

# Bangladesh National Health Accounts 1997-2012

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**BNHA Cell**  
**Health Economics Unit**  
**Ministry of Health and Family Welfare**

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## Health sector in Bangladesh Financing vs. performance

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**'Good health at low cost' 25 years on**



- Bangladesh Paradox: exceptional health achievement despite economic poverty.
- One of the great mysteries in global health
- Unusual success

**-The Lancet Series Nov, 2013**

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## National Health Accounts-NHA

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**NHA is a statistical process that**

- ❑ identifies total health expenditure
  - ❑ traces the sources of health expenditure
  - ❑ shows the distribution of funds by functions (prevention and curative services etc.)
  - ❑ traces the channels of distribution of funds by inputs (pay & salaries, medicines etc.).
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## National Health Accounts-NHA

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**It tends to answer**

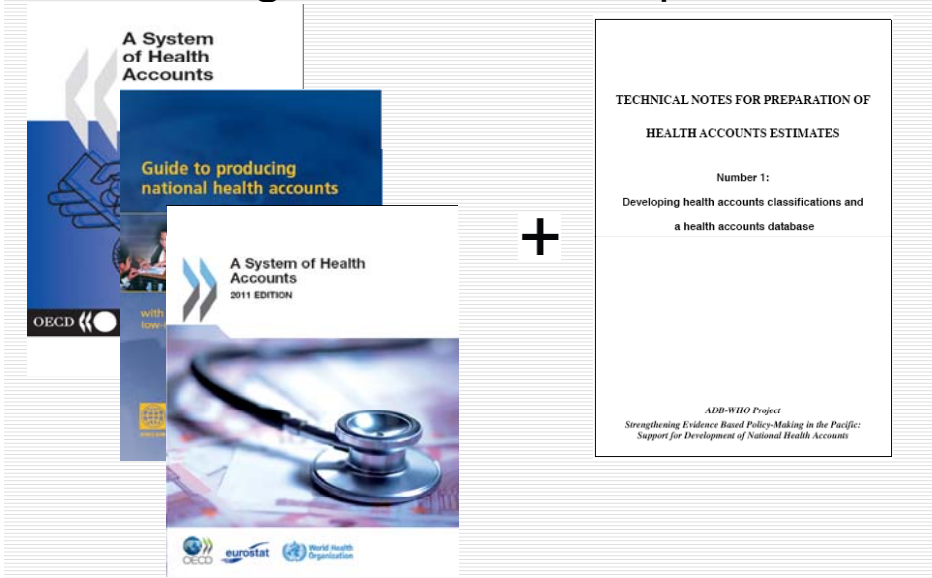
- ❑ How much is spent for health?
  - ❑ Who pays, how much?
  - ❑ How the expenditures are distributed across different services ?
  - ❑ Who is benefited how much ? (Income groups, regions, diseases etc.)
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## Guidelines

NHA follows standard guidelines as it:

- ❑ makes cross-national comparisons
- ❑ provides international validation
- ❑ saves time and cost
- ❑ There are similarities among national health systems where international standards can be applied
- ❑ It is partly customized to the national situation

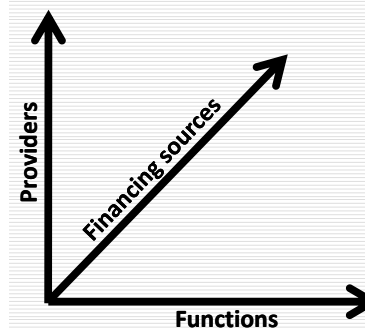
## Global Guidelines – evolving towards more precision



## NHA Frameworks over time

- ❑ Pre 2000
  - No global framework
    - ❑ Ad-hoc national standards & international frameworks
    - ❑ Lack of comparability in international estimates
  - System of National Accounts (SNA)
    - ❑ Not widely used for health
- ❑ 2000
  - OECD System of Health Accounts (SHA)
    - ❑ First global standard
    - ❑ Endorsed by WHO for international reporting
- ❑ 2011
  - System of Health Accounts 2011
    - ❑ Updated SHA
    - ❑ Agreed and adopted by OECD, Eurostat, WHO

## Features of SHA



- ❑ Provides explicit and comprehensive boundary of health and health related production
- ❑ Analyses health expenditure in three core dimensions: financing sources, providers and functions
- ❑ Detailed sets of classifications for the uses of spending: providers and functions
- ❑ Linkages with other international classifications including SNA
- ❑ Basis for adaption to meet specific national requirements

