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# MINISTRY OF HEALTH



## National Health Accounts, Bhutan

Fiscal Years 2014-15 & 2015-16



## Acknowledgement

The study and report would not have been possible without the support of many organizations. The Ministry would like to extend its sincere gratitude to all involved for their contributions in making this possible.

The Ministry is grateful to the World Health Organization for providing financial and technical support to conduct the study.

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## Forward

In response to the pressing need for reliable and comparable statistics on health expenditure and financing, Ministry of Health (MoH), with the support from the World Health Organization (WHO), initiated the conduct of the first ever National Health Accounts (NHA) study in 2011 for the fiscal year 2009-10. Ministry also conducted NHA for the fiscal year 2011-12 and 2012-13. NHA is a systematic description of the financial flows related to consumption of health care goods and services from expenditure perspective.

The current study is the third round covering two fiscal years, 2014-15 and 2015-16. The estimates of the national health expenditures are described in thirteen dimensions covering consumer, provision and financing interfaces, supported by detailed methodological documentation. The findings of all rounds of the health accounts study will provide a reliable comparative source of health expenditure data.

The study results indicate that for both fiscal years, the Royal Government of Bhutan has been the principal financier of the health system in Bhutan. The government share of current health expenditures in financial year 2014-15 and 2015-16 were 72% and 70% respectively. Current health expenditure as % of GDP is around 3.85% and 3.71% respectively for the financial year 2014-15 and 2015-16. Donors contributed to about 5% of Current Health Expenditure. Household's contribution (Out of pocket) to current health expenditures in both the fiscal years was around 20 %.

The Royal Government of Bhutan remains committed to maintaining free access to basic health services for all our citizens, in accordance with the Constitution of the Kingdom of Bhutan. Against the backdrop of complex macroeconomics of health and several other new emerging health challenges, the Ministry strives to sustain free health care by using the resources in the most efficient and effective manner.

In this context, I am pleased to present the NHA Report for the fiscal year 2014-15 and 2015-16, which provides the much-needed updates on the health financing scenario for evidence based health care planning and decision-making. I am confident that this report will be useful to all of our valued partners, both national and international, as we collectively strive to improve the country's health care system.

I would like to thank the WHO for providing financial and technical support in conducting the study. I also take this opportunity to extend my sincere appreciation to all our colleagues for their support to the NHA study team.

Lastly, I take great pride in commending the national NHA team from the MoH for their efforts in successfully completing the study and bringing out this important report.



(Dr. Ugen Dophu)  
Secretary



Acknowledgement .....i

Forward.....ii

List of Tables .....iv

List of Figures .....v

Abbreviations.....vi

Executive Summary .....vii

1 Overview of Health Care Financing..... 1

2 NHA 2014 -15 & 2015 -16 in Bhutan .....3

3 Overall Health Expenditure for FY 2014-15 and 2015-16.....3

    3.1 CHE in Bhutan: FY 2014-15 & 2015-16 .....4

    3.2 CF in Bhutan: FY 2014-15 & 2015-16.....4

    3.3 Health Expenditures as a percentage of GDP .....4

    3.4 Per Capita Health Expenditure .....5

4 CHE by Consumer Interface .....5

5 CHE by Provider Interface .....14

6 CHE by Financial Interface .....19

7 Methodology .....23

8 References .....31

9 Appendix: SHA 2011 Standard Tables.....32

10 Team Members.....73

## List of Tables

Table No	Title	Page
Table 1	GDPs, Health expenditure types, and their relative sizes in FY 2014 -15 and FY 2015 -16	7
Table 2	Per capita health expenditure during FY 2014 -15 and FY 2015 -16	7
Table 3	CHE in FY 2014 -15&2015 -16 by health care functions	9-12
Table 4	Distribution of CHE by Age groups in during FY 2014 -15 and FY 2015 -16	12
Table 5	Distribution of CHE by Gender in during FY 2014 -15 and FY 2015 -16	13
Table 6	CHE in FY 2014 -15 and 2015 -16 by broader disease Categories	15
Table 7	CHE by Regions and Dzongkhag level	15-16
Table 8	Distribution of CHE by providers in during FY 2014 -15 and FY 2015 -16	17-18
Table 9	Distribution of CHE in FY 2014 -15 and FY 2015 -16 by factors of provision	20
Table 10	Distribution of CHE in FY 2014 -15 and 2015 -16 by institutional units providing revenues to financing schemes	21
Table 11	Distribution of CHE in FY 2014 -15 and 2015 -16 by Revenues of Health Care Financing Schemes to financing schemes	22
Table 12	Distribution of CHE in FY 2014 -15 and 2015 -16 by Financing Schemes	23-24
Table 13	Distribution of CHE in FY 2014 -15 and 2015 -16 by Financing Agents	24-25
Table 14	Financing Schemes and Revenues of Health Care Financing Schemes (HF X FS) Cross Tabulation in FY 2014 -15	32-34
Table 15	Financing schemes and Revenues of Health Care Financing Schemes (HF x FS) Cross Tabulation in FY 2015 -16	35-36
Table 16	Health Care Providers and Financing Schemes (HP X HF) Cross Tabulation in FY 2014 -15	37-40
Table 17	Health Care Providers and Financing Schemes (HP X HF) Cross Tabulation in FY 2015 -16	41-43
Table 18	Health Care Functions and Financing Schemes Classification (HC X HF) Cross Tabulation in FY 2014 -15	44-49
Table 19	Health Care Functions and Financing Schemes Classification (HC X HF) Cross Tabulation in FY 2015 -16	50-52
Table 20	Health Care functions and Health Care Providers (HC X HP) Cross Tabulation in FY 2014 -15	53-58
Table 21	Health Care Functions and Health Care Providers (HC X HP) Cross Tabulation in FY 2015 -16	59-63
Table 22	Health Care Providers and Factors of Provision (HP X FP) Cross Tabulation in FY 2014 -15	64-67

<b>Table No</b>	<b>Title</b>	<b>Page</b>
Table 23	Health Care Providers and Factors of Provision (HP X FP) Cross Tabulation in FY 2015 -16	68-70
Table 24	Distribution of CHE Disease Classification in FY 2014 -15 & 2015-16	71-72

## List of Figures

<b>Figure No</b>	<b>Title</b>	<b>Page</b>
Figure 1	Bhutan Health Financing system	4
Figure 2	Overall health Expenditure for FY 2014-15 and 2015-16	6
Figure 3	Percentage distribution of CHE in FY 2014/16 and 2015 -16 by different health care functions	8
Figure 4	Per capita CHE in different age groups	13
Figure 5	Comparisons of per capita CHE in FY 2014 -15 and FY 2015 -16	14
Figure 6	CHE ( Nu million) by major disease groups in FY 2014 -15 and FY 2015/16	14
Figure 7	Distribution of CHE (Nu million) by different health care providers in FY 2014 -15 and FY 2015 -16	18
Figure 8	Percentage distribution of CHE by Factors of Provision in FY 2014 -15 and FY 2015 -16	19

## Abbreviations

BHTF	Bhutan Health Trust Fund
BHU	Basic Health Unit
BMHC	Bhutan Medical and Health Council
BNCA	Bhutan Narcotic Control Authority
CF	Capital Formation
CHE	Current Health Expenditure
DIS	Classification of disease/conditions
DRA	Drug Regulatory Authority
FA	Financing Agents
FP	Factors of Health Care Provision
FS	Revenues of Health Care Financing Schemes
FSRI	Institutional Units Providing Revenues to Financial Schemes
FY	Fiscal Years
GDP	Gross Domestic Product
HAPT	Health Accounts Production Tool
HC	Health Care Functions Classification
HC	Health Care Function
HF	Financing Schemes
HK	Capital Account
HP	Health Care Provider
JDWNRH	JDWNRH
MoF	MoF
MoH	MoH
NGO	Non-Governmental Organizations
NHA	National Health Account
OOPS	Household Out of Pocket Expenditures
PPD	Policy Planning Division
RGOB	Royal Government of Bhutan
RICB	Royal Insurance Cooperation of Bhutan
SHA 2000	System of Health Account 2000
SHA 2011	System of Health Account 2011
SNL	Sub National Level
TCAM	Traditional, Complementary and Alternative Medicine
WHO	World Health Organization

## Executive Summary

This National Health Account (NHA) report presents the financial flows related to current and capital expenditures incurred by the Government, households, donors, employers, and health insurers to meet the health care needs of residents in Bhutan during the fiscal years FY 2014-15 and FY 2015-16.

NHA: FY 2014-15 and FY 2015-16 estimated the total national health expenditures and disaggregated them into thirteen dimensions covering consumer, provider, and financial interfaces. The study has been conducted using the System of Health Accounts (SHA) 2011 introduced by the World Health Organization (WHO). This NHA is the third of such attempt carried out in Bhutan and becomes distinct, as it is the first ever NHA that covered consumer characteristics: age, sex and illness related patterns in health expenditures.

The total Current Health Expenditures (CHE) incurred in Bhutan for FY 2014 -15 and FY 2015 -16 were estimated to be Nu.4.6 billion and Nu. 4.9 billion respectively. These amounts include the expenditures made by both government and private sector participants within respective years and the cost of consumption of capital assets in the government health system.

Expenditure on capital formation (CF) in FY 2014-15 and FY 2015 -16 accounted to Nu. 709 million and Nu. 918 million respectively.

The total sum of CHE and CF during the in FY 2014 -15 was estimated as Nu. 5.3 billion and Nu. 5.8 billion for FY 2015-16 representing 4.4% of the GDP respectively. The sum of CHE and CF borne by the Royal Government of Bhutan (RGoB) was around 2.7% and 2.6 % of the GDP respectively.

The major cost drivers were inpatient care constituting 49% and 58% of the CHE, followed by outpatient care constituting 13% and 24% in FY 2014-15 and FY 2015-16 respectively. The other health care functions such as preventive care, ancillary services such as laboratory investigations, and purchasing medical goods constituted the rest.

Analysis of CHE by age indicated that per capita CHE for those 65 years and older were highest with expenditure of around Nu. 10,000 and Nu. 12,000 in FY 2014- 15 and FY 2015-16 respectively. The second highest per capita health expenditures were for managing the health problems of children under five years.

Gender based per capita health expenditure analysis showed that managing health problems among females were slightly more expensive.

The largest percentage of CHE were attributed to Non- Communicable diseases and the proportion in both FY 2014-15 and FY 2015-16 were around 35%. The second highest CHE were incurred for managing infectious diseases.

The CHE analysis by subnational levels showed that the highest CHE was from Thimphu (12.4 % to 12.7% in FY 2014-15 and FY 2015-16 respectively); Chhukha (11.6% to 12.1 % in FY 2014-

15 and FY 2015-16 respectively); followed by Mongar and Sarpang (around 9% in FY 2014-15 and FY 2015-16) districts.

Hospitals were identified as the most cost consuming health care providers in both financial years. Approximately 68% and 73% of CHE in FY 2014-15 and FY 2015-16 respectively were used by all types of hospitals. The largest percentage of CHE was used by the primary health care hospitals which comprised of Dzongkhag hospitals, BHUI & II, outreach centers and satellite clinics. They collectively consumed around 37% of CHE in both FY 2014-15 and FY 2015-16. The national referral hospital JDWNRH (JDWNRH), used 17% to 21% of hospital costs in FY 2014-15 and FY 2015-16 respectively.

Nearly 41% of CHEs were spent on materials and services related to health care provision in both fiscal years followed by expenditures on employee compensations.

In both fiscal years, RGoB has been the principal financier of the health system in Bhutan. The government share of CHE was estimated 72% and 70% of CHE in FY 2014-15 and 2015-16 respectively.

Households' contribution to CHE was 20% in both fiscal years. Rest of the world contribution was around 5% of CHE in both FY 2014-15 and FY 2015-16. It should be noted that household expenditures exclude transport costs since it was not possible to differentiate patient transport costs from other transport costs and recent health expenditure estimate produced in health system review report also did not include transport costs. Expenditure reported to be incurred on rimdo and puja were excluded as this practice does not confirm to the health care boundary definition according to SHA 2011.

The central government scheme that covered the expenditures related to MoH, JDWNRH, regional referral hospitals and three hospitals under the administration of Central Ministry constituted nearly half CHE in both fiscal years. Dzongkhag health scheme accounted around 28% while household out of pocket payments accounted 20% of CHE in both financial years. Insurance schemes covered only 0.2 % of CHE in both financial years.

