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Editorial

Indeed! 2008 was a Year of History. As Kuensel puts it “It was the end and the beginning of history”. We witnessed the crowning of the Fifth Monarch as the First Constitutional Monarch in the line of Wangchuck Dynasty. We elected the first Prime Minister to govern a democracy forced upon by Fourth Druk Gyalpo, His Majesty Jigme Singye Wangchuck. We celebrated 100 Years of peace and prosperity under the leadership of Wangchuck Dynasty.

The Health Family Members in addition to taking part in the celebration brought out a special edition of the 21st Annual Health Bulletin chronicling the progress of health under the Wangchuck Dynasty. The Health Ministry welcomed Lyonpo Zangley Dukpa as Bhutan’s first democratically elected Health Minister marking a beginning of new era. Under his leadership, 19th Annual Health Conference was convened marking 30 Years of Primary Health Care(PHC). To appreciate and acknowledge the PHC approach, this bulletin carries an article on Primary Health Care in Bhutan.

Health Infrastructure establishment under the Primary Health Care approach is widely acknowledged to be successful as envisaged at Alma-Ata in 1978. The 350 bedded Jigme Dorji Wangchuck National Referral Hospital, 150 bedded Mongar Regional Referral Hospital and 20 bedded Dagana Hospital were inaugurated adding to the above laurels.

The Year 2009 although will not be as festive as 2008 but it will be a year of hope. We now have the youngest democracy with the youngest King at the helm with the 10th Five Year Plan fully rain laden to be ushered in line with the promises of the first democratically elected government.

Unlike the earlier plans, 10th Five Year Plan was planned with the involvement of the communities and will be implemented with the communities. It is a result based planning and the progress will be measured at the output and outcome level. An article covering comprehensively on 10th Five Year Plan for health sector is published in this bulletin to sensitize and promote understanding on the new planning approach.

2009 will be the year of procreation as it is believed children born in *Mewa Gumar* will lead a successful life. Therefore we expect our reproductive health unit around the country will be kept busy. Usually around 12,000 births are recorded annually.

In 2008, two million people visited health centers of which 46,685 were kept in the health facilities for observation. 21% of the total patients were seen at JDWNRH.

Common cold was the most common disease seen with 2, 66,164 cases. 947 patients died in the health facilities of which 123 babies died within a month after birth followed by 98 people dying due alcohol liver disease.

2009 Annual Health Bulletin, 22nd in the series has been possible because of the support & contributions received from our health family members working around the country. It is estimated that 30% of your time is spent in recoding & reporting information. You all have sent the data in time which were reliable and accurate without which the production of this Bulletin would not have been possible.

It is hoped that our managers, planners, decision makers and most importantly you as service providers would find this publication useful and meaningful.

Wishing You all a Happy Female Earth Ox Year although our astrologers predict a dismal year.

Wish You a happy reading!

Selected Health Indicators			
Sl. #	Diseases	Year	Source
		2008	
1	Infant Mortality rate per 1000 live births	40.10	PHCB, 2005
2	Under 5 Mortality rate per 1000 live births	61.50	PHCB, 2005
3	Deliveries attended by health professional	66%	MoH
4	Immunization Coverage	94.4%	MoH
5	Access to safe drinking water	83%	MoH
6	Access to safe excreta disposal	91%	MoH
7	Malaria Incidence per 10,000 population at risk	7	MoH
8	Tuberculosis Prevalence per 10,000 population	15	MoH
10	Diarrhoea Incidence per 10,000 under 5 children	3432	MoH
11	Pneumonia incidence per 10,000 under 5 children	1373	MoH
12	Intestinal Worms incidence per 10,000 population	202	MoH
13	Conjunctivitis Incidence per 10,000 population	555	MoH
14	Diabetes Incidence per 10,000 population	38	MoH
15	Cancer Incidence per 10,000 population	10	MoH
16	Physical Impairment per 10,000 population	124	MoH
17	Alcohol Liver Disease Incidence per 10,000 Population	20	MoH
18	Hypertension Incidence per 10,000 population	303	MoH
19	Skin Infections per 10,000 population	1453	MoH

Health Human Resource - 2008

Sl. No.	Categories of Health Workers	Total Existing
1	Doctors (MBBS/BDS/Specialists)	171
2	Nurses	567
3	Nurse's Assistant	99
4	Health Workers (HA/BHW/PMW)	425
5	Assistant Clinical Officers (ACO)	43
6	DHOs/ADHOs	38
7	Drungtshos	36
8	sMenpas	54
9	Pharmacists	14
10	Pharmacy Assistants/Technicians	75
11	Lab. Technologists	10
12	Technicians/Assistants	453
13	Administrative & Support Staff	1429
Total Staff Strength, MoH		3414

