													
Sóc Sơn	323.1													
Đông Anh	379.2													
Gia Lâm	257.8													
Nam Từ Liêm	216.8													
Thanh Trì	231.7													
Bắc Từ Liêm	318.3													
Mê Linh	214.8													
Hà Đông	292.7													
Sơn Tây	138.8													
Ba Vì	271.3													
Phúc Thọ	175.4													
Đan Phượng	154.9													
Hoài Đức	215.8													
Quốc Oai	177.4													
Thạch Thất	197.6													

Chương Mỹ	315.5													
Thanh Oai	188.1													
Thường Tín	239.6													
Phú Xuyên	188.3													
Ứng Hoà	194.0													
Mỹ Đức	186.7													

Source: Statistical Yearbook 2014 of Hanoi

Table A 3. Statistics of Thai Binh, 2014

Nam of district	Population (persons)	Number of hospitals	Number of regional health facilities	Number of CHCs and equivalent…	Number of hospital beds	Number of beds in regional health facilities	Number of beds in CHCs and equivalent…	Doctor	Physician		Nurse	Midwives	Pharmacist	Middle-degree pharmacist	Assistant pharmacist
Thái Bình City	185.7		12	0	19	2735	0	102	780	222	615	147	79	126	33
Dist. Quỳnh Phụ	231.9		2	0	38	270	0	101	72	80	112	48	8	83	4
Dist. Hưng Hà	248.7		2	0	35	260	0	105	88	100	103	40	7	82	5
Dist. Đông Hưng	233.1		1	0	44	200	0	110	92	130	76	35	6	86	2
Dist. Thái Thụy	248.9		2	0	48	260	0	150	94	98	96	33	5	84	4
Dist. Tiền Hải	209.8		2	0	35	280	0	101	100	110	116	40	6	84	5
Dist. Kiến Xương	212.3		1	0	37	180	0	105	96	80	93	40	5	85	7
Dist. Vũ Thư	218.3		2	0	30	150	0	80	89	85	135	45	8	96	9

Source: Statistical Yearbook 2014 of Thai Binh Province

Table A 4. Statistics of Hai Phong, 2014

Nam of district	Population (persons)	Number of hospitals	Number of regional health facilities	Number of CHCs and equivalent...	Number of hospital beds	Number of beds in regional health facilities	Number of beds in CHCs and equivalent...	Doctor	Physician	Nurse	Midwives	Pharmacist	Middle-degree pharmacist	Assistant pharmacist
Dist. Hồng Bàng	105,097	5	0	11	701	0	55	207	36	269	162	12	20	6
Dist. Ngô Quyền	170,760	3	1	13	240	10	65	199	45	282	31	42	39	4
Dist. Lê Chân	219,094	6	1	15	2	10	75	566	46	623	57	58	115	23
Dist. Hải An	111,657	1	0	8	50	0	40	54	35	35	4	16	53	3
Dist. Kiến An	108,003	4	0	10	1	0	50	408	119	953	78	33	78	9
Dist. Đồ Sơn	47,635	2	0	7	180	0	35	72	54	55	4	1	6	0
Dist. Dương Kinh	53,687	1	0	6	140	0	30	70	43	63	2	4	30	5
Dist. Thuỷ Nguyên	318,265	3	0	37	300	0	185	80	31	163	22	6	15	0
Dist. An Dương	172,891	1	0	16	180	0	80	63	32	73	19	3	32	3
Dist. An Lão	142,639	1	0	17	250	0	85	65	26	149	27	2	17	17
Dist. Kiến Thụy	136,169	1	0	18	150	0	90	48	34	95	15	20	56	22
Dist. Tiên Lãng	150,136	1	0	23	190	0	115	80	33	64	17	2	17	48
Dist. Vĩnh Bảo	176,962	1	0	30	230	0	150	50	39	109	22	9	18	2
Dist. Cát Hải	31,986	2	0	13	100	0	65	38	35	48	21	2	7	7
Dist. Bạch Long Vĩ	1,032	1	0	0	20	0	0	2	4	2	2	0	1	0