# 1 Overview of Health Care Financing

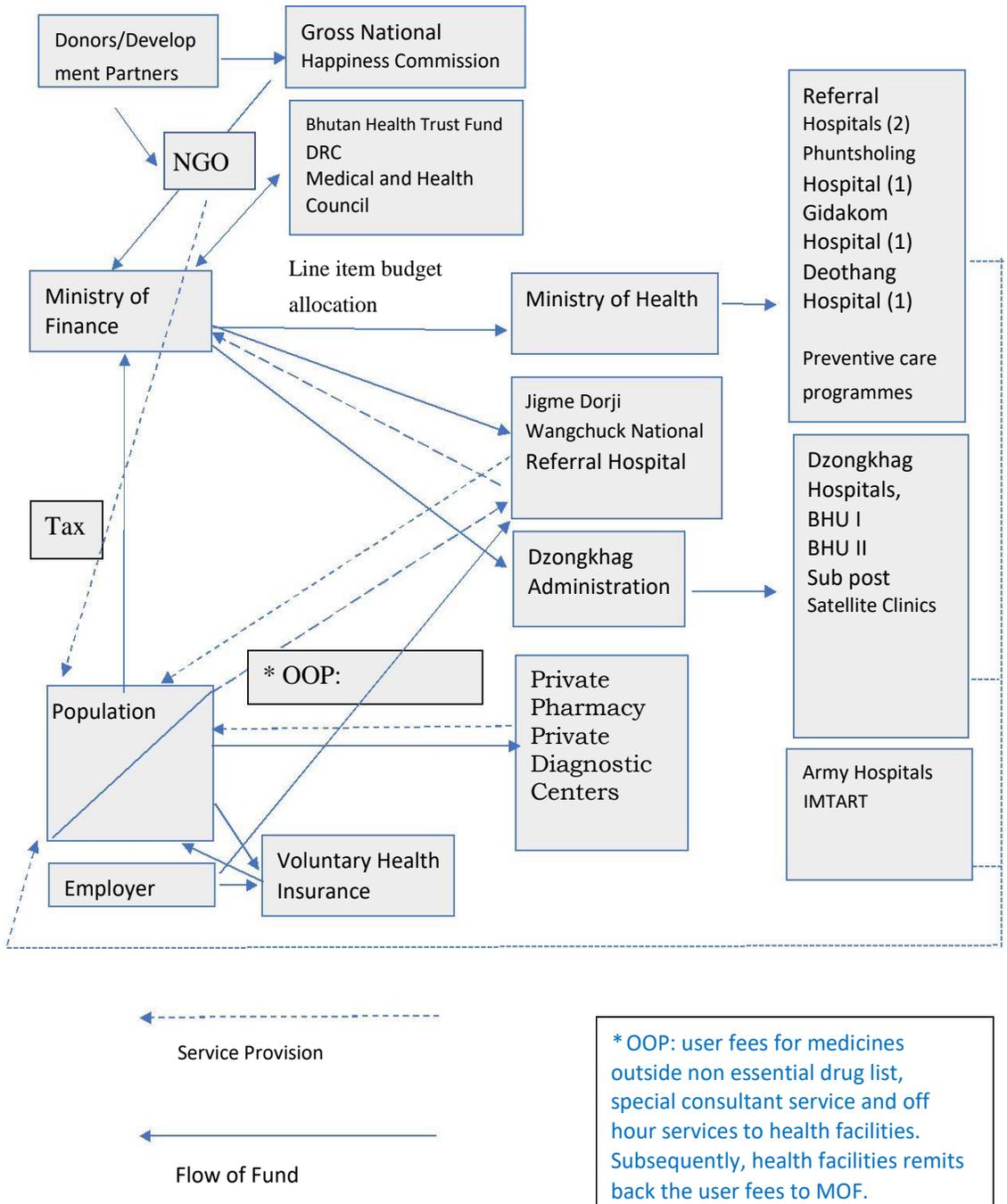
Health care in Bhutan is predominantly funded, organized and delivered by the health institutions operated by the RGoB. Bhutanese can access public health services free of cost in line with the Article 9, Section 21 of Constitution of Kingdom of Bhutan, which states that, “The state shall provide free access to basic public health services in both modern and traditional medicines”. Comprehensive health care is delivered through a three-tiered network of health facilities based on the service standard of each level. Currently 49 sub posts, 185 Basic Health Units (BHU) II, 25 BHU I, and 30 hospitals constitutes the network of health facilities of the Bhutanese health system (MoH, 2017). Around 95% of the Bhutanese population live within the 3 hours distance to the nearest health facility (MoH, 2012). The basic public health service does not include services such as private cabin facility at the government hospitals, cosmetic (high-end) dental care, and cost for obtaining medical certificates and drugs outside the national essential drug list. Patients requiring specialized health services, which are not available in the country are referred to empaneled hospitals in India at the cost of the government. The traditional medicine services is provided through the national traditional medicine hospital and traditional medicine units which are integrated in the health system. Currently, private provider participation in the health care system is limited to a few pharmacies and selective diagnostic centers.

Figure 1 illustrates the flow of funds from Ministry of Finance (MoF), individuals, development partners, including Bhutan Health Trust Fund (BHTF) and employers to the service providers. Flow of fund from MoF to the public health facilities is channeled through the financial intermediaries; MoH, Jigme Dorji Wangchuck National Referral Hospital (JDWNRH), and local government administration. Purchasing of public health services is carried out by the MoF through line item budgets, based on historical trends and realities. Voluntary private health insurance firms usually reimburse the patients. Households also pay directly for availing services from the private pharmacies, private diagnostic centers and services availed during the special consultation service from the JDWNRH. Employers either purchase insurance premiums for their employees, reimburse the health expenditure of their employees or maintain their own health centers. Few NGOs also receive grants from the government or development partners for delivery of health related activities. There are hospitals financed and managed by IMTART and DANTAK. However, their service provision is not restricted to their employees and even Bhutanese can avail services from these hospitals.

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<sup>1</sup> JDWNRH was granted autonomy since July 2014 following which funds from MoF are directly channeled to JDWNRH

**Figure 1 Bhutan Health Financing System**



## 2 NHA 2014 -15 & 2015 -16 in Bhutan

NHA is an exercise that is carried out to determine the amount of expenditure, made by all sources, to meet the health care needs of residents in a country. So far, two such exercises were carried out in Bhutan.

The first ever NHA of Bhutan was carried out covering the health expenditures of the fiscal year FY 2009-10. This NHA was carried out following the WHO guidelines on health account production prevailed at that time: System of Health Account 2000 (SHA 2000). The next NHA of Bhutan covered two fiscal years; FY 2011-12, and FY 2012-13 together and had followed the new WHO guidelines on NHA production: SHA 2011. However, the second NHA was limited in scope and did not include analysis of expenditures by consumer characteristics such as illnesses, age and sex.

This report includes the methods and findings of the third NHA of Bhutan covering the fiscal years 2014-15 and 2015-16 conducted according to SHA 2011 guidelines (WHO, 2011) and included the analyses of health expenditures over 13 different financing classifications covering all three health accounting interfaces : consumer, financial and provider interfaces. In addition to computing the health expenditure made by all financial sources for meeting the individual and community level health promotion, prevention, cure and rehabilitation requirement of the nation, the report also aims to answer the following core questions:

1. How these expenditures were distributed among various health care functions, among males and females of different ages, among people suffering from various illness/health conditions?
2. Which health care providers delivered health services and what proportions of health care expenditures were consumed by them?
3. How health care funding were raised, channeled and managed in producing or purchasing the health care services required by Bhutanese during the two fiscal years concerned?

The following sections present the salient findings of NHA 2014 -15& 2015-2016 study of Bhutan. Standard detailed NHA tables are presented in the appendix.

## 3 Overall Health Expenditure for FY 2014-15 and 2015-16

SHA 2011 distinctly recognizes two main types of health expenditures: Current Health Expenditure (CHE) and Capital Formation (CF).

The CHE includes, the cost of health services and goods provided by the government, the expenses made by private individuals as household out of pocket expenditures (OOPS), cost of health care of employees that were borne by employers, costs borne by NGOs on health-related activities. In addition to cost of intermediate consumption, the consumption of fixed capital is also added to the CHE. The consumption of fixed capital is defined as the decline, during the accounting period, in

the current value of the stock of fixed assets owned by the government. The capital formation includes all investments made on capital asset creation during the fiscal years of concern.

### 3.1 CHE in Bhutan: FY 2014-15 & 2015-16

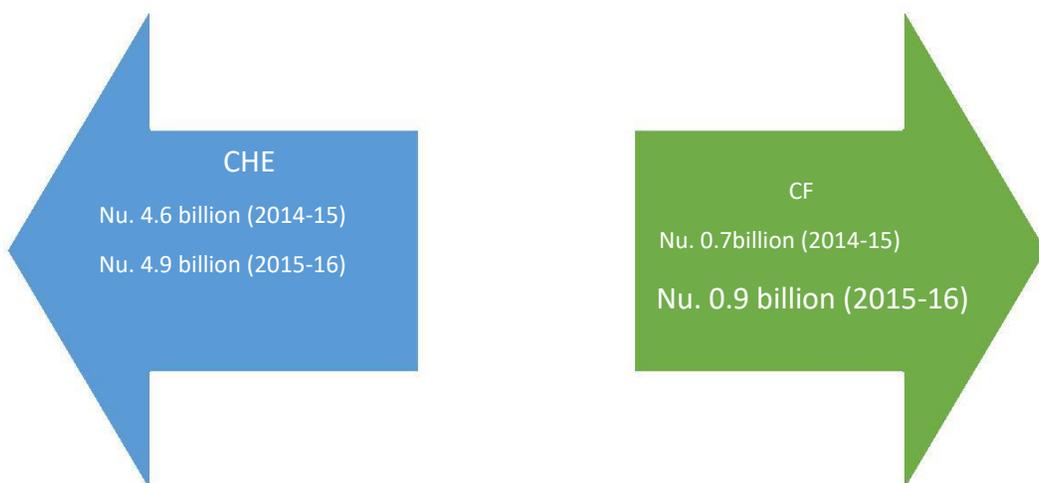
The CHEs in Bhutan for FY 2014-15 and FY 2015-16 were estimated as Nu.4.6 billion (4,602,339,658) and Nu. 4.9 billion (4,896,128,217) respectively (Figure 2).

These amounts include the expenditures made by both government and private sector participants and the cost of consumption of capital assets in the government health system within respective years. It is important to note that this figure excludes the investments made for acquiring capital assets.

### 3.2 CF in Bhutan: FY 2014-15 & 2015-16

In FY 2014-15 it was accounted that Nu. 709,385,320 were spent for adding various forms of new capital assets to the health system. The corresponding amounts for FY 2015 -16 was Nu. 918,058,461 (Figure 2).

**Figure 2: Overall health Expenditure for FY 2014-15 and 2015-16**



### 3.3 Health Expenditures as a percentage of GDP

The sum of current and capital expenditures in FY 2014-15 and FY 2015-16 were Nu. 5.3 billion and in Nu. 5.8 billion respectively. These expenditures were in the range of 4.4% of the GDP of Bhutan in respective years. The CHE and CF borne by the RGoB was around 2.7% and 2.6 % of the GDP respectively. Table 1 further elaborates the amounts and their respective sizes in relation to GDP of Bhutan during two fiscal years.

**Table 1 GDP, Health expenditure types, and their relative sizes in  
FY 2014-15 and FY 2015-16**

Item	FY 2014-15	FY 2015-16
GDP (Nu)	11954580000*	132021300000*
CHE (Nu)	4,602,339,658	4,896,128,217
CHE RGoB (Nu)	3,253,015,329	3,420,169,392
CF (Nu)	709,385,320	918,058,461
CF RGoB (Nu)	444,583,977	502,375,955
Total (CHE +CF)	5,311,724,978	5,814,186,678
Total(CHE +CF) RGoB	3,697,599,305	3,922,545,346
CHE as % of GDP	3.85	3.71
CHE RGoB as % of GDP	2.72	2.59
Total (CHE +CF) as a % of GDP	4.44	4.40
Total (CHE +CF) RGoB as a % of GDP	3.09	2.97

\*Source: Annual Report of Royal Monetary Authority

### 3.4 Per Capita Health Expenditure

Table 2 presents the per capita health expenditures in relation to different types of health expenditures.

**Table 2 Per capita health expenditure during FY 2014-15 and FY 2015-16.**

Item	FY 2014-15	FY 2015-16
Per capita CHE (Nu)	6,053.31	6,325.85
Per capita CHE RGoB (Nu)	4,278.59	4,418.90
Per capita CF (Nu)	933.03	1,186.14
Per capita CF RGoB (Nu)	584.75	649.08
Per capita Total (CHE +CF)	6,986.34	7,512.00
Per capita Total (CHE +CF) RGoB	4,863.33	5,067.97

Per capita expenditure sum of the CHE and CF were Nu. 6,986.34 (US \$ 114) and Nu 7,512.00 (US \$ 123) during FY 2014-15 and FY 2015-16.

## 4 CHE by Consumer Interface

This section analyses how health expenditures in two fiscal years were distributed by consumer characteristics: health care functions, age, gender, disease and geographical distribution.

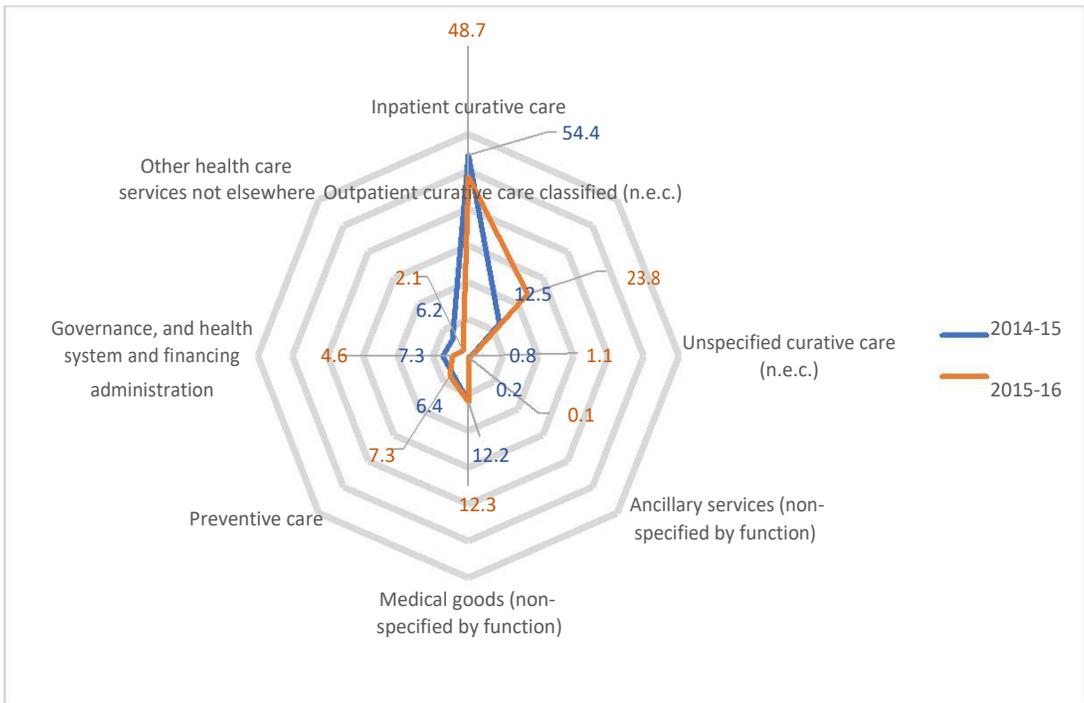
## 4.1 CHE by Health Care Functions

Health care functions classification analyses CHE by the type of health care needs for which the current health expenditure were made. It identifies the CHE components for curative care provisions made at various health institutions, ancillary services that includes privately purchased services such as laboratory investigations, patient transportation, etc... and medical goods non-specified by function. Medical goods non-specified by function includes privately purchased pharmaceuticals and other medical goods that were not included in the curative care packages given by the public health facilities.