Health facilities by Dzongkhag

Dzongkhag	Facility Type				Total
	Hospital	BHU I	BHU II	Ind. Unit	
Bumthang	1	0	4	2	7
Chukha	3	1	7	2	13
Dagana	1	2	6	3	12
Gasa	0	1	3	1	5
Haa	1	1	3	1	6
Lhuentse	1	0	11	1	13
Mongar	1	2	22	4	29
Paro	1	0	3	1	5
Pemagatshel	1	1	11	2	15
Punakha	1	0	6	1	8
Samdrupjongkhar	2	2	6	2	12
Samtse	3	0	9	2	14
Sarpang	2	0	10	1	13
Thimphu	5*	0	7**	0	12
Trashigang	3	2	17	4	26
Trashiyangtse	1	0	7	1	9
Trongsa	1	0	6	2	9
Tsirang	1	0	4	1	6
Wangdi	1	1	9	2	13
Zhemgang	1	2	12	3	18
Total	31	15	163	36	245

Note :

* Indigenous hospital included under hospital

** Satellite Clinic included under BHU II

10th

Five Year Plan : A Different Approach

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10th Five Year Plan : A Different Approach

Back ground

The development activities in Bhutan started through the five year plans with the launch of first five-year plan in 1961, a new beginning in the process of economic development. The five year planning mechanism has been an effective instrument through which the country has made impressive progress in its socio-economic transformation towards the realization of Gross National Happiness (GNH).

Table 1: Five Yr Plans

First Five Year Plan	1962-67
Second Five Year Plan	1967-72
Third Five Year Plan	1972-77
Fourth Five Year Plan	1977-82
Fifth Five Year Plan	1982-87
Sixth Five Year Plan	1987-92
Seventh Five Year Plan	1992-97
Eighth Five Year Plan	1997-2002
Ninth Five Year Plan	2002-2007
Tenth Five Year Plan	2008-2013

Planning approach of the Royal Government of Bhutan (RGoB) has evolved gradually over the years to address new challenges and needs of the country. A significant feature to implement Gewog based planning system was introduced during the 9th FYP, wherein the decision-making for development activities and financial powers were effectively devolved to the local government levels.

The government initiated Results based Planning Approach for the 10th FYP to ensure that development plans are results-oriented, planning and implementations of development efforts are standardized.

The overall macro strategy

Figure 1: health indicators for poverty reduction

of the Tenth Plan is **Poverty Reduction** and all the sectoral plans are geared towards the broader strategy of reducing poverty in the country from 23.2% to 15% by 2013. The main health indicators contributing to this strategy are: (refer figure 1)

Sustaining access to safe drinking water	>95%
Access to safe sanitation	96%
Life expectancy	>70
Infant Mortality Rate (per 1,000)	20
Under Five Mortality Rate (per 1,000)	<30
Maternal Mortality Ratio (per 100,000)	100
Population Growth Rate	1.3%

Planning and development process in the past five year plans:

Bhutan has gained much experience and made remarkable progress in the management of a planned approach to development. However, Stakeholders involved in the planning and implementation of development activities has highlighted the need to improve and standardize planning and management techniques.

The review of the previous plans reflected the following:

1. Weak link between development programmes and national goals and objectives as expressed in Vision 2020, MDGs, PRSP and other commitments in pursuit of GNH.
2. Weak linkage between sectoral goals and objectives with that of the longer-term national goals and objectives.
3. Weak linkages between the operational plans¹ of the programs with the overall sectoral strategic plans².
4. No Rational Resource Allocation Mechanism.

Therefore, in order for the Sectoral goals and objectives to be closely linked with the overall longer term visions of the country; the government developed a mechanism and planning tool in the 10th Plan to operationalize the linkage between the planned activities with overall goals and objectives.

Health Sector 10th Five Year Plan:

• Approach -Results Based Planning:

Results-based planning Framework contains comprehensive output, outcome and impact indicators, which can be monitored and evaluated closely.

A guidebook highlighting the special aspects of results based planning was developed and circulated by the Planning Commission Secretariat (PCS) to help practitioners plan, implement, and evaluate their programs to achieve results for the 10th fyp.

Results Based Planning framework requires final outcomes to be defined in terms of quantifiable goals and targets assessed within a five-year context.