## International Classification of Health Expenditure (ICHA)

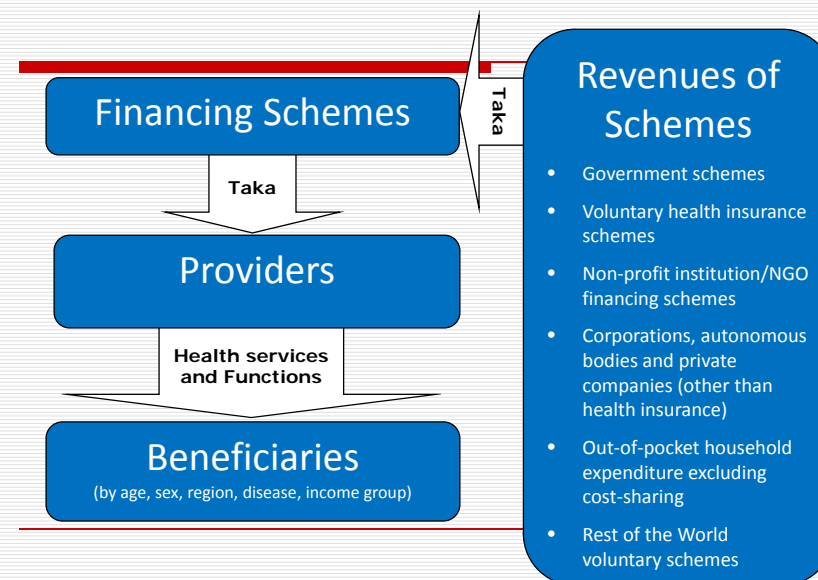
### ❑ SHA 1.0

- ❑ Health care by function (ICHA-HC)
- ❑ Health care by provider industry (ICHA-HP)
- ❑ Sources of health care financing (ICHA-HF)

### ❑ SHA 2011

- ❑ Health care by function (ICHA-HC)
- ❑ Health care by provider industry (ICHA-HP)
- ❑ Health financing schemes (ICHA-HF)
- ❑ Financing agents (ICHA-FA)
- ❑ Revenues of health financing schemes (ICHA-FS)

## Flow of Funds



## NHA in Bangladesh

### ❑ First BNHA-conducted in 1998 (1996/97)

- Financial assistance from ADB

### ❑ Second BNHA- in 2002 (1996/97–2001/02)

Revised estimates for 1996/97 and new estimates for 1997/98 – 2001/02

- Financial assistance from DFID

### ❑ Third BNHA- in 2009 (1996/97–2007/08)

New estimates for 2002/03–2007/08 and revised for earlier years

- Financial assistance from GIZ

### ❑ Fourth NHA- produced in 2014 (1996/97–2011/12)

New estimates for 2007/08–2011/12 and revised for earlier years

- Support from Rockefeller Foundation, GIZ, WB, WHO

## Process undertaken for BHNA-IV - Preparation

- ❑ Previous rounds of NHA done through outsourcing
- ❑ Initiatives taken to institutionalize the process in HEU 2011 and costed action plan developed
- ❑ Three committees formed:
  - National Steering Committee
  - Stakeholder Coordination Committee
  - Technical Working Committee
- ❑ BNHA Cell formed in July 2012 with representations from HEU, BBS, IHE, ICDDR-B and DI, support from WB Dhaka Office
- ❑ Working arrangements with Partners (BBS, ICDDR-B, IHE and DI) outlined through signing MoU in 2013
- ❑ BNHA Cell received Hands on Training on SHA and NHA at IHP, Sri Lanka in September 2013

## Process undertaken for BHNA-IV - Data collection

- ❑ Data collection from : Public & Non-Public sector
- ❑ Data collection instruments developed
- ❑ Different Sampling frame developed for
  - ❑ Private clinics/ hospitals/ diagnostics survey
  - ❑ Corporation survey (those have health expenditures)
  - ❑ NGO Survey
- ❑ Insurance expenditure survey conducted through IDRA
- ❑ DP expenditure survey conducted through DP Consortium
- ❑ Medicine expenditure from IMS & DGDA
- ❑ Household Income and Expenditure Survey from BBS

## Data Sources : Public Sector

BNHA Code	BNHA Financing Schemes	Source	Data
BHF.1	Government schemes and compulsory health care financing schemes		
BHF.1.1.1.1	MoHFW schemes	Controller General of Accounts (CGA), MoF Line Directors Office, MoHFW Planning Wing, MoHFW	MoHFWs' expenditure Spending at district and below RADP
BHF.1.1.1.2	Government Employees Schemes	Govt. Employees Welfare Directorate, MoPA	Reimbursement of treatment cost
BHF.1.1.1.3	Non-MoHFW schemes	Controller General of Accounts (CGA), MoF M o D, M o H A, M o R, M o W & C A, M o S W, M o R A, M o C A & T	other Ministries' health expenditure Health Expenditure
BHF.1.1.2	Local Government Schemes	Mo L G R D & C	City Corporation, Municipalities