It is important to note that the costs of laboratory investigation, ambulance, and pharmaceutical costs associated with institutionalized care are factored into respective curative care component costs and thus do not get reflected under ancillary care and medical goods categories.

In addition, health care function classification disaggregates the CHE into costs of preventive care, governance, health system and financing administration, and other non-specified expenditures. Figure 3 and Table 3 shows the CHE of FY 2014-15 and 2015-16 according to health care functions

**Figure 3 Percentage distribution of CHE in FY 2014-15 and FY 2015-16 by different health care functions**



**Table 3 CHE in FY 2014-15 and 2015-16 by health care functions**

Health care functions		FY 2014 -15		FY 2015 -16	
		CHE (Nu)	%	CHE (Nu)	%
HC.1	Curative care	3,117,290,821	67.7	3,603,438,086	73.6
HC.1.1	Inpatient curative care	2,503,036,923	54.4	2,385,757,843	48.7
HC.1.1.1	General inpatient curative care	1,281,720,520	27.8	1,657,200,141	33.8
HC.1.1.2	Specialized inpatient curative care	1,199,802,194	26.1	705,948,773	14.4
HC.1.1.nec	Unspecified inpatient curative care (n.e.c.)	21,514,210	0.5	22,608,929	0.5
HC.1.3	Outpatient curative care	576,907,427	12.5	1,164,067,123	23.8
HC.1.3.1	General outpatient curative care	566,098,784	12.3	904,724,642	18.5
HC.1.3.2	Dental outpatient curative care	2,324,181	0.1	2,876,356	0.1
HC.1.3.nec	Unspecified outpatient curative care (n.e.c.)	8,484,462	0.2	256,466,125	5.2
HC.1.nec	Unspecified curative care (n.e.c.)	37,346,471	0.8	53,613,120	1.1
HC.4	Ancillary services (non-specified by function)	7,954,797	0.2	3,539,356	0.1
HC.4.1	Laboratory services	3,944,714	0.1	2,303,356	0.0
HC.4.2	Imaging services	0	0.0	1,236,000	0.0
HC.4.nec	Unspecified ancillary services (i.e.)	4,010,083	0.1	0	0.0
HC.5	Medical goods (non-specified by function)	560,071,394	12.2	602,345,474	12.3
HC.5.1	Pharmaceuticals and Other medical non-durable goods	542,591,958	11.8	585,942,017	12.0

Health care functions		FY 2014 -15		FY 2015 -16	
		CHE (Nu)	%	CHE (Nu)	%
HC.5.1.1	Prescribed medicines	120,577,015	2.6	130,210,443	2.7
HC.5.1.2	Over-the-counter medicines	422,014,944	9.2	455,731,574	9.3
HC.5.nec	Unspecified medical goods (n.e.c.)	17,479,436	0.4	16,403,457	0.3
HC.6	Preventive care	292,698,817	6.4	355,646,088	7.3
HC.6.1	Information, education and counseling (IEC) programmes	20,623,067	0.4	8,180,461	0.2
HC.6.1.nec	Other and unspecified IEC programmes (n.e.c.)	20,623,067	0.4	8,180,461	0.2
HC.6.2	Immunization programmes	32,926,702	0.7	61,032,409	1.2
HC.6.4	Healthy condition monitoring programmes	36,463,293	0.8	21,697,655	0.4
HC.6.4.1	Maternal care programme	11,268,273	0.2	10,052,722	0.2
HC.6.4.2	Nutrition programme	5,736,824	0.1	4,326,761	0.1
HC.6.4.3	Family planning programme	19,458,196	0.4	7,318,172	0.1
HC.6.7	Public Health Preventive Care	167,151,726	3.6	160,161,444	3.3
HC.6.7.1	Communicable Disease prevention and control	30,438,276	0.7	24,893,767	0.5
HC.6.7.2	TB Control	15,509,880	0.3	26,728,248	0.5
HC.6.7.3	STI and AIDS prevention and control	24,174,389	0.5	30,246,052	0.6
HC.6.7.4	Vector Borne Disease Control	33,691,363	0.7	24,577,914	0.5

Health care functions		FY 2014 -15		FY 2015 -16	
		CHE (Nu)	%	CHE (Nu)	%
HC.6.7.5	Maternal and Child Health related preventive actions	15,474,870	0.3	14,031,746	0.3
HC.6.7.6	Non-communicable disease prevention and control	35,430,128	0.8	18,832,335	0.4
HC.6.7.7	Epidemiology and disease surveillance	12,432,821	0.3	14,331,622	0.3
HC 6.7.nec	Other Public Health Preventive Care	0	0.0	6,519,761	0.1
HC.6.nec	Unspecified preventive care (n.e.c.)	35,534,028	0.8	104,574,119	2.1
HC.7	Governance, and health system and financing administration	337,796,549	7.3	227,421,708	4.6
HC.7.1	Governance and Health system administration	287,971,489	6.3	210,593,350	4.3
HC.7.1.1	Planning & Management	145,872,062	3.2	188,568,257	3.9
HC.7.1.2	Monitoring & Evaluation (M&E)	2,418,127	0.1	0	0.0
HC.7.1.3	Procurement & supply management	6,884,227	0.1	2,831,182	0.1
HC.7.1.nec	Other governance and Health system administration .nec	132,797,073	2.9	19,193,911	0.4
HC.7.2	Administration of health financing	3,854,164	0.1	1,205,495	0.0
HC.7.nec	Unspecified governance, and health system and financing administration (n.e.c.)	45,970,897	1.0	15,622,863	0.3

Health care functions		FY 2014 -15		FY 2015 -16	
		CHE (Nu)	%	CHE (Nu)	%
HC.9	Other health care services not elsewhere classified (n.e.c.)	286,527,280	6.2	103,737,504	2.1
<b>All HC</b>		<b>4,602,339,658</b>	<b>100.0</b>	<b>4,896,128,217</b>	<b>100.0</b>

The analysis showed that the largest share of CHE was spent on the curative care services, which accounted for 68% and 74% of the total CHE in FY 2014-15 and FY 2015-16 respectively.

Around 12 % of CHE was spent on the medicines and other medical goods people bought from pharmacies in both fiscal years.

Preventive care expenditures were found to be relatively low with the share of preventive care as % of CHE estimated at 6.4% and 7.3% for FY 2014-15 and 2015-16 respectively. Central administration cost of the health programs were estimated as 6.3% and 4.3% in two fiscal years. It is important to note that administration cost of hospitals was not factored in this amount. In line with the SHA framework, hospital administration costs were included in the curative care costs.

## 4.2 CHE by Age

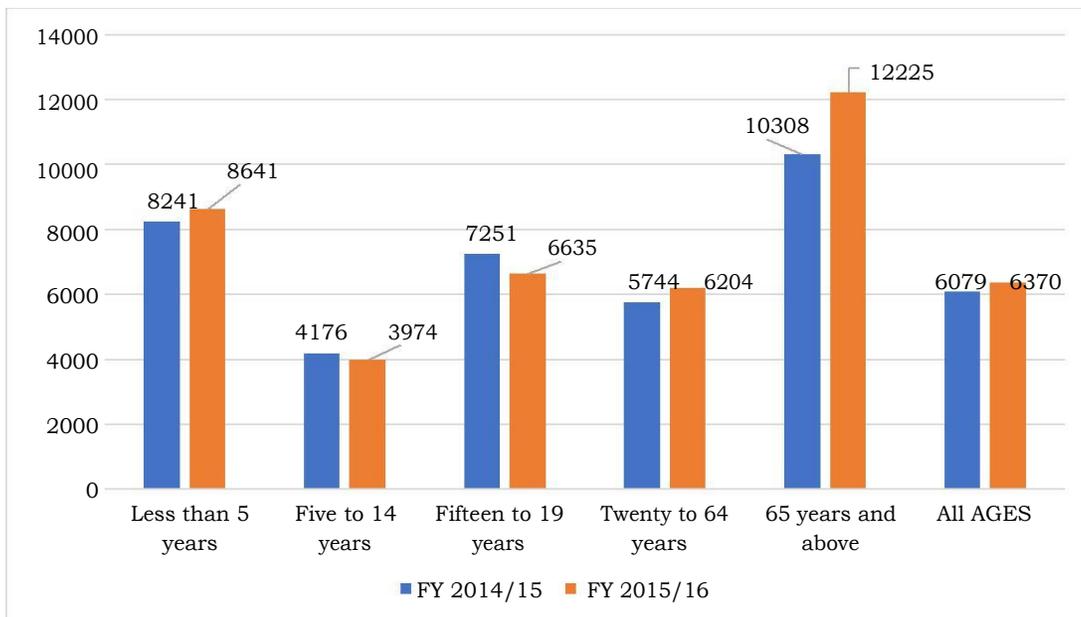
The disaggregation of expenditures by ages was based on the relative proportion of the estimated health care resource utilization of people in different ages. These calculations were based on the relative age, sex and disease related patient's distributions and the details of calculation are given in the section of methodology. Table 4 presents pattern of health care expenditures in different age groups.

**Table 4 Distribution of CHE by Age groups in during FY 2014 -15 and FY 2015 -16**

Age		FY 2014 -15		FY 2015 -16	
		CHE (Nu)	%	CHE (Nu)	%
AGE.1	Less than 5 years	681,653,010	14.8	708,898,569	14.3
AGE.2	Five to 14 years	593,104,160	12.9	577,806,875	12.2
AGE.3	Fifteen to 19 years	506,271,063	11.0	452,770,200	9.0
AGE.4	Twenty to 64 years	2,449,236,642	53.2	2,704,524,463	55.0
AGE.5	65 years and above	372,074,784	8.1	452,128,110	9.5
<b>Total AGE</b>		<b>4,602,339,658</b>	<b>100</b>	<b>4,896,128,217</b>	<b>100</b>

However, it is important to note that the number of people in different age groups were not similar and therefore relative costs are not directly comparable. Therefore per capita CHE in different age groups were calculated and compared to have an insight on the relative expenditures in different age groups. Per capita expenditures were calculated for the total population (both ill and healthy) in respective age groups. The comparison shows that sick person of 65 years and above had the highest per capita CHE, while children less than 5 years had the second highest per capita CHE.

**Figure 4 per capita (Nu) CHE in different age groups**



### 4.3 CHE by Gender

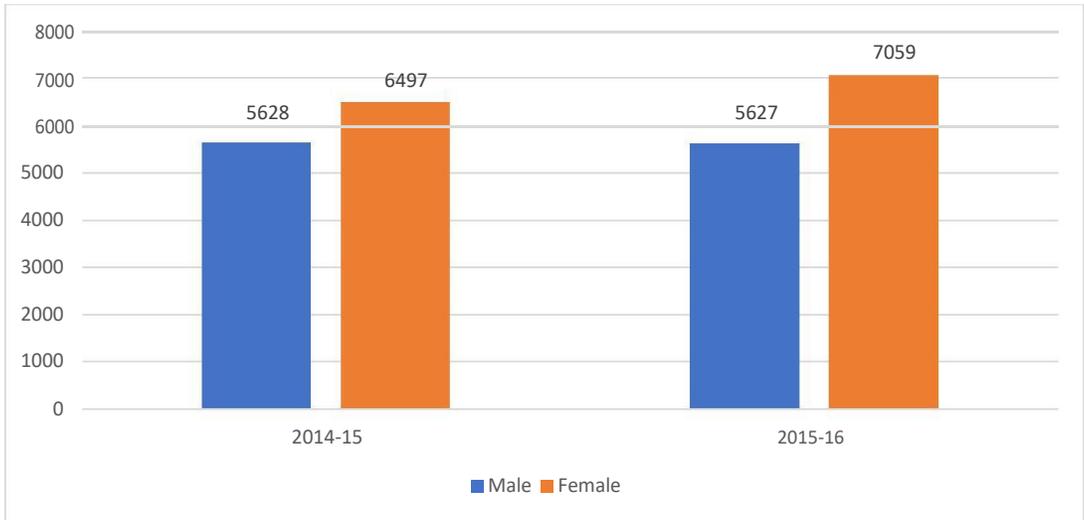
CHE was disaggregated by sex based on the gender based patterns of seeking health care. Table 5 and figure 5 shows the gender based disaggregation of CHE in fiscal years 2014 -15 and 2015 - 16.

**Table 5 Distribution of CHE by Gender in during FY 2014 -15 and FY 2015 -16**

Gender		FY 2014 -15		FY 2015 -16	
		CHE (Nu)	%	CHE (Nu)	%
GEN.1	Female	2,555,469,161	55.5	2,816,265,553	57.5
GEN.2	Male	2,046,870,497	44.5	2,079,862,664	42.5
<b>Total GEN</b>		<b>4,602,339,658</b>	<b>100.0</b>	<b>4,896,128,217</b>	<b>100.0</b>

For both years, CHE and per capita CHE was higher for females than for males. Figure 4 shows the sex specific per capita CHE.