Source: Statistical Yearbook 2014 of Hai Phong

Table A 5. Statistics of HCMC, 2014

Nam of district	Population (persons)	Number of hospitals	Number of regional health facilities	Number of CHCs and equivalent…	Number of hospital beds	Number of beds in regional health facilities	Number of beds in CHCs and equivalent…	Doctor	Physician	Nurse	Midwives	Pharmacist	Middle-degree pharmacist	Assistant pharmacist
Dist. 1	200,297													
Dist. 2	140,288													
Dist. 3	193,694													
Dist. 4	187,157													
Dist. 5	171,562													
Dist. 6	257,183													
Dist. 7	312,376													
Dist. 8	430,580													
Dist. 9	284,990													
Dist. 10	238,755													
Dist. 11	228,030													
Dist. 12	499,569													
Dist. Gò Vấp	620,078													
Dist.Tân Bình	448,989													
Dist. Tân Phú	452,044													
Dist. Bình Thạnh	485,772													
Dist. Phú Nhuận	182,821													
Dist. Thủ Đức	517,772													
Dist. Bình Tân	672,309													
Dist. Củ Chi	390,722													
Dist. Hóc Môn	414,795													
Dist. Bình Chánh	551,545													
Dist. Nhà Bè	132,034													
Dist. Cần Giờ	74,386													

Source: Statistical Yearbook 2014 of HCMC

Table A 6. Statistics of Can Tho, 2014

Nam of district	Population (persons)	Number of hospitals	Number of regional health facilities	Number of CHCs and equivalent…	Number of hospital beds	Number of beds in regional health facilities	Number of beds in CHCs and equivalent…	Doctor	Physician	Nurse	Midwives	Pharmacist	Middle-degree pharmacist	Assistant pharmacist
Dist. Ninh Kiều	258,218	16	0	13	2938	0	162	1155	209	1344	230	240	1314	192
Dist. Ô Môn	135,971	1	0	7	200	0	35	46	69	85	29	7	32	0
Dist. Bình Thủy	120,576	1	0	8	60	0	0	41	55	33	20	3	10	0
Dist. Cái Răng	91,927	2	0	7	350	0	11	187	49	223	36	4	29	0
Dist. Thốt Nốt	166,639	1	0	9	300	0	63	67	76	156	41	7	47	0
Dist. Vĩnh Thạnh	116,511	1	0	11	80	0	55	39	61	34	29	5	22	1
Dist. Cờ Đỏ	126,427	0	0	10	0	0	51	21	49	20	16	4	15	0
Dist. Phong Điền	101,630	1	0	7	60	0	25	28	45	34	16	2	17	0
Dist. Thới Lai	124,370	1	0	13	80	0	29	30	69	35	27	1	19	0

Source: Statistical Yearbook 2014 of Can Tho

Appendix II: Survey Tools

Please see the detailed tools attached to this Report.

Appendix III: Other Survey Results

Table A 7. Understanding of the insured about Health Insurance Law (Non-users of HIV/AIDS-related services)

	Sex		Age group				TOTAL
	Male N=1013 (%)	Female N=1252 (%)	0–19 N=214 (%)	20 – 39 N=387 (%)	40 – 59 N=771 (%)	60+ N=893 (%)	N=2265 (%)
Ever heard about the following topics on health insurance in health checks-up							
Rights of the insured	77.7	76.8	70.6	81.7	76.4	77.5	77.2
Responsibilities of the insured	63.1	60.8	54.7	63.3	60.2	64.3	61.8
Benefit level that the insured will receive when having health checks at health facilities	71.3	70.8	64.5	73.1	72.1	70.8	71
Rights of the patients	52.1	47	38.3	44.7	51.2	52.2	49.3
Information sources	N=1008	N=1242	N=213	N=387	N=762	N=888	N=2250
Local socio-political org. staff	35.7	35.2	26.3	26.4	41.3	36.5	35.4
Health staff	43.1	49.4	43.2	41.6	47.1	49	46.5
Village health workers/population affiliates	15.8	20	10.8	13.7	21.8	18.7	18.1
SHI staff	18.7	23.4	13.1	20.9	24.9	20.3	21.3
Family members	33.9	34.3	30.5	29.5	37.9	33.8	34.1
Friends/neighbors	30.8	31.6	16.4	34.4	36.4	29.1	31.2
TV/Radio	51.8	43.3	31.5	38.8	50.1	51.9	47.1
Commune radio	32.8	29.5	17.8	23.5	34.6	34.2	31
Book, magazine, poster, advertisement screen	25	19.9	21.6	21.2	22.7	22.3	22.2
Internet	15.6	14.7	13.6	33.6	14.2	8.1	15.1
Health insurance agency	7.9	11.8	2.3	10.1	13.8	8.8	10.1
Other	9.9	10.9	22.1	9.8	9.1	9.1	10.4
Know the benefits of an insured							
Is provided HI card	89.4	88.3	81.3	90.4	88.7	90	88.8
Choose the primary care facility	69.6	67.4	55.1	74.4	70.9	66.7	68.4
Is health checked/treated	94	94.2	89.7	94.6	93.6	95.3	94.1
Is paid health care costs by health insurance orgs according to SHI regulations	88.8	87.9	78	89.1	88.5	90.4	88.3
Ask relevant orgs/individuals to explain and provide more information about SHI benefits	69.5	64.8	58.9	71.3	66.3	67.4	66.9
Prosecute illegal/violated activities according to SHI Law	57.3	53.1	50	62	56.2	52.1	55
Do not know	3	2.6	5.6	1.3	3.5	2.1	2.8
Know the responsibilities of an							