## Data Sources : Private Sector

BNHA Code	BNHA Financing Schemes	Source	Data
BHF.2	Voluntary health care payment schemes		
BHF.2.1.2.2	Voluntary Health Insurance schemes	Insurance Development and Regulatory Authority Bangladesh Bureau of Statistics	Insurance Companies Survey Household Income and Expenditure Survey Bangladesh National Accounts
BHF.2.2.1	NIPISH/NGO financing scheme	BNHA Survey	NGO Survey
BHF.2.3.1.1	Parastatal firms and corporations	BNHA Survey	Corporations and Autonomous Bodies Survey
BHF.2.3.1.2	Private firms and corporations	BNHA Survey	

## Data Sources : Private Sector

BNHA Code	BNHA Financing Schemes	Source	Data
BHF.3	Households out-of-pocket payment		
BHF.3.1	Out-of-pocket expenditure excluding cost sharing	BNHA Survey B B S DGHS and DGFP IMS DGDA, MoHFW NBR	Private Hospital/Clinic/Diagnostic Survey Household Income and Expenditure Survey Bangladesh National Accounts Morbidity and Health Status Survey User fee Pharmaceutical Survey Pharmaceutical-Production, import, export Tax-VAT-Excise duty
BHF.4	Rest of the world health financing schemes (non-resident)		
BHF.4.2	Rest of the world voluntary schemes	BNHA Survey DP Consortium Planning Wing C G A / E R D OECD	NGO Survey Development Partner Survey RADP D P Expenditure D A C Data

## Data processing & analysis

- ❑ Using data from multiple sources cross checking, corroboration & validation
- ❑ Interpolation and extrapolation done in case of data gap
- ❑ Checking trends of various components and comparing them with National Accounts

## Total Health Expenditure (THE)

SHA 2011: Final consumption expenditure of resident units on health care goods and services

- ❑ *Human capital* (training, research) and *physical capital* formation an investment, not included in SHA THE

Bangladesh National Health Accounts (BNHA) includes capital investment under THE

## THE Estimates BNHA 1997-2012 & Earlier Rounds

Year	THE estimates under BNHA (million taka)				Share of THE in GDP			
	BNHA-IV	BNHA-III	BNHA-II	BNHA-I	BNHA-IV	BNHA-III	BNHA-II	BNHA-I
1997	46,356	48,699	55,763	54,698	2.57%	2.70%	3.09%	3.03%
2002	81,488	82,978	88,113		2.98%	3.04%	3.23%	
2007	153,887	160,899			3.26%	3.41%		
2008	178,943				3.28%			
2009	205,120				3.34%			
2010	244,331				3.52%			
2011	289,017				3.63%			
2012	325,094				3.54%			

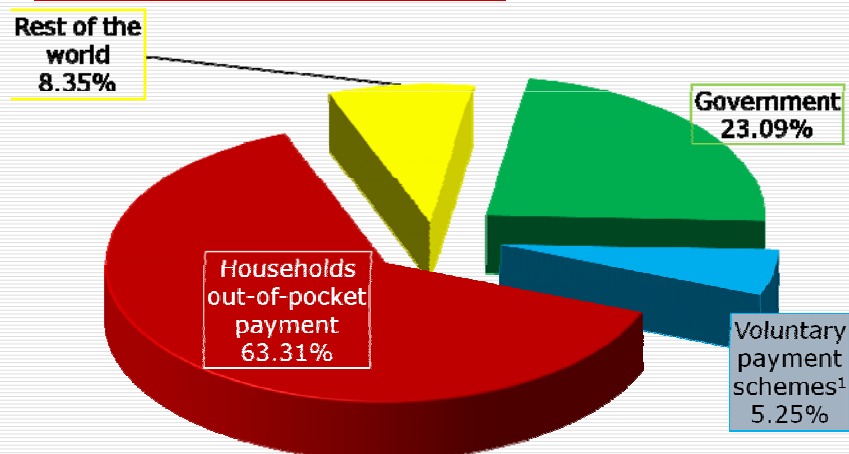
Changes in estimates happened due to:

- ① Use of actual audited data
- ② Changes in estimation methods
- ③ Changes in definition
- ④ Better knowledge on all types of healthcare facilities