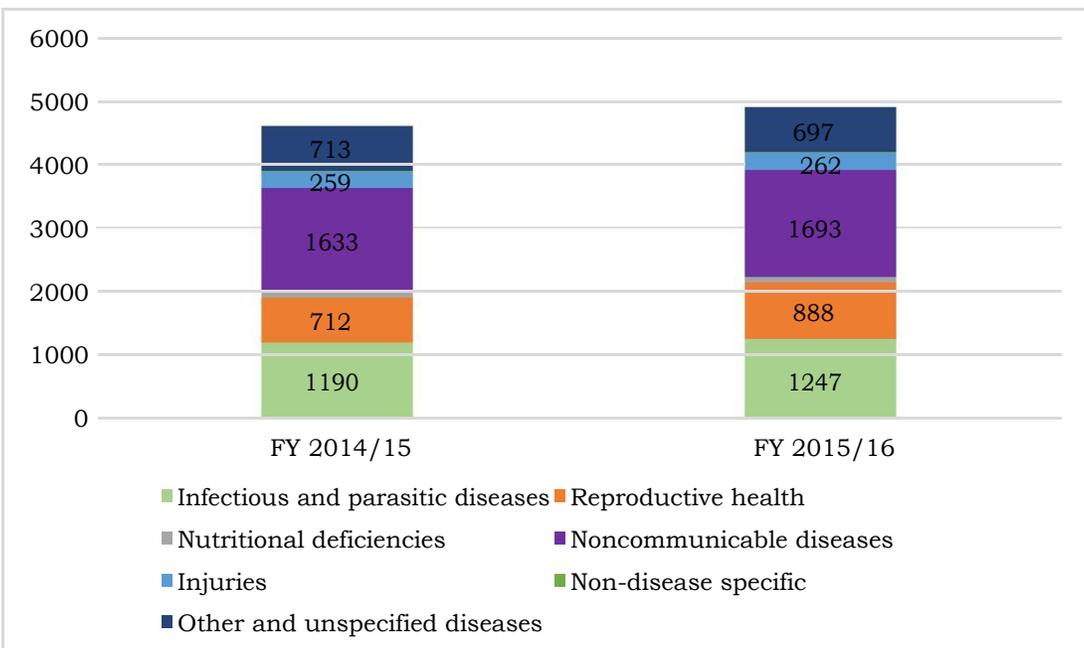
**Figure 5 Comparisons of per capita CHE in FY 2014 -15 and FY 2015 -16**



### 4.4 CHE by Illnesses

CHE were disaggregated based on Global Disease Burden classification as indicated in SHA 2011. The reported diagnosis recorded from different health care provider institutions were used in identifying the relative resource utilization by persons with different illnesses. Figure 6 and Table 6 shows how the CHEs in FY 2014 -15 and FY 2015-16 are attributed to various illness categories.

**Figure 6 CHE (Nu million) by major disease groups in FY 2014 -15 and FY 2015/16**



It is shown that in both fiscal years the highest share of CHE (nearly 35%) was attributed to non-communicable diseases. The second highest expenditure was on infectious diseases (26%) in both years. Reproductive conditions, which include child birth and related care consumed further 16% and 18% of CHE in respective fiscal years.

**Table 6 CHE in FY 2014 -15 and 2015 -16 by broader disease Categories**

Illness		FY 2014 -15		FY 2015 -16	
		CHE (Nu)	%	CHE (Nu)	%
DIS.1	Infectious and parasitic diseases	1,189,978,406	25.9	1,247,096,380	25.5
DIS 2	Reproductive health	711,542,429	15.5	888,425,980	18.1
DIS 3	Nutritional deficiencies	93,075,234	2.0	85,814,690	1.8
DIS 4	Non-communicable diseases	1,633,043,233	35.5	1,693,156,200	34.6
DIS 5	Injuries	259,370,299	5.6	261,980,630	5.4
DIS 6	Non-disease specific	2,704,759	0.1	23,152,240	0.5
DIS .NEC	Other and unspecified diseases/conditions (n.e.c.)	712,625,300	15.5	696,502,100	14.2
<b>Total DIS</b>		<b>4,602,339,658</b>	<b>100.0</b>	<b>4,896,128,220</b>	<b>100.0</b>

Detailed CHE disaggregation by illnesses are included in the annexure.

#### 4.5 CHE by Dzongkhag

CHE was disaggregated to Dzongkhag levels by considering the places, where the health care is provided. Expenditure for preventive interventions were determined after considering the geographical areas into which preventive interventions were targeted and respective age and sex related population proportions in these areas.. Table 7 presents the CHE by Region and Dzongkhag level.

**Table 7 CHE by Region and Dzongkhag level**

Region /Dzongkhag		FY 2014 -15		FY 2015 -16	
		CHE (Nu)	%	CHE (Nu)	%
<b>SNL1</b>	<b>Central region</b>	<b>1,061,778,120</b>	<b>23.1</b>	<b>1,104,409,457</b>	<b>22.6</b>
SNL.1.1	Bumthang	106,382,909	2.3	109,057,348	2.2
SNL.1.2	Dagana	134,904,924	2.9	148,720,630	3.0
SNL.1.3	Sarpang	419,564,896	9.1	417,976,974	8.5
SNL.1.4	Trongsa	93,900,649	2.0	99,510,020	2.0
SNL.1.5	Tsirang	147,936,705	3.2	161,822,287	3.3

Region /Dzongkhag		FY 2014 -15		FY 2015 -16	
		CHE (Nu)	%	CHE (Nu)	%
SNL.1.6	Zhemgang	159,088,036	3.5	167,322,198	3.4
<b>SNL 2</b>	<b>Eastern Region</b>	<b>1,409,754,705</b>	<b>30.6</b>	<b>1,502,345,017</b>	<b>30.7</b>
SNL.2.1	Lhuntse	112,615,190	2.4	124,044,995	2.5
SNL.2.2	Mongar	415,718,606	9.0	424,595,539	8.7
SNL.2.3	Pemagatshel	130,820,778	2.8	135,913,258	2.8
SNL.2.4	Samdrup Jongkhar	257,279,188	5.6	284,773,951	5.8
SNL.2.5	Trashigang	350,570,376	7.6	377,577,812	7.7
SNL.2.6	Trashiyangtse	142,750,567	3.1	155,439,463	3.2
<b>SNL 3</b>	<b>Western Region</b>	<b>2,130,806,833</b>	<b>46.3</b>	<b>2,289,373,743</b>	<b>46.8</b>
SNL.3.1	Chukkha	532,765,593	11.6	592,360,568	12.1
SNL.3.2	Gasa	31,953,028	0.7	37,154,515	0.8
SNL.3.3	Haa	68,395,800	1.5	80,582,209	1.6
SNL.3.4	Paro	253,467,649	5.5	247,409,869	5.1
SNL.3.5	Punakha	146,146,000	3.2	154,190,458	3.1
SNL.3.6	Samtse	321,763,251	7.0	340,009,409	6.9
SNL.3.7	Thimphu	569,639,214	12.4	619,498,635	12.7
SNL.3.8	Wangduephodrang	206,676,300	4.5	218,168,079	4.5
<b>Total SNL</b>	<b>Bhutan</b>	<b>4,602,339,658</b>	<b>100</b>	<b>4,896,128,217</b>	<b>100</b>

The CHE analysis by subnational levels showed that the highest CHE was reported from Thimphu district followed by Chukha, Mongar and Sarpang. This could be attributed to the location of major hospitals (providers) in these Districts. The 350 bedded national referral hospital in Thimphu, which contributes to almost 17-21% of the hospital cost, the 150 bedded regional referral hospitals in Mongar and Sarpang, a 60 bedded general hospital in Chukha.

## 5. CHE by Provider Interface

This section presents the analysis of CHE by provider institutions, and by factors of provision.

### 5.1 CHE by Providers

SHA 2011 classify health care providers as hospitals (general and specialized), providers of ambulatory health services, retailers and other providers of medical goods, providers of preventive care, providers of health system administration and financing and rest of the economy. Table 8 presents how CHEs in FY 2014 -15 and FY 2015 -16, are distributed by various health care providers in Bhutan.

**Table 8 Distribution of CHE by providers in during FY 2014 -15 and FY 2015 -16**

Health care providers		FY 2014 -15		FY 2015 -16	
		CHE	%	CHE	%
HP.1	Hospitals	3,125,498,197	67.9	3,577,799,450	73.1
HP.1.1	General hospitals	1,700,248,826	36.9	1,805,985,759	36.9
HP.1.1.1	Dzongkhag Hospitals	1,266,267,880	27.5	1,314,080,452	26.8
HP.1.1.2	BHU I, II & others	433,980,946	9.4	491,905,307	10.0
HP.1.3	Specialized hospitals (Other than mental health hospitals)	1,235,526,777	26.8	1,520,695,743	31.1
HP.1.3.1	JDWNRH	791,099,533	17.2	1,027,425,446	21.0
HP.1.3.2	Regional Referral Hospital	444,427,243	9.7	493,270,297	10.1
HP.1.nec	Unspecified hospitals (n.e.c.)	189,722,594	4.1	251,117,948	5.1
HP.3	Providers of ambulatory health care	1,682,833	0.0	24,785,008	0.5
HP.3.1	Medical practices	1,682,833	0.0	21,908,652	0.4
HP.3.1.nec	Unspecified medical practices (i.e.)	1,682,833	0.0	21,908,652	0.4
HP.3.2	Dental practice	0	0.0	2,876,356	0.1
HP.4	Providers of ancillary services	23,058,957	0.5	3,539,356	0.1
HP.4.9	Other providers of ancillary services	23,058,957	0.5	3,539,356	0.1
HP.5	Retailers and Other providers of medical goods	560,133,721	12.2	602,412,781	12.3
HP.5.1	Pharmacies	542,654,285	11.8	586,009,324	12.0
HP.5.9	All Other miscellaneous sellers and Other suppliers of pharmaceuticals and medical goods	17,479,436	0.4	16,403,457	0.3
HP.6	Providers of preventive care	206,479,502	4.5	298,331,099	6.0

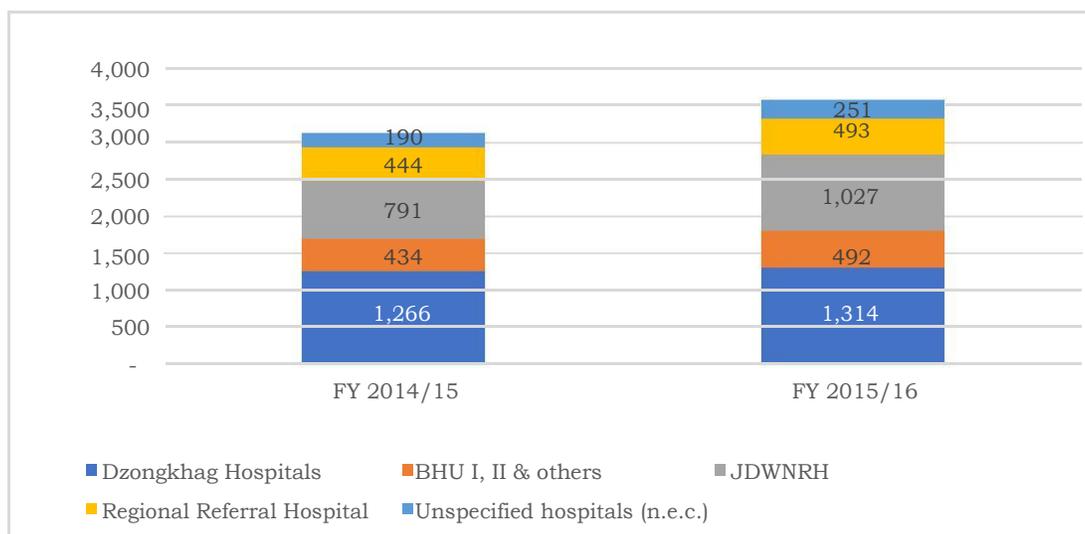
Health care providers		FY 2014 -15		FY 2015 -16	
		CHE	%	CHE	%
HP.7	Providers of health care system administration and financing	336,695,263	7.3	227,421,708	4.6
HP.7.1	Government health administration agencies	307,016,139	6.7	168,173,048	3.4
HP.7.9	Other administration agencies	29,679,125	0.6	59,248,660	1.2
HP.nec	Unspecified health care providers (n.e.c.)	348,791,185	7.6	161,838,814	3.3
<b>Total HP</b>		<b>4,602,339,658</b>	<b>100</b>	<b>4,896,128,217</b>	<b>100</b>

Hospitals were identified as the most cost consuming health care providers in both years. It reflects relatively higher needs for curative care needs, as well as relatively higher expenses associated with curative care provision.

Approximately 68% and 73% of CHE in FY 2014 -15 and FY 2015 -16 were used by all types of hospitals in Bhutan. The largest percentage (27%) of hospital cost was used by the Dzongkhag level hospitals. More than 36% of the CHE was utilized by primary health care institutions (BHUs and sub-post, and Dzongkhag hospitals) during both fiscal years respectively.

Expenditure of JDWNRH accounted 17.2 % of CHE in FY 2014-15 and 21% of CHE in FY 2015 -16. Figure 7 and table 8 show further details on CHE by hospitals.

**Figure 7 Distribution of CHE (Nu million) by different health care providers in FY 2014 -15 and FY 2015 -16**



As there are no private ambulatory care practitioners in Bhutan, the expenditure amount specified as unspecified medical practices (n.e.c.) includes the expenditures made by households during outpatient counters at hospitals (availing special consultation service or even hospitals abroad) as recorded in BLSS.

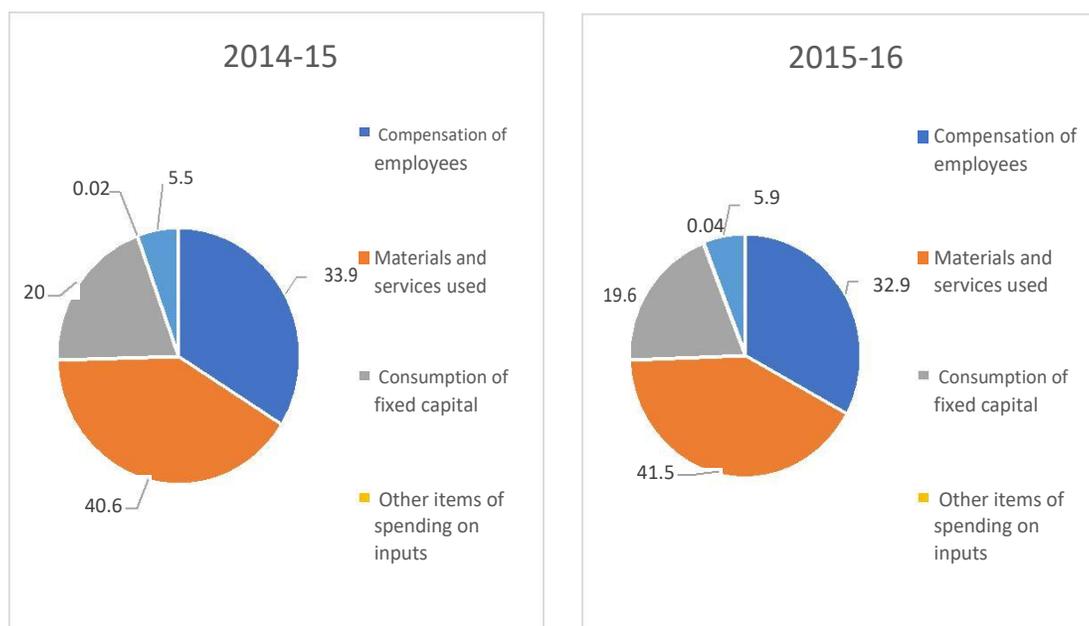
Around 12% of CHE was used for purchasing medicine and other items from pharmacies in both fiscal years.