insured							
Pay full premium timely	87	85.1	75.7	89.7	86.4	86.3	85.9
Use HI card for right purposes; do not give HI card to other persons; keep HI card clean, untorn	93.6	93.8	87.9	95.3	93.6	94.5	93.7
Follow HI-based health care procedures strictly	84.4	85	72.4	87.1	86.4	85.2	84.7
Pay additional costs which are not covered	83.6	82.3	73.4	85.3	84.3	83	82.9
Follow all regulations and guidelines by SHI organizations and health facilities	76.6	73.2	64.5	78.3	75.5	74.9	74.7
Do not know	4.1	3.7	7.9	2.3	4.5	3	3.9
When having health checks, know what documents an insured needs to bring							
Bring SHI card	98.3	97.9	95.8	98.4	98.2	98.4	98.1
ID with photo	90.3	90.7	63.6	94.3	95.6	90.9	90.5
Certificate of birth for children under 6	1.9	1.0	7.0	1.8	0.9	0.3	1.4
Introduction or referral document	14	11.8	8.4	9.8	13.2	14.8	12.8
Other	32.6	33.9	22.9	20.2	35.1	39.9	33.3
Do not know	0.6	1.0	2.8	0.5	0.4	0.8	0.8

Table A 8. Understanding of the insured about Health Insurance Law (Users of HIV/AIDS-related services)

	Sex		**Age group**				**TOTAL**
	Male N=223 (%)	**Female N=152 (%)**	**0–19 N=1 (%)**	**20 – 39 N=233 (%)**	**40 – 59 N=132 (%)**	**60+ N=9 (%)**	**N=375 (%)**
Ever heard about the following topics on health insurance in health checks-up							
Rights of the insured	69.1	82.9	100	71.2	80.3	77.8	74.7
Responsibilities of the insured	52.5	58.6	0	54.9	55.3	55.6	54.9
Benefit level that the insured will receive when having health checks at health facilities	58.7	77.6	0	67	66.7	55.6	66.4
Rights of the patients	35	42.8	100	34.3	44.7	33.3	38.1
Information sources	N=223	N=152	N=1	N=233	N=132	N=9	N=375
Local socio-political org. staff	30	36.2	0	31.8	34.8	22.2	32.5
Health staff	43.9	57.2	0	50.6	47	55.6	49.3
Village health workers/population affiliates	20.2	24.3	0	22.3	22.7	0	21.9
SHI staff	13.9	23	0	18.9	16.7	0	17.6
Family members	26	33.6	0	30.5	27.3	22.2	29.1