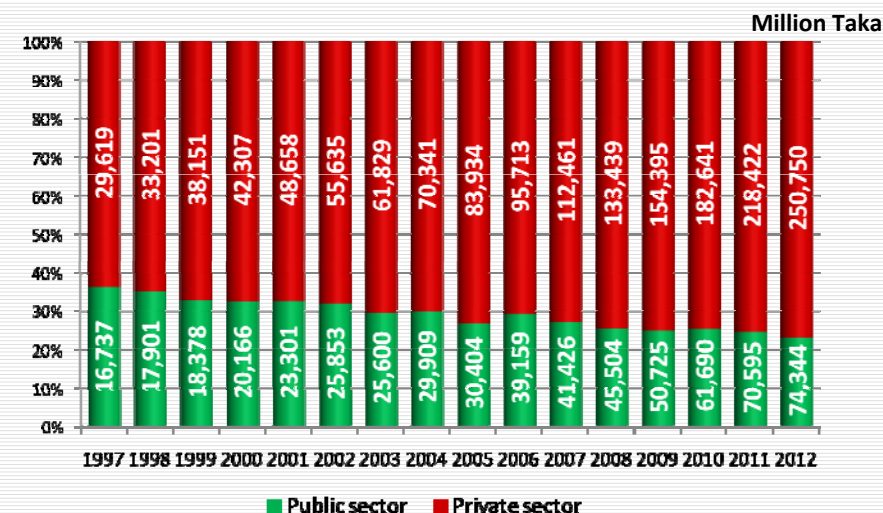
## Per capita THE: BNHA and SHA

Year	Per capita THE (BNHA 1997 – 2012)				Per capita THE (SHA 2011)			
	Current (Taka)	Constant (Taka)	Real Growth Rate (%)	Current (US \$)	Current (Taka)	Constant (Taka)	Real Growth Rate (%)	Current (US \$)
1997	379	826		9	364	792		9
2002	634	1,137	7.1	11	581	1,075	9.5	10
2007	1,082	1,558	5.7	16	1,004	1,447	8.0	16
2008	1,245	1,647	5.7	18	1,126	1,490	3.0	16
2009	1,412	1,754	6.5	21	1,284	1,595	7.1	19
2010	1,663	1,940	10.6	24	1,510	1,762	10.5	21
2011	1,947	2,112	8.8	25	1,769	1,919	9.0	23
2012	2,167	2,167	2.6	27	2,028	2,028	5.6	25
Average annual growth rate					Average annual growth rate			
1998 - 2002	501	974	6.7	10	476	924	6.3	9
2003 – 2007	849	1,350	6.6	13	788	1,255	6.2	12
2008 - 2012	1,687	1,924	6.8	23	1,544	1,759	7.0	21
1998 - 2012	1,012	1,416	6.7	15	936	1,313	6.5	14

## THE by Financing Schemes 2012



## THE by Public and Private 1997-2012



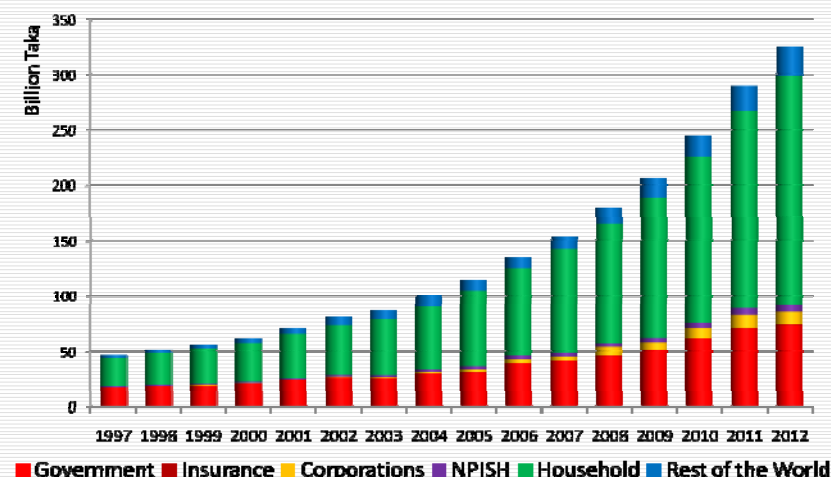
- Public expenditure in nominal terms have increased every year
- As a share of THE declined during 1997 - 2012

## THE by Revenues of schemes 1997-2012

Year	Transfers from government		Voluntary prepayment		Other domestic resources n.e.c.		Direct foreign transfers		Total Health Expenditure
	Million Taka	Row%	Million Taka	Row%	Million Taka	Row%	Million Taka	Row%	
1997	17,064	37%	28	0.1%	26,614	57%	2,651	6%	46,356
2002	25,838	32%	49	0.1%	48,326	59%	7,276	9%	81,488
2007	41,730	27%	93	0.1%	100,370	65%	11,525	7%	153,718
2008	45,580	25%	119	0.1%	119,927	67%	13,317	7%	178,943
2009	50,589	25%	174	0.1%	136,295	67%	17,317	8%	204,375
2010	62,737	26%	184	0.1%	161,769	66%	19,641	8%	244,331
2011	71,155	25%	195	0.1%	194,978	68%	22,314	8%	288,642
2012	75,071	23%	221	0.1%	222,657	68%	27,144	8%	325,054

- Government share of THE declined from 37% in 1997 to 23% in 2012
- Household OOP continue to be largest financier of THE
- Development Partners contribution of THE 8% in 2012