Investment on preventive care provision was comparatively low and the expenditures reported by preventive care providers were 4.5 % in FY 2014 -15 and 6% in FY 2015 -16. Expenditure of central health administration agencies that includes, MoH and allied health agencies were 7% and 4 % in FY 2014 -15 and FY 2015 -16 respectively.



Disaggregation of CHE by factors of provision allows to understand the distribution of current health expenses on various constituents of production. They include expenditure incurred for paying compensations for employees in the health system, cost of drugs and other medical goods, cost of non-health care services and cost of consumption of fixed capital in the government health system. Figure 8 shows that in both fiscal years nearly 40% of CHEs were spent on materials and services related to health care provision. The second highest percentage, around 33%, was spent on paying employee compensations. Figure 8 and Table 9 presents the detailed disaggregation of CHE by factors of provision.

**Figure 8 Percentage distribution of CHE by Factors of Provision in FY 2014 -15 and FY 2015 -16**



**Table 9 Distribution of CHE in FY 2014 -15 and FY 2015 -16 by factors of provision**

Factors of health care provision		FY 2014-15		FY 2015 -16	
		CHE	%	CHE	%
FP.1	Compensation of employees	1,559,818,115	33.9	1,610,622,829	32.9
FP.1.1	Wages and salaries	1,209,361,045	26.3	1,238,210,052	25.3
FP.1.2	Social contributions	122,071,265	2.7	126,577,661	2.6
FP.1.3	All Other costs related to employees	228,385,805	5.0	245,835,116	5.0
FP.3	Materials and services used	1,869,064,790	40.6	2,033,947,662	41.5
FP.3.1	Health care services	96,160,468	2.1	92,204,050	1.9
FP.3.1.1	Laboratory & Imaging services	6,036,923	0.1	2,288,378	0.0
FP.3.1.nec	Other health care services (n.e.c.)	90,123,545	2.0	89,915,671	1.8
FP.3.2	Health care goods	1,060,820,051	23.0	1,171,300,460	23.9
F.P.3.2.1	Pharmaceuticals	1,059,918,576	23.0	1,154,034,443	23.6
FP.3.2.2	Other health care goods	901,475	0.0	17,266,018	0.4
FP.3.3	Non-health care services	644,816,402	14.0	652,845,880	13.3
FP.3.3.1	Training	250,729,444	5.4	177,630,046	3.6
FP.3.3.2	Technical Assistance	4,241,599	0.1	21,086,933	0.4
FP.3.3.3	Operational research	11,307,732	0.2	2,853,513	0.1
FP.3.3.nec	Other non-health care services (n.e.c.)	378,537,628	8.2	451,275,389	9.2
FP.3.4	Non-health care goods	67,138,068	1.5	117,597,272	2.4
FP.3.nec	Other materials and services used (n.e.c.)	129,800	0.0	0	0.0
FP.4	Consumption of fixed capital	919,472,877	20.0	961,033,052	19.6
FP.5	Other items of spending on inputs	712,056	0.02	1,851,044	0.04
FP.5.1	Taxes	712,056	0.0	1,851,044	0.0
FP.nec	Unspecified factors of health care provision (n.e.c.)	253,271,820	5.5	288,673,630	5.9
<b>Total FP</b>		<b>4,602,339,658</b>	<b>100</b>	<b>4,896,128,217</b>	<b>100</b>

## 6 CHE by Financial Interface

Characteristics that are used to understand the financial flows related to CHEs include institutions providing revenues, revenue mechanisms, financing schemes and financing agents.

### 6.1 CHE by Institutional Units Providing Revenues to Financing Schemes

In both fiscal years, RGoB has been the principal financier of the health system in Bhutan. The government share of CHE in FY 2014 -15 and FY 2015 -16 were 72% and 70% respectively. Households' contribution to CHE was round 20% in both fiscal years (Table 10). Rest of the world contribution was around 5% of CHE.

**Table 10 Distribution of CHE in FY 2014 -15 and 2015 -16 by institutional units providing revenues to financing schemes**

Institutional units providing revenues to financing schemes		FY2014 -15		FY2015 -16	
		CHE	%	CHE	%
FS.RI.1.1	Government	3,253,015,329	72.1	3,420,169,392	69.9
FS.RI.1.2	Corporations	18,701,160	0.4	25,848,951	0.5
FS.RI.1.3	Households	919,462,370	20	994,396,721	20.3
FS.RI.1.5	Rest of the world	232,935,047	5.1	233,109,642	4.7
FS.RI.1.5.1	Bilateral donors	8,868,988	0.2	9,158,507	0.2
FS.RI.1.5.2	Multilateral donors	224,066,060	4.9	223,951,135	4.6
FS.RI.1.nec	Unspecified institutional units providing revenues to financing schemes (n.e.c.)	178,225,752	2.5	222,603,510	4.6
<b>Total FS.RI</b>		<b>4,602,339,658</b>	<b>100</b>	<b>4,896,128,217</b>	<b>100</b>

### 6.2 CHE by Revenues of Health Care Financing Schemes

Reflecting the higher percentage of government contribution to CHE, the main revenue mechanism of CHE in both fiscal years in focus has been the transfers from government domestic revenue representing 72% to 74% in two fiscal years respectively. Other domestic revenues that included revenues from households, corporations and a few nonspecific sources accounted to 22% to 21% of CHE in two fiscal years respectively as indicated in Table 11.

**Table 11 Distribution of CHE in FY 2014 -15 and 2015 -16 by Revenues of Health Care Financing Schemes to financing schemes**

Revenues of health care financing schemes		FY2014 -15		FY2015 -16	
		CHE	%	CHE	%
FS.1	Transfers from government domestic revenue (allocated to health purposes)	3,417,309,945	74.3	3,620,834,795	74.0
FS.1.1	Internal transfers and grants	3,417,309,945	74.3	3,620,834,795	74.0
FS.2	Transfers distributed by government from foreign origin	233,539,076	5.1	233,109,642	4.8
FS.5	Voluntary prepayment	11,260,006	0.2	11,761,358	0.2
FS.5.1	Voluntary prepayment from individuals/households	8,445,005	0.2	8,821,019	0.2
FS.5.2	Voluntary prepayment from employers	2,815,002	0.1	2,940,340	0.1
FS.6	Other domestic revenues n.e.c.	940,230,631	20.4	1,030,422,421	21.0
FS.6.1	Other revenues from households n.e.c.	911,017,365	19.8	985,575,702	20.1
FS.6.2	Other revenues from corporations n.e.c.	15,886,159	0.3	22,908,612	0.5
FS.6.3	Other revenues from NPISH n.e.c.	13,327,107	0.3	21,938,107	0.4
<b>Total FS</b>		<b>4,602,339,658</b>	<b>100</b>	<b>4,896,128,217</b>	<b>100</b>

It should be noted that household expenditures reported in this report excludes transport costs and expenditures made on rimdo and puja. Transportation has been excluded as it was not possible to differentiate patient transport costs from other transportation costs and recent health expenditure estimate produced in health system review report also did not include transport costs. As per the SHA 2011 framework, transportation cost incurred only for the patient has to be considered into the account of health expenditure. Rimdo and puja expenditures were excluded as this practice does not fall within the health care boundary definition according to SHA 2011.

The household transport cost both in and out of country for FY 2014/15 and 2015/16 were around 1.2 billion in each year. If the transportation cost is included into household expenditure for health, then the OOP as% to CHE would be almost double the current estimate. The amount of household cost for rimdo and puja were around Nu 639 million and Nu 690 million in FY 2014/15 and

2015/16 respectively. It is important to note here that conducting rimdo and puja in the event of sickness is culturally unique to Bhutan.

### 6.3 CHE by Financing Schemes

Financing of the Government health sector was attained through several financial schemes. These are, MoH Scheme, JDWNRH Scheme and Dzongkhag Health Scheme. The first of these two schemes are Central Government Schemes, while Dzongkhag Health Scheme is a sub-national scheme.

Government schemes handled approximately 79% and 78% of CHE in both fiscal years respectively. The central government scheme that covered the expenditures related to MoH, JDWNRH, regional referral hospitals and three hospitals under MoH's administration, handled almost 50% of CHE in both fiscal years, while Dzongkhag health scheme handled 29%. Household out of pocket payments scheme accounted near 20% of CHE. Voluntary health care payment schemes that included health care insurance expenditures incurred by employers and private individuals, covered 1.2% and 1.5 of CHE in two fiscal years respectively (Table 12).

**Table 12 Distribution of CHE in FY 2014 -15 and 2015 -16by Financing Schemes**

Financing schemes		FY 2014 -15		FY 2015 -16	
		CHE	%	CHE	%
<b>HF.1</b>	<b>Government schemes and compulsory contributory health care financing schemes</b>	<b>3,633,925,197</b>	<b>79.0</b>	<b>3,838,972,659</b>	<b>78.4</b>
HF.1.1	Government schemes	3,633,925,197	79	3,838,972,659	78.4
HF.1.1.1	Central government schemes	2,282,299,264	49.6	2,414,806,742	49.3
HF.1.1.1.1	MoH Scheme	1,451,382,150	31.5	1,528,488,589	31.2
HF.1.1.1.2	JDWNRH Scheme	825,503,847	17.9	868,945,095	17.7
HF.1.1.1.nec	Other Central government schemes	5,413,267	0.1	17,373,058	0.4
HF.1.1.2	State/regional/local government schemes	1,318,300,761	28.6	1,405,979,472	28.7
HF.1.1.2.1	Dzongkhag Health Scheme	1,318,300,761	28.6	1,405,979,472	28.7
HF.1.1.nec	Unspecified government schemes (n.e.c.)	33,325,172	0.7	18,186,445	0.4
<b>HF.2</b>	<b>Voluntary health care payment schemes</b>	<b>57,397,096</b>	<b>1.2</b>	<b>71,579,855</b>	<b>1.5</b>

Financing schemes		FY 2014 -15		FY 2015 -16	
		CHE	%	CHE	%
HF.2.1	Voluntary health insurance schemes	11,260,006	0.2	11,761,358	0.2
HF.2.1.1	Primary/substitute health insurance schemes	11,260,006	0.2	11,761,358	0.2
HF.2.1.1.3	Other primary coverage schemes	11,260,006	0.2	11,761,358	0.2
HF.2.2	NPISH financing schemes (including development agencies)	30,250,931	0.7	36,909,885	0.8
HF.2.2.1	NPISH financing schemes (excluding HF.2.2.2)	30,250,931	0.7	36,909,885	0.8
HF.2.3	Enterprise financing schemes	15,886,159	0.3	22,908,612	0.5
HF.2.3.1	Enterprises (except health care providers) financing schemes	15,886,159	0.3	22,908,612	0.5
<b>HF.3</b>	<b>Household out-of-pocket payment</b>	<b>911,017,365</b>	<b>19.8</b>	<b>985,575,702</b>	<b>20.1</b>
HF.3.1	Out-of-pocket excluding cost-sharing	911,017,365	19.8	985,575,702	20.1
<b>Total HF</b>		<b>4,602,339,658</b>	<b>100</b>	<b>4,896,128,217</b>	<b>100.0</b>

## 6.4 CHE by Financing Agents

Government is the predominant financing agent. On average 78 % to 79% of CHE was handled by the Government in FY 2014 -15 and 2015 -16 respectively. Table 13 presents the distribution of CHE by financing agents.

**Table 13 Distribution of CHE in FY 2014 -15 and 2015 -16 by Financing Agents**

Financing agents		FY 2014 -15		FY 2015 -16	
		CHE	%	CHE	%
<b>FA.1</b>	<b>General government</b>	<b>3,633,925,197</b>	<b>79.0</b>	<b>3,838,972,659</b>	<b>78.4</b>
FA.1.1	Central government	2,315,624,436	50.3	2,432,993,187	49.7
FA.1.1.1	MoH	1,437,840,166	31.2	1,516,011,843	31.0

FA.1.1.2	JDWNRH	839,045,832	18.2	868,945,095	17.7
FA.1.1.nec	Unspecified central government agents (n.e.c.)	38,738,439	0.8	48,036,249	1.0
FA.1.2	State/Regional/Local government	1,318,300,761	28.6	1,405,979,472	28.7
FA.1.2.1	Dzongkhag Administration	1,318,300,761	28.6	1,405,979,472	28.7
<b>FA.2</b>	<b>Insurance corporations</b>	<b>11,260,006</b>	<b>0.2</b>	<b>11,761,358</b>	<b>0.2</b>
FA.2.1	Commercial insurance companies	11,260,006	0.2	11,761,358	0.2
<b>FA.3</b>	<b>Corporations (Other than insurance corporations) (part of HF.RI.1.2)</b>	<b>15,886,159</b>	<b>0.3</b>	<b>22,908,612</b>	<b>0.5</b>
FA.3.2	Corporations (Other than providers of health services)	15,886,159	0.3	22,908,612	0.5
<b>FA.4</b>	<b>Non-profit institutions serving households (NPISH)</b>	<b>30,250,931</b>	<b>0.7</b>	<b>36,909,885</b>	<b>0.8</b>
<b>FA.5</b>	<b>Households</b>	<b>911,017,365</b>	<b>19.8</b>	<b>985,575,702</b>	<b>20.1</b>
<b>Total FA</b>		<b>4,602,339,658</b>	<b>100</b>	<b>4,896,128,217</b>	<b>100</b>

## 7 Methodology

This NHA study was conducted according to SHA 2011 guidelines. Health Account Production Tool (HAPT) (V4.0.0.1) was used to process data and produce reports.

### 7.1 SHA 2011 and HAPT Tool

System of health accounts 2011 is a collection of standards, definitions and guidelines for producing NHAs. SHA 2011 facilitates the production of comparable health accounts across countries and between different periods in a same country. SHA 2011 principles envision a health

financing system through three primary dimensions. They include: 1) Consumer Interface 2) Provider Interface and 3) Financing Interface.