	Sex		Age group				TOTAL
	Male N=223 (%)	Female N=152 (%)	0–19 N=1 (%)	20 – 39 N=233 (%)	40 – 59 N=132 (%)	60+ N=9 (%)	N=375 (%)
Friends/neighbors	22.4	34.9	100	28.3	27.3	0	27.5
TV/Radio	44.8	53.3	0	48.1	51.5	11.1	48.3
Commune radio	23.3	27.6	0	25.8	25.8	0	25.1
Book, magazine, poster, advertisement screen	21.1	23.0	0	21.9	22.7	11.1	21.9
Internet	11.2	10.5	100	13.7	5.3	11.1	10.9
Health insurance agency	6.7	7.2	0	6.4	8.3	0	6.9
Other	5.8	7.2	0	8.6	3	0	6.4
Know the benefits of an insured							
Is provided HI card	94.2	92.8	100	95.3	90.2	100	93.6
Choose the primary care facility	65	70.4	100	70	62.1	66.7	67.2
Is health checked/treated	93.3	96.1	100	93.6	95.5	100	94.4
Is paid health care costs by health insurance orgs according to SHI regulations	84.3	88.8	100	87.6	84.8	66.7	86.1
Ask relevant orgs/individuals to explain and provide more information about SHI benefits	68.6	67.1	100	71.2	62.9	55.6	68
Prosecute illegal/violated activities according to SHI Law	56.5	54.6	0	56.2	56.1	44.4	55.7
Do not know	2.2	2	0	1.7	3	0	2.1
Know the responsibilities of an insured							
Pay full premium timely	91.9	89.5	100	92.3	88.6	88.9	90.9
Use HI card for right purposes; do not give HI card to other persons; keep HI card clean, untorn	92.4	94.1	100	94.4	90.2	100	93.1
Follow HI-based health care procedures strictly	85.2	84.2	100	88.4	78.8	77.8	84.8
Pay additional costs which are not covered	77.6	80.9	100	81.1	75	77.8	78.9
Follow all regulations and guidelines by SHI organizations and health facilities	68.6	69.1	100	70.8	65.2	66.7	68.8
Do not know	2.2	3.3	0	2.1	3.8	0	2.7
When having health checks, know what documents an insured needs to bring							
Bring SHI card	88.8	84.2	100	87.6	84.8	100	86.9
ID with photo	74	81.6	0	77.7	75	100	77.1

	Sex		Age group				TOTAL
	Male N=223 (%)	Female N=152 (%)	0–19 N=1 (%)	20 – 39 N=233 (%)	40 – 59 N=132 (%)	60+ N=9 (%)	N=375 (%)
Certificate of birth for children under 6	4.9	6.6	0	6	5.3	0	5.6
Introduction or referral document	9	8.6	0	6.9	12.1	11.1	8.8
Other	33.2	36.2	0	32.6	36.4	55.6	34.4
Do not know	3.6	0	0	1.7	3	0	2.1

Table A 9. Utilization rate, distance, transportation time, and means of transportation to HFs of the insured (Non-users of HIV services), by sex and age

	Sex		Age group				TOTAL
	Male N=1013	Female N=1252	0–19 N=214	20 – 39 N=387	40 – 59 N=771	60+ N=893	N=2265
The nearest CHC							
Ever visited (%)	40.5	45	50.5	36.7	46.6	40.9	43
Average distance (km)	1.8	1.7	1.7	2.1	1.7	1.6	1.7
Most frequently used means of transportation (%)							
Walking	31.9	68.1	7.14	7.62	37.14	48.1	100
Motorbike	49.54	50.46	15.66	20.04	35.34	28.96	100
Car	33.33	66.67	11.11	0	22.22	66.67	100
Other	33.17	66.83	3.41	7.32	40.98	48.29	100
Average transportation time (minutes)	10.2	12	10.3	10.2	10.7	12.6	11.3
The nearest district hospital							
Ever visited (%)	65.9	64.4	63.1	61.5	66.1	66.3	65.1
Average distance (km)	7.3	6.8	7.2	7.6	7.3	6.6	7
Most frequently used means of transportation (%)							
Walking	42.86	57.14	5.71	4.29	25.71	64.29	100
Motorbike	47.39	52.61	10.26	19.63	36.43	33.69	100
Car	36.8	63.2	8.8	8.8	22.4	60	100
Other	38.1	61.9	3.4	1.36	34.01	61.22	100
Average transportation time (minutes)	21.4	23.1	19.5	20	24.3	22.2	22.3
The nearest provincial hospital							
Ever visited (%)	57.8	56.6	46.3	47.3	55.8	65.3	57.2
Average distance (km)	18.8	18.4	22.2	20.8	20.5	15.9	18.6
Most frequently used means of transportation (%)							