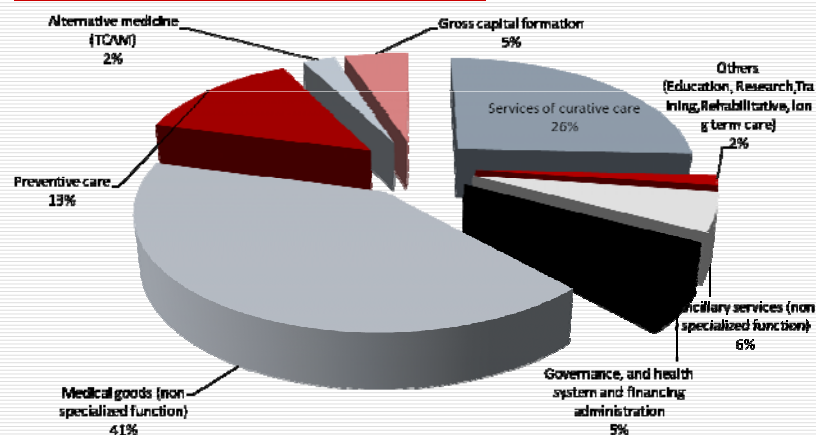
## THE by Financing agents 1997-2012



- Household followed by government is the major financing agent



## THE by BNHA Functional Classification 2012



- Medical goods followed by curative care dominate expenditure by function

## Curative care services

Year	General inpatient curative care		Specialized inpatient curative care		General day curative care		General outpatient curative care		Dental outpatient curative care		Specialized outpatient curative care		Total curative care
	Million Taka	%	Million Taka	%	Million Taka	%	Million Taka	%	Million Taka	%	Million Taka	%	Million Taka
1977	3,971	38.1%	387	3.7%	332	3.2%	5,476	52.6%	59	0.6%	164	1.9%	10,419
2002	8,589	45.1%	848	4.5%	2	0.0%	9,146	48.0%	144	0.8%	325	1.7%	19,053
2007	19,130	51.1%	645	1.7%	8	0.0%	17,131	45.7%	301	0.8%	257	0.7%	37,472
2008	20,463	47.7%	870	2.0%	8	0.0%	20,848	48.6%	349	0.8%	347	0.8%	42,886
2009	24,123	47.6%	1,086	2.1%	10	0.0%	24,617	48.6%	407	0.8%	429	0.8%	50,672
2010	27,994	47.6%	1,326	2.2%	491	0.8%	28,217	47.8%	478	0.8%	516	0.9%	59,021
2011	33,695	46.7%	1,924	2.7%	2,034	2.8%	33,116	45.9%	582	0.8%	738	1.0%	72,089
2012	38,697	46.3%	2,021	2.4%	3,170	3.8%	38,134	45.7%	699	0.8%	775	0.9%	83,495

- Increase in inpatient curative care expenditure over the years
- Day curative care services offered primarily by public sector, expenditure in community clinics increased in 2011 and 2012

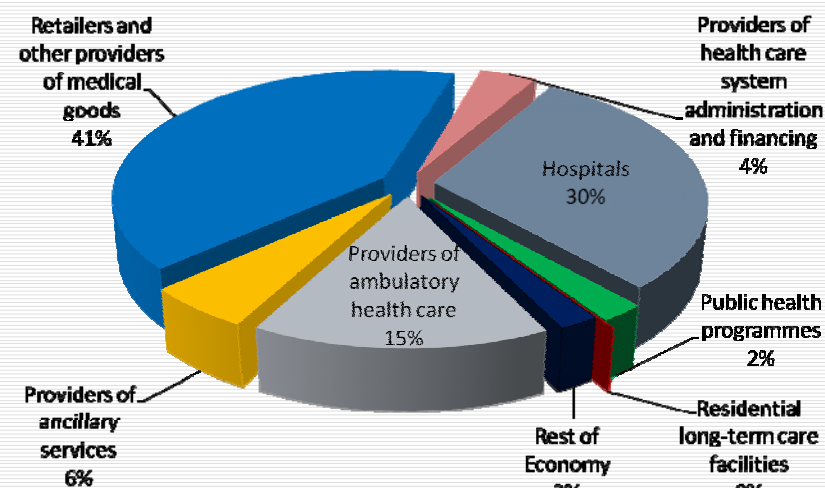
## Expenditure on medical goods 1997 – 2012

Million Taka

Year	Prescribed medicines		Glasses and other vision products		Hearing aids		Orthopaedic appliances and prosthetics (excluding glasses and		Total medical goods	% of THE
1997	19,557	99.5%	89	0.5%	1	0.0%	1	0.0%	19,648	42.4%
2002	32,087	99.4%	184	0.6%	12	0.0%	3	0.0%	32,287	39.6%
2007	62,089	99.5%	256	0.4%	18	0.0%	14	0.0%	62,376	40.5%
2008	69,361	99.6%	239	0.3%	13	0.0%	16	0.0%	69,631	38.9%
2009	80,479	99.8%	223	0.3%	8	0.0%	22	0.0%	80,732	39.4%
2010	96,596	99.8%	206	0.2%	3	0.0%	26	0.0%	96,830	39.6%
2011	116,337	99.8%	197	0.2%	3	0.0%	25	0.0%	116,562	40.3%
2012	133,794	99.8%	189	0.1%	2	0.0%	24	0.0%	134,009	41.2%