Health Accounts Production Tool, (HAPT) is a public domain windows based software program that can be used to digitalize health account details in a systematic manner and produce various health accounts reports. HAPT is designed to be used with SHA 2011 guidelines and has in built classifications that can be customized to represent specific country contexts. Users of HAPT should define classifications to be used in the country and identify data sources. Data from various sources should be gathered, processed and entered into the HAPT enabling a process called “mapping” to collate these data by different SHA classification characteristics. Successful completion of mapping allows the creation of tables and graphs related to health accounts.

## **7.2 Customization of NHA accounts**

Two NHA studies were created in the HAPT for FY 2014/15 and 2015/16 simultaneously. Accounting periods were set to be between 01/07/14 to 30/06/15 and 01/07/15 to 30/06/16 to be commensurate with the accounting practices with the RGoB. The accounts were customized to have 13 CHE classifications including age, gender, disease and TCAM accounts. The standard classifications were changed to reflect the Bhutan Health system context. SNL classification was created based on distribution of dzongkhag under three regions.

## **7.3 Data Sources**

A comprehensive data records on health expenditures were available from the routine financial data systems of the MoH. MoH’s expenditure records included both recurrent and capital expenditures categorized according to standard accounting classifications. Background data associated with government expenditure records were sufficient to recognize classification codes related to FSRI, FS, HF, FA, HP, SNL and FP classifications.

The expenditure data obtained through MoF by the MoH had 3 different origins. MoH’s expenditure covered the expenditures of central administration including preventive care programmes, Bhutan Health Trust Fund (BHTF), Bhutan Medical and Health Council (BMHC), 2 Regional Referral Hospitals, Phuntsholing, Gidakom and Deothang hospitals,. Expenditure report of Drug Regulatory Authority (DRA), Bhutan Narcotic Control Authority (BNCA), Khesar Gyalpo University of Medical Sciences of Bhutan (KGUMSB) and JDWNRH were obtained separately from MoF. Dzongkhag level institutions has separate expenditure reports on the expenditures made by dzongkhag level administration, hospitals, BHUs, sub posts and outreach clinics.

Age, sex and disease specific morbidity data on outpatient, inpatient and preventive care records were available for all institutions except for disaggregated outpatient data of JDWNRH. This data was used to derive mapping keys based on HC, AGE, Gender and Disease classifications.

Since all ‘rest of the world’ funding were channeled through the MoH, data related to donor expenditures were also included in the MoH expenditure reports. Data on remaining direct expenditures made by donors directly were obtained separately.

Annual financial report of the MoF also recorded the detailed health expenditure data. They were used to verify the consistency of MoH expenditure data.

At present Bhutan has 10 NGOs dealing with health related activities. Data from 4 of them were received as a response to a stakeholder meeting on NHA data collection. The expenditures of remaining NGOs were imputed based on group average of reported NGOs.

Data on employer related health expenses were collected from all major corporations in the country. Three types of health expenditures were reported by employers. They included expenditures made on claim reimbursements, purchasing of insurance premium and providing institutional based health care.

The expenditure records of the Royal Insurance Corporation of Bhutan (RICBL), were used as the source of insurance based health expenditures.

Two sources of information were considered for estimating household out of pocket expenditures (OOPS). These were the OOPS estimated by National Statistical Bureau of Bhutan, as a component of Bhutan National Accounts and the Bhutan BLSS Survey 2012 data that could be used to forecast the OOPS in FY 2014/15 and 2015/16. After considering pros and cons, BLISS survey based data was used for estimating OOPS. However, household costs related to transport and rimdo and puja were not considered for estimating the health accounts. The NHA team decided to exclude transport cost since it was not possible to differentiate patient transport costs from other transport costs and recent health expenditure estimate produced in health system review report also did not include transport costs. Expenditure incurred on rimdo and puja were excluded as this practice does not confirm to the health care boundary definition according to SHA 2011. BLSS survey included sufficient information to create distribution keys for mapping on health care provider, area, age and gender.

MoH Expenditure records and BLSS survey data base were used as the source of estimating Traditional Complementary and Alternative Medicine (TCAM) expenditures.

## **7.4 Data Processing and import**

MoH, JDWRH and Dzongkhag data records were customized in excel sheets, so that they can be directly imported to HAPT using auto-binding technique. Original data files were sorted and processed to ensure only the expenditure lines are remained after processing. Under each expenditure line qualitative information required for recognizing the membership in respective classification categories and codes related to FSRI, FS, HF, FA, SNL, FP, and HP were also included. In addition, special coding columns were maintained to facilitate the repeat mapping procedures, where relevant. Once processed double checking for coding consistencies was carried out. Then these data files were imported under relevant data source categories.

## 7.5 Data Mapping and estimation

The data from Donors, Government, Employers, NGO, Insurance companies and part of TCAM institutes were available from actual expenditure reports. Household costs were estimated.

The nature of data record arrangement in the government health system enabled the identification and direct coding of FSRI, FS, and HF. FA, SNL, FP, and HP classifications in most expenditure files. As described earlier direct coding procedure was accomplished automatically through auto binding. Mapping in relation to HC, Age, Gender, and disease classifications were carried out using respective disease keys.

Morbidity data were available for each district separately and they were disaggregated by type of institution, type of care within institution and by age sex and disease. These morbidity data files were selectively, amalgamated to compile three national master files, each for outpatient care, inpatient care and preventive care. Each master file presented data on number of patients under each disease condition further sub categorized under 10 age-sex categories (5 age and 2 sex categories). In addition, the information was retained so that these data files could be filtered by districts and type of institution.

Two adjustments were carried out to make the data values in these 3 master files were comparable or in other words to standardize.

The first adjustment was to convert the number of patients in the inpatient data file in to number of inpatient days. In order to do that each value in the inpatient data file that is reflecting a particular number of patients having a particular disease, was multiplied by the average in patient days related to that disease. Repeating this procedure, it was possible to create an inpatient data master file that contains number of patient's days for each disease conditions under 10 age- sex categories.

The second adjustment was to standardize the number of patients in outpatient and preventive master files so that they are comparable with inpatient data file described in the above paragraph. A cost study carried out in Bhutan (MoH, 2011), indicated cost ratios between different types of health care functions (inpatient and outpatient costs) across different types of health institutions (Referral, district, BHU etc.). These cost ratios were used to convert number of outpatient and preventive care patient visits in to inpatient day equivalents. This was achieved by multiplying respective data lines in master files by disease, hospital type based cost ratios related to them. This second multiplication made the data values in 3 master files were comparable and in the same value scale.

These standardized values were used to calculate mapping keys related to HC, Age, and Gender classifications. Excel pivot tables were used to create relevant proportions.

Under each district, separate HC classifications were created for district hospitals and BHUs. This was required as the presence of district hospitals and various types of smaller primary care hospitals varied by districts and this composition influenced the percentage cost composition of health care functions.

Separate age based mapping keys were created for out-patient and in-patient care in different health care providers. These keys were based on the standardized total patient days under each age class in a particular type of care and provider. The age categories of preventive care components were directly allocable.

Separate gender classifications were created for each age category under different types of providers. These were also based on the total standardized patient days assigned for male and female patients under each provider, function and age category. Whenever age related data were not available for a particular expenditure the respective population based age distribution was used to create distribution keys.

Disease classifications were also created based on the total standardized patient days assigned for each disease. Separate disease keys were created based on type of provider, gender and district (based on malaria endemic zone, only in dzongkhag level hospitals).

Cost of consumption of fixed capital in government institutes were estimated in the following manner.

- Consumption of fixed capital (CFC) for buildings, vehicles and equipment (Medical and other) and furniture belonged to the MoH were calculated for each year.
- The number and types of capital items prevailed during the 2 fiscal years were listed by reviewing annual health bulletins and other relevant reports.
- Then for each year, annualized capital cost (CFC) for corresponding items were calculated. Annualized capital cost was based on the following formula (4):

$$\text{CFC}_{it} = (\text{RC}_{it} / \text{Annualization factor}_{it})$$

Where,

$\text{CFC}_{it}$  = Consumption of Fixed Capital of infrastructure item  $i$  in year  $t$ )

$\text{RC}_{it}$  = Replacement cost of infrastructure item  $i$  at the end of year  $t$  = (Present cost \* (1+ real  $r$ ))

Real  $r$  = real interest rate =  $\{[(1+\text{nominal interest rate}) / (1+\text{annual inflation})]-1\}$

Annualization factor =  $(1/r) \times [1 - (1 / (1+r)^n)]$ :

where;  $r$  = real interest rate,  $n$  = life span of the infrastructure

Real interest rate was calculated using the nominal interest rates and inflation rates in Bhutan pertaining to each year. Life span of a building was set at 60 years while those for vehicles and equipment assumed to be 10 and 5 years respectively.

Household expenditure data for FY 2014/15 and FY 2015/16 were estimated by forecasting these amounts based on the BLSS survey data in 2012. Initially, outpatient, delivery and inpatient per capita health expenditures incurred by Bhutan people in 2012 was estimated. this was accomplished by running the original data base using STATA software.

BLSS survey data included data on background variables such as age, sex, etc.. so that adequate filtration of estimates could be done when finding out the relevant costs percentages required for creating age, gender related distribution keys. Data also provided information on provider, and health care function only for OPD) so that distribution keys for HP, HC, DIS classifications could be derived. Later the estimates were further adjusted for inflation and population growth over period extending from 2014 to 2016, where the household expenditure estimates were carried out.

Donor data were mainly retrieved from the government data sources, supplemented by the reports directly obtained from Donors. These records contained adequate information to identify FSRI, FS, HF, FA, FP, and HC classifications. In some cases of donor expenditures related to preventive care SNL, age and gender coding were not available. Hence, it was assumed that these funds for which data were not available, were mostly aimed at overall population preventive work. Hence, they were mapped using distribution keys created based on national population characteristics.

Coding for FSRI, FS, HF, FA for employer data were implied from the nature of information. No details on coding related to FP, HC and HP classifications were available. Therefore, they were coded into respective unidentified categories. The overall distribution keys derived from the SNL, Age, Gender and disease cost distributions pertaining to government data were used for coding employer data on SNL, Age (productive age only), gender and disease classifications. It was assumed that SNL, Age, Gender and disease patterns among employees who fall ill also similar to normal population who falls ill.

Insurance data allowed the direct identification of FSRI, FS, HF, FA classifications based on context. FP, HP and HC classification were classified as non-specific due to lack of identification data. RICB data had adequate information to develop SNL based distribution keys.

No specific data available for mapping NGO expenditures in to HC,HP, FP classifications and hence they were assigned to .nec ( un specified) categories. SNL, age, gender classifications were assumed to be equal to national population distributions related to these criteria.

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Nu , Million	Revenues of health care financing schemes										Total FS
	FS.1	FS.1.1	FS.2	FS.5	FS.5.1	FS.5.2	FS.6	FS.6.1	FS.6.2	FS.6.3	
<b>i n g s c h e m e s</b>	(allocated to health purposes) Transfers from government domestic revenue	Internal transfers and grants	Transfers distributed by government from foreign origin	Voluntary prepayment	Voluntary prepayment from individuals/households	Voluntary prepayment from employers	Other domestic revenues .c.e.n	Other revenues from households .c.e.n	Other revenues from corporations .c.e.n	Other revenues from NPISH .c.e.n	
Dzongkhag Health Sector/Scheme	1,318	1,318									1,318
Unspecified government schemes (n.e.c.)	29	29	4								33
Voluntary health care payments/schemes			17	11	8	3	29		16	13	57
Voluntary health insurance schemes				11	8	3					11
Primary/subsidiary health insurance schemes				11	8	3					11
Other primary coverage schemes				11	8	3					11
NPISH financing schemes (including development agencies)			17				13			13	30
NPISH financing schemes (excluding HF.2.2.2)			17				13			13	30
<b>Enterprise Financing schemes</b>							16		16		16
Enterprises (except health care providers) financing schemes							16		16		16

Nu , Million	Revenues of health care financing schemes										Total FS
	FS.1	FS.1.1	FS.2	FS.5	FS.5.1	FS.5.2	FS.6	FS.6.1	FS.6.2	FS.6.3	
	Transfers from government domestic revenue (allocated to health purposes)	Internal transfers and grants	Transfers distributed by government from foreign origin	Voluntary prepayment	Voluntary prepayment from individuals/households	Voluntary prepayment from employers	Other domestic revenues .c.e.n	Other revenues from households .c.e.n	Other revenues from corporations .c.e.n	Other revenues from NPISH .c.e.n	
Household out-of-pocketpayment							911	911			911
Out-of-pocket excluding cost-sharing							911	911			911
<b>Total HF</b>	<b>3,417</b>	<b>3,417</b>	<b>234</b>	<b>11</b>	<b>8</b>	<b>3</b>	<b>940</b>	<b>911</b>	<b>16</b>	<b>13</b>	<b>4,602</b>



Revenues of health care financing schemes											
Nu. Million	FS.1	FS.1.1	FS.2	FS.5	FS.5.1	FS.5.2	FS.6	FS.6.1	FS.6.2	FS.6.3	All FS
<b>Financing schemes</b>	revenue (allocated to health purposes) Transfers from government domestic										
	Unspecified government schemes (n.e.c.)	14	4								18
	Voluntary health care payment schemes		15	12	9	3	45		23	22	72
	Voluntary health insurance schemes			12	9	3					12
	Primary substitutory health insurance schemes			12	9	3					12
	Other primary coverages schemes			12	9	3					12
	NPISH financing schemes (excluding HF.2.2.2)		15				22			22	37
	NPISH financing schemes (excluding HF.2.2.2)		15				22			22	37
	Enterprise financing schemes						23		23		23
	Enterprises & except health care providers financing schemes						23			23	23
	<b>HOUSEHOLD out-of-pocket payment</b>						960		960		960
	Out-of-pocket, excluding cost-sharing						986		986		986
<b>Total HF</b>	<b>3,621</b>	<b>3,621</b>	<b>233</b>	<b>12</b>	<b>9</b>	<b>3</b>	<b>1,030</b>	<b>986</b>	<b>23</b>	<b>22</b>	<b>4,896</b>