	Sex		Age group				TOTAL
	Male N=1013	Female N=1252	0–19 N=214	20 – 39 N=387	40 – 59 N=771	60+ N=893	N=2265
Walking	45.95	54.05	8.11	5.41	29.73	56.76	100
Motorbike	45.92	54.08	7.81	17.6	34.62	39.98	100
Car	45.22	54.78	8.41	8.7	28.99	53.91	100
Other	35.19	64.81	0	0	38.89	61.11	100
Average transportation time (minutes)	40.3	43.1	51.6	44.4	46.2	36	41.8
The nearest central hospital							
Ever visited (%)	29.1	28	18.7	25.8	30.7	30.1	28.5
Average distance (km)	110.6	90.6	95.5	91.2	111.8	95	100.4
Most frequently used means of transportation (%)							
Walking (n=2)	-	-	-	-	-	-	-
Motorbike	36.99	63.01	9.83	23.12	38.15	28.9	100
Car	49.67	50.33	5.01	12.64	35.95	46.41	100
Other	8.33	91.67	0	16.67	41.67	41.67	100
Average transportation time (minutes)	163.1	169.4	136.4	141.1	206.9	144.2	166.6
The nearest private hospital/clinic							
Ever visited (%)	30.8	33.6	36.9	42.1	33	26.4	32.3
Average distance (km)	10	8.1	4.8	9.8	9.2	9.3	8.9
Most frequently used means of transportation (%)							
Walking	47.44	52.56	14.1	17.95	28.21	39.74	100
Motorbike	42.48	57.52	11.81	26.48	36	25.71	100
Car	56.34	43.66	9.86	11.27	25.35	53.52	100
Other	21.05	78.95	0	1.75	45.61	52.63	100
Average transportation time (minutes)	26	23.6	15.5	24.1	27.5	25.2	24.7
The current HF for health care							
Average distance (km)	31.5	24.2	26.1	29.2	33.3	22.5	27.6
Most frequently used means of transportation (%)							
Walking	38.3	61.7	5.85	6.91	33.51	53.72	100
Motorbike	47.13	52.87	10.96	21.99	34.33	32.72	100
Car	46.86	53.14	9.59	14.02	31	45.39	100
Other	30.91	69.09	3.18	4.55	39.55	52.73	100
Average transportation time (minutes)	54.6	54.1	45.5	57	64.8	46.1	54.3

Table A 10. Utilization rate, distance, transportation time, and means of transportation to HFs of the insured (Users of HIV services), by sex and age

	Sex		Age group				TOTAL
	Male N=223	Female N=152	0–19 N=1	20 – 39 N=233	40 – 59 N=132	60+ N=9	N=375
The nearest CHC							
Ever visited (%)	36.8	43		38.7	39.4	62.5	39.4
Average distance (km)	3	2.8		3	2.8	1.6	2.9
Most frequently used means of transportation (%)							
Walking	41.18	58.82		52.94	47.06	0	100
Motorbike	58.18	41.82		61.82	33.64	4.55	100
Car	50	50		0	100	0	100
Other	52.94	47.06		70.59	29.41	0	100
Average transportation time (minutes)	11.8	11.3		12.4	10.5	8.2	11.6
The nearest district hospital							
Ever visited (%)	50.5	51		50.4	48.5	100	50.7
Average distance (km)	6.9	7.6		7.3	7.1	7.4	7.2
Most frequently used means of transportation (%)							
Walking	100	0		0	0	100	100
Motorbike	59.88	40.12		64.07	31.74	4.19	100
Car	62.5	37.5		37.5	62.5	0	100
Other	41.67	58.33		50	50	0	100
Average transportation time (minutes)	19.6	20.9		18.9	25.6	20.1	19.6
The nearest provincial hospital							
Ever visited (%)	57.3	51.7		54.3	56.1	62.5	55
Average distance (km)	18.5	33.8		26.8	19.5	23.6	24
Most frequently used means of transportation (%)							
Walking	0	100		0	0	100	100
Motorbike	66.67	33.33		60.78	36.6	2.61	100
Car	48.94	51.06		65.96	34.04	0	100
Other	50	50		0	100	0	100
Average transportation time (minutes)	41	53.7		48.1	42.2	45	45.8
The nearest central hospital							