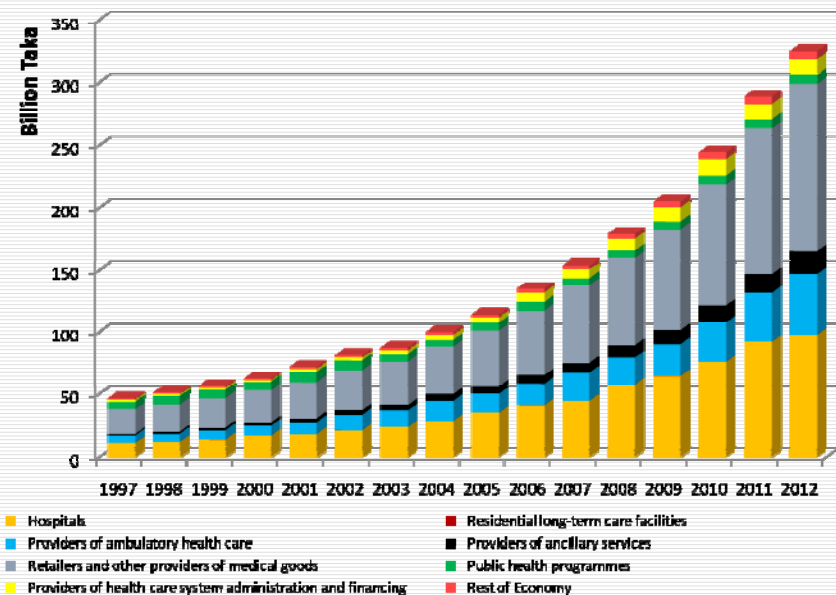
- Expenditure on medicine comprise almost 100% of medical goods category

## THE by Provider classification 2012



- Drug retailers, hospitals and ambulatory care major expenditures

## THE by Provider classification 1997-2012



## Hospitals as provider 1997-2012

Year	General hospitals including teaching hospitals		Mental health and substance abuse hospitals		Specialized hospitals		Total hospital
	Million Taka	Row %	Million Taka	Row %	Million Taka	Row %	Million Taka
1997	8,848.38	84.1%	5.38	0.1%	1,672.05	15.9%	10,525.80
2002	18,289.19	82.0%	5.55	0.1%	2,473.50	11.9%	20,782.57
2007	40,665.86	92.0%	28.81	0.1%	3,498.69	7.9%	44,193.37
2008	52,993.24	92.0%	24.42	0.0%	4,572.78	7.9%	57,590.43
2009	58,993.44	91.7%	33.93	0.1%	5,281.20	8.2%	64,308.57
2010	69,772.76	91.9%	41.74	0.1%	6,084.21	8.0%	75,898.72
2011	82,671.13	89.8%	53.75	0.1%	9,372.55	10.2%	92,097.43
2012	88,172.98	90.1%	58.21	0.1%	9,594.17	9.8%	97,825.36

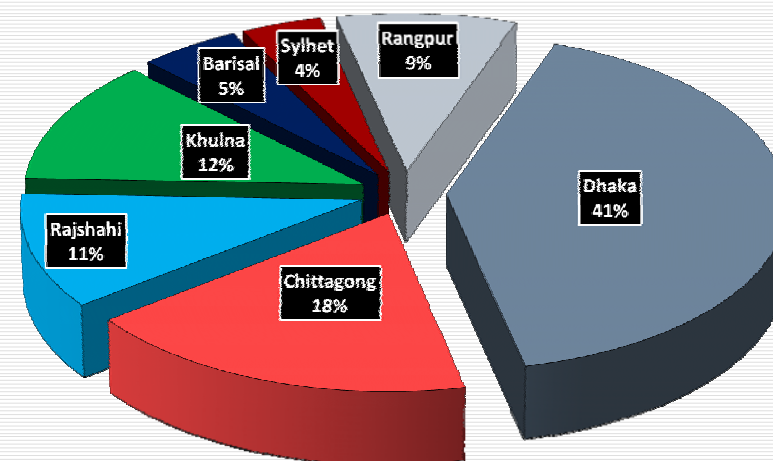
- General Hospitals including Medical College Hospitals account for major portion of hospital services
- Decline in share of Specialized Hospital services suggest General Hospitals also offering specialized services

## Public health programmes 1997-2012

Year	GoB MoHFW public health programmes		GoB non-MoHFW public health programmes		NGO public health programmes		Total public health programmes
	Million Taka	Row %	Million Taka	Row %	Million Taka	Row %	Million Taka
1997	4,448	71.8%	30	0.5%	1,714	27.7%	6,192
2002	1,205	14.6%	31	0.4%	6,997	85.0%	8,233
2007	2,304	39.9%	40	0.7%	3,426	59.4%	5,770
2008	5,117	82.3%	75	1.2%	1,025	16.5%	6,217
2009	4,758	75.5%	232	3.7%	1,316	20.9%	6,306
2010	6,139	83.1%	111	1.5%	1,140	15.4%	7,391
2011	5,545	76.6%	127	1.8%	1,566	21.6%	7,236
2012	6,050	82.0%	61	0.8%	1,269	17.2%	7,380