Financing schemes					
Nu. Million	All HF		349		4,602
	1.3.HF	sharing Out-of-pocket excluding cost-	285		911
	3.HF	paymen t Household out-of-pocket	285		911
	1.3.2.HF	providers) financing schemes Enterprises (except health care	16		16
	3.2.HF	Enterprise financing schemes	16		16
	1.2.2.HF	(excluding .2.2.HF2) NPISH financing schemes	21		30
	2.2.HF	agencies) (including development NPISH financing schemes	21		30
	3.1.1.2.HF	schemes Other primary coverage	11		11
	1.1.2.HF	insurance schemes Primary/substitutory health	11		11
	1.2.HF	schemes Voluntary health insurance	11		11
	2.HF	payment schemes Voluntary health care	48		57
	nec.1.1.HF	schemes .c.e.(n) Unspecified government			33
	1.2.1.1.HF	Scheme Dzongkhag Health Sector			1,318
	2.1.1.HF	government schemes State/regional/local		1,31	8
	nec.1.1.1.HF	schemes Other Central government			5
	2.1.1.1.HF	JDWNRH Scheme			826
	1.1.1.1.HF	MoH Scheme	15		1,451
	1.1.1.HF	Central government schemes	15		2,26
	1.1.HF	Government schemes	15	3,05	4
	HF 1.	health care financing schemes compulsory contributory Government schemes and	15	3,05	4
	Health care providers				
HP,nec	Unspecified				
All HP					

**Table 17** Care Providers and Financing Schemes (HP X HF) Cross Tabulation in FY 2015/16

		schemes																	
Nu Million	Health care providers	HF 1.	1.HF1.	1.1.HF1.	1.1.1.HF1.	1.1.1.1.HF2.	nec.1.1.1.HF	1.1.HF2.	2.1.1.HF1.	nec.1.1.HF	HF 2.	2.HF1.	2.HF2.	2.2.HF1.	2.HF3.	3.2.HF1.	HF 3.	3.HF1.	All HF
		health care financing compulsory contributory Government schemes and	Government schemes	schemes Central government	MoH Scheme	JDWRH Scheme	schemes Other Central government	government schemes State/regional/local	Scheme Dzongkhag Health Sector	schemes .c.e.(n) Unspecified government	Voluntary health care payment schemes	insurance schemes Voluntary health	Primary/substitutory health insurance schemes	Other primary coverage	NPISH financing schemes (including development)	Enterprise financing (excluding .2.2.HF2)	Enterprises (except health care providers) financing	Household out-of-pocket payment	Out-of-pocket excluding cost-sharing
HP-1	Hospitals	33 38	3,280	1,888	1,019	869		1,392	1,392								298	298	3,578
HP-1.1	General hospitals	17 41	1,744	352	352			1,392	1,392								62	62	1,806
HP-1.1.1	Dzongkhag hospitals	12 35	1,285	300	300			985	985								29	29	1,314
HP-1.1.2	BHu I, II & others	400	460	52	52			407	407								32	32	492
HP-1.3	Regional Referral Hospital	14 34	1,494	1,494	625	869											27	27	1,521
HP-1.3.1	Regional Referral Hospital	13 33	1,013	1,013	144	869											15	15	1,027
HP-1.3.2	Regional Referral Hospital	481	481	481	481												12	12	493
HP-1.nec	Unspecified hospitals (n.e.c.)	42	42	42	42												210	210	251
HP-3	Private, ambulatory healthcare	23	23	23	23												2	2	25
HP-3.1	Medical practices	20	20	20	20												2	2	22
HP-3.1.nec	Unspecified medical practices (n.e.c.)	20	20	20	20												2	2	22



8 schemes					
Nu Million	All HF		4	102	4,896
	3.HF1.	cost-sharing Out-of-pocket excluding		100	986
	HF 3.	payment Household out-of-pocket		100	986
	3.2.HF1.	care providers) financing Enterprises (except health		23	23
	2.HF3.	schemes Enterprise financing		23	23
	2.2.HF1.	(excluding .2.2.HF2) NPISH financing schemes		22	37
	2.HF2.	(including development NPISH financing schemes		22	37
	1.1.2.HF3.	schemes Other primary coverage		12	12
	1.2.HF1.	health insurance schemes Primary/substitutory		12	12
	2.HF1.	insurance schemes Voluntary health		12	12
	HF 2.	payment schemes Voluntary health care		72	72
	nec.1.1.HF	schemes .c.e.(n ) Unspecified government			18
	2.1.1.HF1.	Scheme Dzongkhag Health Sector			1,406
	1.1.HF2.	government schemes State/regional/local			1,406
	nec.1.1.1.HF	schemes Other Central government			17
	1.1.1.HF2.	JDWNRH Scheme			869
	1.1.1.HF1.	MoH Scheme	4	2	1,528
	1.1.HF1.	schemes Central government	4	2	2,415
	1.HF1.	Government schemes	4	3	3,839
	HF 1.	health care financing compulsory contributory Government schemes and	4	3	38 29
	Health care providers				
HP.8.3 HF-nec	Unspecified health care providers(n.e.c.)				
All HF					







Nu million	Health care functions	HF 1. Government schemes and compulsory contributory health care financing										HF 2. Voluntary health care payment schemes	HF 3. Household out-of-pocket payment	3.HF1. Out-of-pocket excluding cost-sharing	All HF	
		1.HF1. Government schemes	1.1.HF1. Central government schemes	1.1.1.HF1. MoH Scheme	1.1.1.HF1. JDWRH Scheme	1.1.1.HF1. Other Central government schemes	2.1.1.HF1. State/regional/local government schemes	21.1.1.HF1. Dzongkhag Health Sector Scheme	1.1.1.HF1. Unspecified government schemes .c.e.(n)	2.HF1. Voluntary health insurance schemes	1.1.2.HF1. Primary/substitutory health insurance schemes					13.1.2.HF1. Other primary coverage schemes
HC-6.7	Public Health/Preventive Care	167	156	153		12									167	
HC-6.7.1	Control of Outbreaks/Intervention	30	30	30											30	
HC-6.7.2	TB Control	16	16	16											16	
HC-6.7.3	Shigellosis/Amoebiasis/Cholera/Enteric fever	24	24	24											24	
HC-6.7.4	Vector Borne Disease Control	34	22	22		12									34	
HC-6.7.5	Health surveillance/epidemiology	15	15	15											15	
HC-6.7.6	Non-communicable diseases surveillance	35	35	35											35	
HC-6.7.7	Epidemiology and disease surveillance	12	12	10				3							12	
HC-6.nec	Unspecified government schemes	22	4	4											22	36

Nu million	HF 1	Government schemes and compulsory contributory health care financing schemes	Fig 8																															
			Health care functions	Government schemes	Central government schemes	MoH Scheme	JDWRH Scheme	Other Central government schemes	State/regional/local government schemes	Dzongkhag Health Sector Scheme	Unspecified government schemes .c.e.(n)	Voluntary health care payment schemes	Voluntary health insurance schemes	Primary/substitutory health insurance schemes	Other primary coverage schemes	NPISH financing schemes (including development agencies)	NPISH financing schemes (excluding .2.2.HF2)	Enterprise financing schemes	Enterprises (except health care providers) financing schemes	Household out-of-pocket payment	Out-of-pocket excluding cost-sharing	All HF												
HC.7				31	4	311	27	3			15	9		9	9	9					338	288	146	2	7				133	4		46		
HC.7.1		Governance and health system administration		279	9	9						9																						
HC.7.1.1		Planning & Management		138	8	138						8																						
HC.7.1.2		Procurement & supply management		2	2	2	0					0																						
HC.7.1.nec		Administration of health financing		133	3	133																												
HC.7.2				4	4	4																												
HC.7.nec				4	4	4																												

Nu million	Financing schemes					
	All HF				287	4,602
	1.3.HF	Out-of-pocket excluding cost-sharing			285	911
	3.HF	Household out-of-pocket payment			285	911
	1 .3.2.HF	financing schemes Enterprises (except health care providers)				16
	3.2.HF	Enterprise financing schemes				16
	1 .2.2.HF	.2.2.HF2) NPISH financing schemes (excluding				30
	2.2.HF	development agencies) NPISH financing schemes (including				30
	3.1 .1.2.HF	Other primary coverage schemes				11
	1 .1.2.HF	schemes Primary/substitutory health insurance				11
	1.2.HF	Voluntary health insurance schemes				11
	2.HF	Voluntary health care payment schemes				57
	nec .1.1.HF	Unspecified government schemes .c.e.(n)				33
	1.2 .1.1.HF	Dzongkhag Health Sector Scheme				13 8
	.1.1.HF 2	State/regional/local government schemes				3
	nec.1 .1.1.HF	Other Central government schemes				5
	2.1 .1.1.HF	JDWNRH Scheme				82 6
	1.1 .1.1.HF	MoH Scheme				14 51
	.1.1.HF 1	Central government schemes				14 51
1.1.HF	Government schemes				3,634	
HF 1.	schemes contributory health care financing Government schemes and compulsory				3,634	
HC:9						
All HC						





Nu Millions	Schemes												
	Health Care Providers												
HP.7	Private providers												27
HP.7.1	Governmental providers												18
HP.7.9	Other administrative costs												59
HP.8	Rest of economy												4
HP.8.3													4
HP.ncc	Unspecified health care providers (n.c.c.)												6
All HP													100
													986
													986
													23
													23
													37
													37
													12
													12
													12
													15
													15
													18
													140
													1,406
													17
													869
													19
													16
													44
													4
													4
													4
													5
													5
													24
													15

Table 20 Health Care functions and Health

Health care providers		Number	Million																									
Health Care Functions				HP 1.	.1.1.HP 1	.1.1.HP 1	.1.1.HP 2	3.1.HP 1	3.1.HP 2	ne.1.HP 2	3.HP	1.3.HP	.1.3.HP	4.HP	1.4.HP	9.4.HP	5.HP	1.5.HP	9.5.HP	6.HP	7.HP	1.7.HP	9.7.HP	8.HP	3.8.HP	nec.HP	All HP	
HC.1	Curative care	3,069			416		416	790	441	189	2	2	2	8	8	1	0	0									38	3,117
HC.1.1	Hospitals	2,501			305		305	621	410	148				1	1											1	2,503	
HC.1.1.1	Specialised hospitals	1,282			301		301	6	6																		1,282	
HC.1.1.2	General hospitals and healthcare facilities	1,198			5		5	616	400	147				1	1											1	1,200	
HC.1.1.ne.c	Other providers of ancillary services and emergency rescue	22			4		4	5	4	1																	22	
HC.1.3	Other suppliers of pharmaceuticals and medical goods	568			110		110	169	30	42	2	2	2	7	7			0	0							0	577	
HC.1.3.1	Pharmacies	564			110		110	169	30	38	2	2	2	0	0			0	0								566	
HC.1.3.2	Other providers of ancillary services and emergency rescue	2								2																	2	



Nu Million	Health care providers									
	Health Care Functions									
HC-5.1.2	Healthcare community									
		42 2	1 7	293	2 1	2 1	2 1	33	3 6	11
	nec.HP			25	8	8				
	3.8.HP									
	8.HP									
	9.7.HP									
	1.7.HP									
	7.HP									
	6.HP			205	1 3	1 3	13			
	9.5.HP		1 7							
	1.5.HP	42 2								
	5.HP	42 2	17							
	9.4.HP									
	1.4.HP			7			0	0		0
	4.HP			7			0	0		0
	.1.3.HP									
	1.3.HP									
	3.HP									
	ne.1.HP			0			0	0		0
	.3.1.HP			4			2	2	1	0
	.3.1.HP			1			1	0		0
	3.1.HP			5			3	2	1	1
	.1.1.HP			18			5	1	3	2
	.1.1.HP			32			11	2	1	3
	1.1.HP			51			16	3	4	5
	HP 1.			56			20	3	6	6

Nu. Million	Health care providers		Health Care Functions	
	All HP			1 9 1
	nec.HP	.c.e.(n) Unspecified health care providers		6 7
	8.HP3.	health aide, .etc) village health worker, community Community health workers (or		3 0
	8. HP	Rest of economy		1 6
	7.HP9.	Other administration agencies		2 4
	7.HP1.	agencies Government health administration		3 4
	7. HP	administration and financing Providers of health care system		1 5
	6. HP	Providers of preventive care		3 5
	5.HP9.	and medical goods Other suppliers of pharmaceuticals All Other miscellaneous sellers and		6
	5.HP1.	Pharmacies		
	5. HP	medical goods Retailers and Other providers of		
	4.HP9.	Other providers of ancillary services		
	4.HP1.	and emergency rescue Providers of patient transportation		7 7
	4. HP	Providers of ancillary services		7 7
	.1.3.HP	Unspecified medical practices .c.e.(n)		
	3.HP1.	Medical practices		
	HP 3.	Providers of ambulatory health care		
	nec.HP	Unspecified hospitals .c.e.(n)		
	.3.1.HP	Regional Referral Hospital		1
	.3.1.HP	JDWNRH		
	1.HP3.	mental health hospitals) Specialised hospitals (Other than		1
	.1.1.HP	BHUs 1 & 2, ORC and others		8
	.1.1.HP	Dzongkhag Hospitals		11
	1.HP1.	facilities General hospitals and Healthcare		19
	HP 1.	Hospitals		19
	HC.6.4.3	Family planning programme		
	HC.6.7	Public Health Service DZ		
	HC.6.7.1	Control of communicable diseases DZ		
	HC.6.7.2	TB Control		
	HC.6.7.3	STI control DZ		
	HC.6.7.4	Non-communicable diseases DZ		
	HC.6.7.5	Maternal and child health DZ		
	HC.6.7.6	Immunisation DZ		
	HC.6.7.7	Epidemiology and DZ		