	Sex		Age group				TOTAL
	Male N=223	Female N=152	0–19 N=1	20 – 39 N=233	40 – 59 N=132	60+ N=9	N=375
Ever visited (%)	19.1	20.5		21.3	16.7	25	19.7
Average distance (km)	60.7	49.8		53	61	78	56.1
Most frequently used means of transportation (%)							
Walking (n=2)	1	2		100	0	0	100
Motorbike	100	0		61.54	35.9	2.56	100
Car	51.28	48.72		72.73	24.24	3.03	100
Other	63.64	36.36		67.12	30.14	2.74	100
Average transportation time (minutes)	95.9	77		87.1	85.5	127.5	87.8
The nearest private hospital/clinic							
Ever visited (%)	20.9	27.8		23	24.2	37.5	23.7
Average distance (km)	9.7	7.1		7.5	9.3	18.5	8.5
Most frequently used means of transportation (%)							
Walking	45.45	54.55		72.73	27.27	0	100
Motorbike	53.62	46.38		60.87	36.23	2.9	100
Car	50	50		50	25	25	100
Other	50	50		25	75	0	100
Average transportation time (minutes)	18	17.5		15.8	20.5	22.7	17.8
The current HF for health care							
Average distance (km)	21.5	25.1		19.9	27.5	32.1	23
Most frequently used means of transportation (%)							
Walking	54.55	45.45		81.82	9.09	9.09	100
Motorbike	61.99	38.01		63.47	33.95	2.21	100
Car	53.57	46.43		53.57	44.64	1.79	100
Other	46.88	53.13		56.25	43.75	0	100
Average transportation time (minutes)	34.1	42.7		35.2	40.6	46.3	37.5

Table A 11. Utilization rate, distance, transportation time, and means of transportation to HFs of the insured (Non-users of HIV services), by membership group

	Group 1 N=109	Group 2 N=518	Group 3 N=428	Group 4 N=1118	Group 5 N=1	Total N=2174
The nearest CHC						
Ever visited (%)	51.4	59.8	29.9	37.1		41.8
Average distance (km)	1.7	2.1	1.5	1.7		1.8
Most frequently used means of transportation (%)						
Walking	3.76	34.41	23.66	38.17		100
Motorbike	9.19	33.02	9.38	48.41		100
Car	0	55.56	11.11	33.33		100
Other	0.56	35.56	18.33	45.56		100
Average transportation time (minutes)	8.7	12.5	12.8	10.7		11.4
The nearest district hospital						
Ever visited (%)	63.3	74.7	56.5	63.2		64.7
Average distance (km)	6.7	9.4	5.3	6.4		7
Most frequently used means of transportation (%)						
Walking	2.9	15.94	42.03	39.13		100
Motorbike	5.55	26.92	13.23	54.21		100
Car	5.13	37.61	16.24	41.03		100
Other	0	0	100	0		100
Average transportation time (minutes)	21.2	28.8	19.8	19.7		22.3
The nearest provincial hospital						
Ever visited (%)	51.4	56.6	73.8	50.9		56.8
Average distance (km)	13.7	28.3	12.2	17.7		18.6
Most frequently used means of transportation (%)						
Walking	5.56	8.33	55.56	30.56		100
Motorbike	4.86	20.05	23.09	51.88		100
Car	4.33	34.67	24.15	36.84		100
Other	0	23.08	53.85	23.08		100
Average transportation time (minutes)	41.1	55.3	30.1	41.3		41.7
The nearest central hospital						
Ever visited (%)	20.2	25.3	34.6	28.7		28.6