- MoHFW is the major provider of public health services
- NGO share declined in recent years

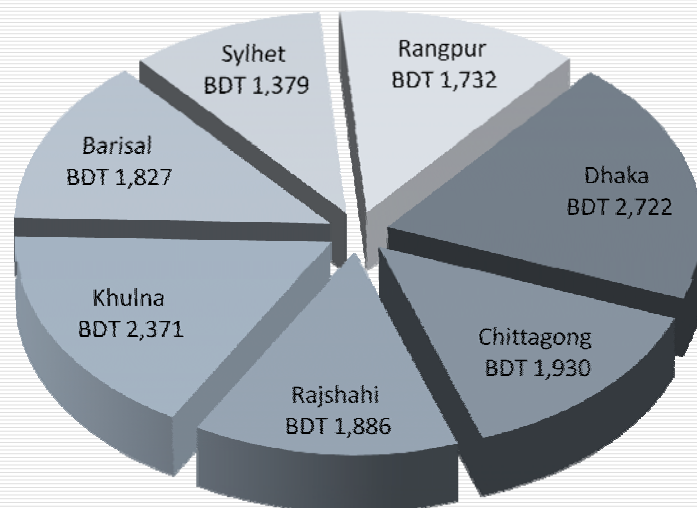
## Share of THE by Division 2012



- Dhaka Division accounts for largest share of THE; Sylhet smallest



## Per capita THE by Division 2012



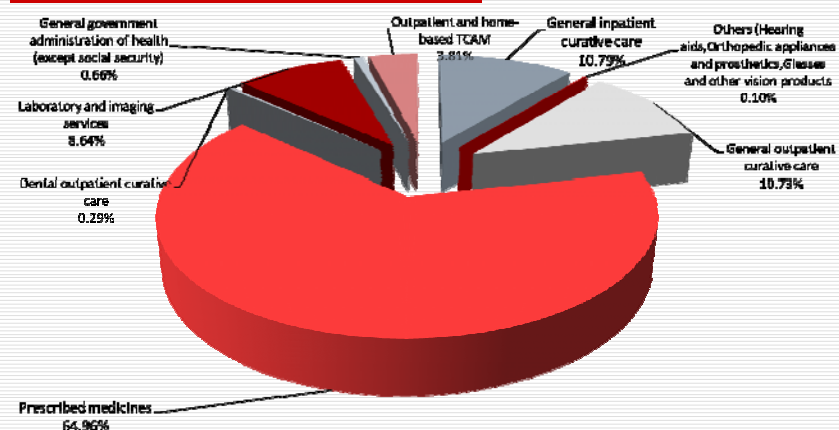
- Per capita THE highest in Dhaka division; lowest in Sylhet

## Per capita THE by Division 1997 – 2012 BDTaka

Year	Dhaka	Chittagong	Rajshahi	Khulna	Barisal	Sylhet	Rangpur
1997	349	527	382	357	277	381	283
2002	632	705	580	554	604	692	470
2007	1,187	1,183	994	1,036	998	1,004	845
2008	1,484	1,294	1,059	1,207	1,024	1,085	939
2009	1,658	1,411	1,230	1,445	1,163	1,135	1,182
2010	2,002	1,622	1,466	1,721	1,378	1,164	1,373
2011	2,390	1,857	1,729	2,065	1,631	1,265	1,520
2012	2,722	1,930	1,886	2,371	1,827	1,379	1,732

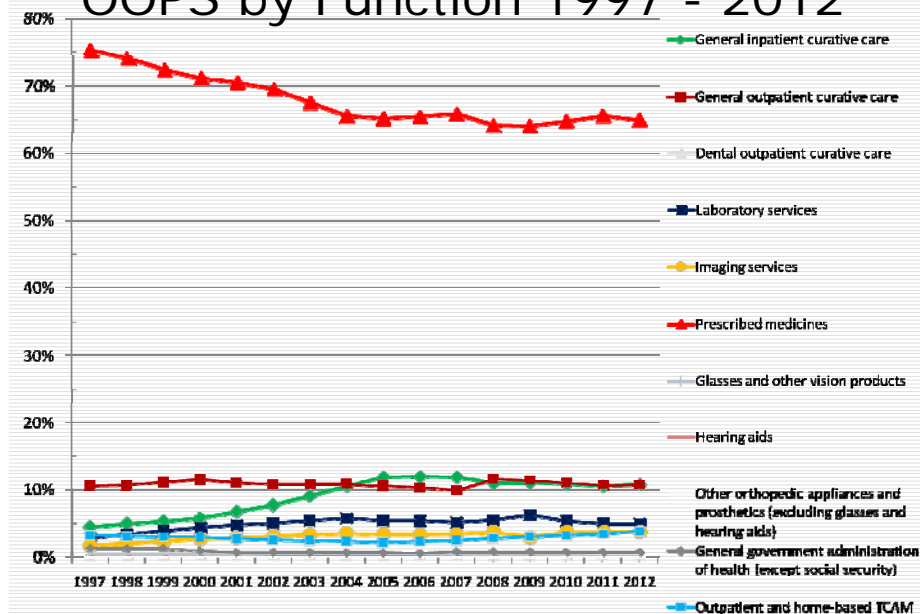
- Dhaka division had the highest per capita spending followed by Khulna & Chittagong, while Sylhet had the lowest per capita spending.
- During the period 1997 – 2006 Chittagong division had the highest per capita spending.
- Barisal, Rangpur and Sylhet had relatively lower per capita expenditure than the other four divisions.