Health care providers	All HP		36	338	288	146	2	7	133	
	nec.HP	.c.e.(n)	16	1						
	3.8.HP	health aide, .etc) village health worker, community Community health workers (or								
	8.HP	Rest of economy								
	9.7.HP	Other administration agencies		30	11	8	0	1	2	
	1.7.HP	agencies Government health administration		307	277	1			131	
	7.HP	administration and financing Providers of health care system		337	288	14			133	
	6.HP	Providers of preventive care		20						
	9.5.HP	and medical goods Other suppliers of pharmaceuticals All Other miscellaneous sellers and								
	1.5.HP	Pharmacies								
	5.HP	medical goods Retailers and Other providers of								
	9.4.HP	Other providers of ancillary services								
	1.4.HP	and emergency rescue Providers of patient transportation								
	4.HP	Providers of ancillary services								
	.1.3.HP	Unspecified medical practices .c.e.(n)								
	1.3.HP	Medical practices								
	3.HP	Providers of ambulatory health care								
	ne.1.HP <sup>c</sup>	Unspecified hospitals .c.e.(n)								
	.3.1.HP <sup>2</sup>	Regional Referral Hospital								
	.3.1.HP <sup>1</sup>	JDWNRH								
	3.1.HP	mental health hospitals) Specialised hospitals (Other than								
	.1.1.HP <sup>2</sup>	BHUs 1 & 2, ORC and others								
	.1.1.HP <sup>1</sup>	Dzongkhag Hospitals								
	1.1.HP	facilities General hospitals and Healthcare								
	HP 1.	Hospitals								
	Nu Million	Health Care Functions	diseasesurveillance							





Health care providers							
Na Million	Health Care Function	Hospital inpatient services		Unspecified ambulatory health care		Unspecified ambulatory health care	
	HP 1. Hospitals	236	14				
	1.1.HP General hospitals						
	1.1.1.HP Dzongkhag Hospitals						
	2.1.1.HP BHU I, II & others						
	3.1.HP Specialised hospitals (Other than mental health hospitals)						
	1.3.1.HP JDWNRH						
	2.3.1.HP Regional Referral Hospital						
	nec.1.HP Unspecified hospitals .c.e.(n)	236	14				
	3.HP Providers of ambulatory health care	20					
	1.3.HP Medical practices	20					
	nec.1.3.HP Unspecified medical practices .c.e.(n)	20					
	2.3.HP Dental practice						
	4.HP Providers of ancillary services			4	4		
	9.4.HP Other providers of ancillary services						
	5.HP Retailers and Other providers of medical goods					602	586
	1.5.HP Pharmacies						586
	9.5.HP Other suppliers of pharmaceuticals					16	
	6.HP Providers of preventive care						
	7.HP Providers of health care system						
	1.7.HP Government health administration						
	9.7.HP Other administration agencies						
	8.HP Rest of economy			1			
	3.8.HP Community health workers (or village health worker, community health workers)			1			
	nec.HP Unspecified health care providers			38			
	All HP	256	54			602	586
	HC.1.3.nec						
	HC.1.nec						
	HC.4						
	HC.4.1						
	HC.4.2						
	HC.5						
	HC.5.1						
	HC.5.1.1						
	HC.5.1.2						
	HC.5.nec						



Nu. Million	Health care providers		Health Care Function		2011		2012		2013		2014		2015	
			2011	2012	2013	2014	2015	2011	2012	2013	2014	2015		
	HP 1.	Hospitals												
	HC.6.7.2	TB Control												
	HC.6.7.3	STI and AIDS prevention and control												
	HC.6.7.4	Vector Borne Disease Control												
	HC.6.7.5	Maternal and Child Health												
	HC.6.7.6	Non-communicable diseases												
	HC.6.7.7	Immunisation Services												
	HC.6.7.nec	Other Public Health Services												
	HC.6.nec	Unspecified health care												
	HC.7													
	1.1.HP	General hospitals												
	1.1.1.HP	Dzongkhag Hospitals												
	2.1.1.HP	BHu I, II & others												
	3.1.HP	Specialised hospitals (Other than mental health hospitals)												
	1.3.1.HP	JDWNRH												
	2.3.1.HP	Regional Referral Hospital												
	nec.1.HP	Unspecified hospitals .c.e.(n)												
	3.HP	Providers of ambulatory health care												
	1.3.HP	Medical practices												
	n.1.3.HP	Unspecified medical practices .c.e.(n)												
	2.3.HP	Dental practice												
	4.HP	Providers of ancillary services												
	9.4.HP	Other providers of ancillary services												
	5.HP	Retailers and Other providers of medical goods												
	1.5.HP	Pharmacies												
	9.5.HP	Other suppliers of pharmaceuticals												
	6.HP	Providers of preventive care	27	30	25	14	19	14	7	83				
	7.HP	Providers of health care system administration and financing												227
	1.7.HP	Government health administration agencies												168
	9.7.HP	Other administration agencies												59
	8.HP	Rest of economy												
	3.8.HP	Community health workers (or village health worker, community health workers)												
	nec.HP	Unspecified health care providers .c.e.(n)												22
	All HP		27	30	25	14	19	14	7	105				227



**Table 22** Care and Provision X FP) Cross Tabulation in FY 2014/15

Nu. Million		Factors of Health Care Provision																	
		FP.1	1.1.FP	2.1.FP	3.1.FP	3.FP	1.3.FP	2.3.FP	3.3.FP	1.3.3.FP	2.3.3.FP	3.3.3.FP							
HP.1	Hospitals	1,360	1,094	94	222	855	85	424	423	0	294	5	1	1	0	910	0	0	3,125
HP.1.1	Government hospitals	673	613	59	1	413	59	161	0	165	0	0	0	0	0	615	0	0	1,700
HP.1.1.1	District hospitals	407	373	33	1	260	29	128	128	0	86	0	0	0	0	599	0	0	1,266
HP.1.1.2	BHUs, I & 2 OR Clinics	265	240	25	0	153	30	33	33	0	80	0	0	0	0	16	0	0	434
HP.1.3	Specialized hospitals	502	431	35	36	438	26	262	262	0	125	3	1	1	0	296	0	0	1,236
HP.1.3.1	JDWRH	340	292	22	26	314	14	200	200	0	83	3	1	1	0	138	0	0	791
HP.1.3.2	Regional hospitals	162	139	13	10	124	12	62	62	0	42	0	0	0	0	158	0	0	444
HP.1.nec	Unspecified health care	186	1	1	185	4	0	0	0	0	4	2	0	1	0	0	0	0	190







**Table 23 Health Care Providers and Factors of Health Care Provision**

**Provision (HP X) FP) Cross Tabulation in FY 2015/16**

Nu Million	Factors of Health Care Provision		All FP																							
	Health Care Providers	Health Care Providers	Health Care Providers	Health Care Providers																						
HP.1	Hospitals	1,453	1,109	104	240	964	88	1.3.FP	Health care services	88	2.3.FP	Health care goods	471	3.3.FP	Non-health care services	353	12	11	0	329	52	951	1	1	210	3,578
HP.1.1	General hospitals	716	633	56	28	447	62	1.3.FP	Laboratory & Imaging services		2.3.FP	Pharmaceuticals	471	3.3.FP	Technical Assistance	11	0	2	0	192	25	643	0	0	0	1,806
HP.1.1.1	District hospitals	430	390	33	6	258	29	1.3.FP	Health care services	29	2.3.FP	Health care goods	113	3.3.FP	Training	2		2	96	18	626	0	0	0	1,314	
HP.1.1.2	Other hospitals	287	243	22	21	188	32	1.3.FP	Health care services	32	2.3.FP	Pharmaceuticals	53	3.3.FP	Operational research	0		0	96	7	17	0	0	0	492	
HP.1.3	Specialized hospitals	717	458	47	212	495	27	3.FP	Materials and services used		3.1.FP	employees		3.3.FP	Technical Assistance	8		8	123	26	309	0	0	0	1,521	
HP.1.3.1	Specialized hospitals	550	310	35	205	333	15	3.FP	All Other costs related to		3.1.FP	Social contributions		3.3.FP	Operational research	7		7	82	18	144				1,027	
HP.1.3.2	Specialized hospitals	166	148	12	6	162	12	3.FP	employees		3.1.FP	Social contributions		3.3.FP	Operational research	1		1	42	8	165	0	0	0	493	
HP.1.nec	Unspecified health care providers	20	18	1	0	22		3.FP	All Other costs related to		3.1.FP	Social contributions		3.3.FP	Operational research	2		2	14	0		0	0	0	210	
HP.3	Provision in Metropolitan	11	10	1	0	14	2	3.FP	All Other costs related to		3.1.FP	Social contributions		3.3.FP	Operational research	5		5	7	0		0	0	0	25	

Nu Million		Factors of Health Care Provision																			
Health Care Providers	FP 1.	Compensation of employees																			
		1.1.FP	2.1.FP	3.1.FP	3.FP	1.3.FP	1.3.FP	nec .1.3.FP	2.3.FP	1.2.3.FP	3.3.FP										
		Wages and salaries	Social contributions	All Other costs related to employees	Materials and services used	Health care services	Laboratory & Imaging services	Other health care services .c.e.(n)	Health care goods	Pharmaceuticals	Non-health care services	Training	Technical Assistance	Operational research	Other non- health care services	Non-health care goods	Consumption of fixed capital	Other items of spending on inputs	Taxes	Unspecified factors of health care provision .c.e.(n)	All FP
HP.3.1	Medical practices	10	1	0	11	2		2			9	3			5	0					22
HP.3.1.nec	Dependent practice (nec)	10	1	0	11	2		2			9	3			5	0					22
HP.3.2	Dental practice				3						3	2			1						3
HP.4	Providers, independent practice				4						4	3			0						4
HP.4.9	Other providers (independent)				4						4	3			0						4
HP.5	Health care services	10	2	1	590	0		0	586	586	4	1			3	0			0	0	602
HP.5.1	Pharmacies				586	0		0	586	586											586
HP.5.9	Pharmacies	10	2	1	4						4	1			3	0			0	0	16
HP.6	Providers dependent	29	4	3	259	2			35	19	165	11	8	2	45	56			0	0	295

Nu Million		Factors of Health Care Provision																				
Health Care Providers	FP 1.	Compensation of employees																				
		1.1.FP	2.1.FP	3.1.FP	3.FP	1.3.FP	1.3.FP	2.3.FP	2.3.FP	1.2.3.FP	3.3.FP											
		Wages and salaries	Social contributions	All Other costs related to employees	Materials and services used	Health care services	Laboratory & Imaging services	Other health care services .c.e.(n)	Health care goods	Pharmaceuticals	Non-health care services	Training	Technical Assistance	Operational research	Other non-health care services .c.e.(n)	Non-health care goods	Consumption of fixed capital	Other items of spending on inputs	Taxes	Unspecified factors of health care provision .c.e.(n)	nec.FP	All FP
HP-7		81	16	3	117				1		107	41	2	0	64	9	10	1	1	0	0	227
HP-7.1	Private health insurance	73	14	3	67				1		61	10	1	0	51	6	10	1	1	0	0	168
HP-7.9	Governmental health insurance	8	2		49						46	31	1	0	13	3		0	0			59
HP-8	Rest of economy				4						4	2			1							4
HP-8.3					4						4	2			1							4
HP-nec	Governmental health insurance				84				79	79	5	4			1						78	162
All HP		123	127	246	2,034	92	2	90	1,171	1,171	653	178	21	3	451	118	961	2	2	289		4,896

**Table 24 Distribution of CHE Disease Classification in FY 2014/15**

Classification of diseases / conditions		FY 2014/15 (Nu.millions)	FY 2015/16 (Nu.millions)
DIS.1	Infectious and parasitic diseases	1,190	1,247
DIS.1.1	HIV/AIDS and Other Sexually Transmitted Diseases (STDs)	26	34
DIS.1.1.1	HIV/AIDS and Opportunistic Infections (OIs)	24	9
DIS.1.1.1.1	HIV/AIDS	17	3
DIS.1.1.1.nec	Unspecified HIV/AIDS and OIs (n.e.c.)	7	5
DIS.1.1.2	STDs Other than HIV/AIDS	2	2
DIS.1.1.nec	Unspecified HIV/AIDS and Other STDs (n.e.c.)	0	23
DIS.1.2	Tuberculosis (TB)	123	148
DIS.1.2.1	Pulmonary TB	11	3
DIS.1.2.1.nec	Unspecified Pulmonary Tuberculosis (n.e.c.)	11	3
DIS.1.2.nec	Unspecified tuberculosis (n.e.c.)	112	145
DIS.1.3	Malaria & other vector borne diseases	45	55
DIS.1.4	Respiratory infections	265	266
DIS.1.6	Neglected tropical diseases	3	3
DIS.1.7	Vaccine preventable diseases	34	38
DIS.1.nec	Other and unspecified infectious and parasitic diseases (n.e.c.)	309	274
DIS.2	Reproductive health	712	888
DIS.2.1	Maternal conditions	553	662
DIS.2.2	Perinatal conditions	108	170
DIS.2.3	Contraceptive management (family planning)	10	12
DIS.2.nec	Unspecified reproductive health conditions (n.e.c.)	41	45
DIS.3	Nutritional deficiencies	93	86
DIS.4	Non communicable diseases	1,633	1,693

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Classification of diseases / conditions		FY 2014/15 (Nu.millions)	FY 2015/16 (Nu.millions)
DIS.4.1	Neoplasm	29	78
DIS.4.2	Endocrine and metabolic disorders	54	51
DIS.4.2.1	Diabetes	54	51
DIS.4.3	Cardiovascular diseases	150	153
DIS.4.3.1	Hypertensive diseases	59	53
DIS.4.3.nec	Other and unspecified cardiovascular diseases (n.e.c.)	91	100
DIS.4.4	Mental & behavioural disorders, and Neurological conditions	205	235
DIS.4.4.1	Mental (psychiatric) disorders	20	27
DIS.4.4.2	Behavioural disorders	67	91
DIS.4.4.3	Neurological conditions	11	14
DIS.4.4.nec	Unspecified mental & behavioural disorders and neurological conditions (n.e.c.)	106	103
DIS.4.5	Respiratory diseases	193	193
DIS.4.6	Diseases of the digestive	336	344
DIS.4.7	Diseases of the genito-urinary system	258	250
DIS.4.8	Sense organ disorders	199	193
DIS.4.9	Oral diseases	97	92
DIS.4.nec	Other and unspecified non communicable diseases (n.e.c.)	113	106
DIS.5	Injuries	259	262
DIS.6	Non-disease specific	3	23
DIS.nec	Other and unspecified diseases/conditions (n.e.c.)	713	697
<b>Total DIS</b>		<b>4,602</b>	<b>4,896</b>

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