	Group 1 N=109	Group 2 N=518	Group 3 N=428	Group 4 N=1118	Group 5 N=1	Total N=2174
Average distance (km)	49.8	134.6	88.1	97.1		100.6
Most frequently used means of transportation (%)						
Walking (n=2)	0	0	100	0		100
Motorbike	5.23	11.63	15.12	68.02		100
Car	2.98	25.23	26.38	45.41		100
Other	0	16.67	41.67	41.67		100
Average transportation time (minutes)	65.3	206.4	136.1	173.8		167.8
The nearest private hospital/clinic						
Ever visited (%)	44	22.8	20.8	40.8		32.7
Average distance (km)	5.2	12.4	7.6	8.7		9
Most frequently used means of transportation (%)						
Walking	7.69	5.13	21.79	65.38		100
Motorbike	7.48	15.35	9.65	67.52		100
Car	7.04	33.8	8.45	50.7		100
Other	0	19.23	32.69	48.08		100
Average transportation time (minutes)	16.9	32.3	22.6	24		24.7
The current HF for health care						
Average distance (km)	99.1	99.8	100	99.8		99.8
Most frequently used means of transportation (%)	9.6	38	21.5	28.1		28.3
Walking	2.41	22.89	28.92	45.78		100
Motorbike	6.09	20.37	16	57.53		100
Car	4.57	30.48	21.9	42.86		100
Other	1.03	29.74	30.26	38.97		100
Average transportation time (minutes)	22.6	73.6	47.1	53.2		55.4

Table A 12. Utilization rate, distance, transportation time, and means of transportation to HFs of the insured (Non-users of HIV services), by membership group

	Group 1 N=0	Group 2 N=43	Group 3 N=11	Group 4 N=130	Group 5 N=0	Total N=184
The nearest CHC						
Ever visited (%)	--	44.2	45.5	39.5	--	41
Average distance (km)	--	1.1	1.7	2.5	--	2.1

	Group 1 N=0	Group 2 N=43	Group 3 N=11	Group 4 N=130	Group 5 N=0	Total N=184
Most frequently used means of transportation (%)						
Walking	--	54.55	0	45.45	--	100
Motorbike	--	17.24	6.9	75.86	--	100
Car	--	0	0	100	--	100
Other	--	60	20	20	--	100
Average transportation time (minutes)	--	9.4	11	10.8	--	10.6
The nearest district hospital						
Ever visited (%)	--	44.2	45.5	65.9	--	59.6
Average distance (km)	--	6.8	6.8	7.7	--	7.5
Most frequently used means of transportation (%)						
Walking	--	0	0	100	--	100
Motorbike	--	17.35	5.1	77.55	--	100
Car	--	16.67	0	83.33	--	100
Other	--	25	0	75	--	100
Average transportation time (minutes)	--	18.2	27	19.6	--	19.7
The nearest provincial hospital						
Ever visited (%)	--	41.9	27.3	58.1	--	52.5
Average distance (km)	--	25.1	17	23.7	--	23.7
Most frequently used means of transportation (%)						
Walking	--				--	100
Motorbike	--	16.22	4.05	79.73	--	100
Car	--	26.32	0	73.68	--	100
Other	--	50	0	50	--	100
Average transportation time (minutes)	--	58.3	53.3	41.6	--	45.2
The nearest central hospital						
Ever visited (%)	--	7	9.1	20.9	--	16.9
Average distance (km)	--	20.7	110	47.6	--	47
Most frequently used means of transportation (%)						
Walking (n=2)	--				--	
Motorbike	--	14.29	0	85.71	--	100
Car	--	0	10	90	--	100

	Group 1 N=0	Group 2 N=43	Group 3 N=11	Group 4 N=130	Group 5 N=0	Total N=184
Other	--				--	
Average transportation time (minutes)	--	50	180	82.8	--	82.7
The nearest private hospital/clinic						
Ever visited (%)	--	7	0	32.6	--	24.6
Average distance (km)	--	3.5		7.6	--	7.3
Most frequently used means of transportation (%)						
Walking	--	0	--	100	--	100
Motorbike	--	8.82	--	91.18	--	100
Car	--	0	--	100	--	100
Other	--	0	--	100	--	100
Average transportation time (minutes)	--	8.3	--	14.9	--	14.5
The current HF for health care						
Average distance (km)	--	100	100	99.2	--	99.5
Most frequently used means of transportation (%)		10.5	6.3	19.1		16.2
Walking	--	80	0	20	--	100
Motorbike	--	16.78	6.29	76.92	--	100
Car	--	18.75	0	81.25	--	100
Other	--	61.54	15.38	23.08	--	100
Average transportation time (minutes)	--	27.1	21.5	34.1	--	31.9