## Share of OOPS by Functions 2012



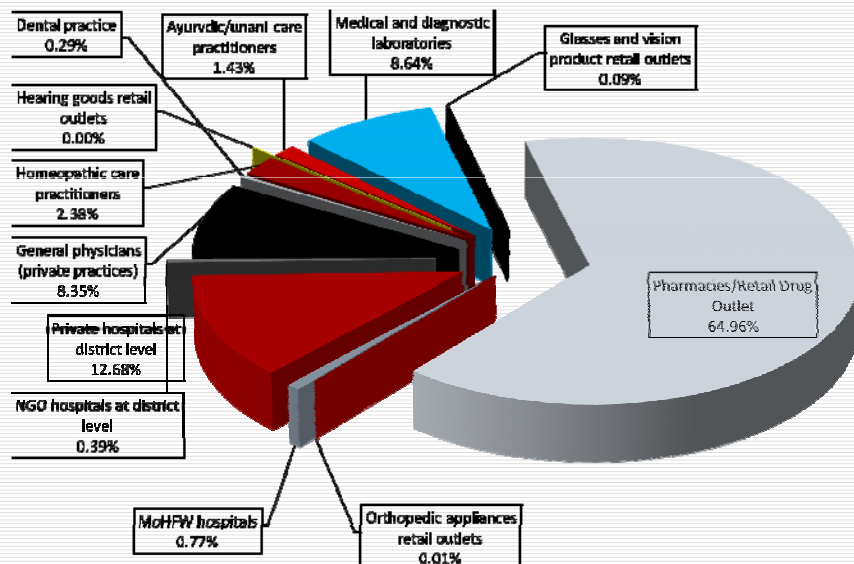
- Two out of three Taka spent on medicine

## OOPS by Function 1997 - 2012



- Households spending less (as percent of total OOP) on medicine compared to 1997

## OOPS by Providers 2012



- Retail drug outlets was the largest provider in 2012

## Regional comparison: Expenditure and selected Indicators

Indicator	Bangladesh	Bhutan	India	Myanmar	Nepal	Pakistan	Sri Lanka
Per capita THE	\$ 27	\$ 90	\$ 61	\$ 20	\$ 36	\$ 39	\$ 89
THE as % of GDP	3.5%	3.8%	4.0%	1.8%	5.5%	3.1%	3.1%
Pub. Exp. as % of THE	23.1%	83.9%	33.1%	23.9%	39.5%	31.4%	39.8%
Life Expectancy at birth (yrs)	70	68	66	66	68	66	74
Infant Mortality Rate	33	30	41	41	32	69	08
Under 5 Mortality Rate	41	38	53	51	40	86	10
Maternal Mortality Rate	170	120	190	200	190	170	29
Contraceptive Prevalence Rate	61%	66%	55%	46%	50%	27%	68%

Source: WB, WHO

## Major findings

- ❑ BNHA-IV provides detailed healthcare expenditure for 1997-2012
- ❑ Health expenditure increasing both in nominal and real terms
- ❑ Private expenditure as share of THE increasing while public expenditure share has declined
- ❑ Household OOP dominates THE, expenditure on drugs by households as % share declining

## How BHNA-IV is different ?

- ❑ **Process**
  - ❑ BNHA-IV conducted & steered by BNHA Cell
  - ❑ Collaborative effort-HEU, BBS, IHE, ICDDR&B & DI and World Bank
- ❑ **Data capturing – more wide & accurate**
  - ❑ Audited health expenditure data for all ministries - CGA
  - ❑ Total Insurance expenditure survey - IDRA
  - ❑ Total DP expenditure survey – Chair, DP Consortium
  - ❑ Uses a complete list of Private Clinics/Diagnostics for Private Clinic/Diagnostics Survey
- ❑ **Outcome**
  - ❑ Estimates more reliable and complete than earlier NHA rounds as well as SHA 2011 compatible
  - ❑ More comprehensive health expenditure information
  - ❑ Adopts SHA 2011 for dual reporting
- ❑ **One step forward towards institutionalization**