¹Annual Work Plans ²Five Year Plans

Table 2: Result Matrix

Results Levels	Indicator Description	Baseline Indicator	FYP Target	Data Source/ Collection Method
Impact 1: Millennium Development Goals Achieved beyond the targets and other priority health goals accomplished	Infant Mortality Rate per 1000 live births	40.1 (PHC-2005)	25	Survey
	Under Five Mortality Rate per 1000 live births	61.5 (PHC-2005)	35	Survey
	Maternal Mortality Rate per 100000 live births	255 (NHS-2000)	140	Survey
Outcome 1: Institutional delivery scaled up	Percentage of delivery in health facilities	40	80	Program/ BHMIS
Output 1.1: EmOC facilities expanded	Number of Comprehensive EmOC Centres established	9	15	Program

“The five-year plans will be operationalized through multi-year rolling plans of three years (1+2) that will be rolled over from year to year based on annual work plans”. (10th FYP Document, GNHC)

- **Process -Participatory Planning:**

The formulation of the Tenth Plan for health sector was participatory and followed extensive deliberations and consultations with various stakeholders. The discussions were guided by the preliminary set of guidelines that contained the core objective, priorities, strategies and resource allocation principles for the Tenth Plan

The Planning Core Group of the ministry provided technical guidance and reviewed the draft consultative sector plan prepared by PPD and the other two departments.

Ministry adopted systematic and transparent institutional measures to prepare the plan. The planners and implementers both at the department and program level were informed on the concept of Results Based Planning through series of workshops and meetings. The workshops discussed the definition of the components of results based planning like **Impacts, Outcome, Outputs and even the indicator description and development**. The health Information Unit of the ministry took a lead role in developing the core indicators for the sector.

Health sector 10th FYP of the districts are linked to the overall impacts and objectives defined for the sector. This was done through a workshop whereby the district health officers were briefed on the new planning approach. The outputs and outcomes of the district plans were then streamlined.

Even the donors participated in the 10th plan preparation whereby they referred the 10th FYP as the master document in preparing the UNDAF² and cCPAP³ document. Likewise, at all levels, policy makers realized that it is imperative to introduce Participation, transparency and accountability into government work.

- **Resource Allocation methodology:**

The 10th FYP introduced the Resource Allocation criteria. As highlighted in the 10th FYP Document, resource allocation has been determined on the overall resource availability and based on Medium Term Fiscal Framework (MTFF), macroeconomic framework and debt sustainability . Resource allocation for the districts is done according to the mechanism: (refer figure 2)

With this mechanism, the different sectors in the districts will not get earmarked budgets but they have to compete as the Resource allocation for individual sectors depends on the priority set by the dzongkahgs. Hence, the District health planners would now require more analytical skills to come up with evidence to prove their area as the priority. Consequently, District health planners will be involved more in operational planning, resource mobilization and priority setting unlike in the past where they just have to implement the earmarked fund allocated for them.

² United Nations Development Assistance Frame Work

³ Common Country Programme Action Plan

Ultimately, it may contribute in the capacity development of community leaders and dzongkhag officials in basic planning skills and tools for the successful implementation of gewog-based planning.

Further, the outcome of this approach can determine the actual planning capacity of the districts health planners and can guide the sectors to generate relevant interventions.

Figure 2: Resource Allocation Mechanism

The total resources earmarked for Local Governments will be assigned on a 60:40 ratio between Dzongkhags and Gewogs respectively. Tied Grants will be allocated by central agencies for the sector specific utilization. The formula for resource allocation to local governments will be based on the following four factors with varying weightage assigned to them. It may be noted that the criteria will be refined and changed over time as the development situation changes and the information on which the criteria are based become more detailed and disaggregated.

Population: The population factor will be calculated based on actual residency and not the number of people registered. The 2005 Population and Housing Census is source of data. From the overall resource envelope, 70% weightage will be assigned for population with local governments administering to larger populations receiving a higher share of resources.

Food Security: Local Governments that administer regions with poor food security will receive higher allocation of resources. Food security has been taken as a proxy indicator for incidence of poverty. 15% of the total resource envelope will be allocated to factor in the local food security context. This data shall be sourced from Bhutan Living Standard Survey, 2007.

Environment: In order to incentivize conservation of environment, Local Governments that manage and maintain a richer natural environment particularly in terms of forest cover will be rewarded with higher allocations. Based on an environment index, 10% of the resource envelope will be provided to Local Governments. The source of this data is the Ministry of Agriculture.

Gewographic Size: The Gewographic size and area will also be a determining factor for resource allocation with 5 % of the resources devoted to it. Data for this criteria will be sourced from the National Land Commission.

However, for judicious utilization of resources within the overall national policies, local government will be guided by the Annual Block Grants guidelines, DYT and GYT Chathrimis, and the Framework on the Assignment of Functional and Financial responsibilities for Local Governments.

Source: 10th FYP Volume I- GNH Commission

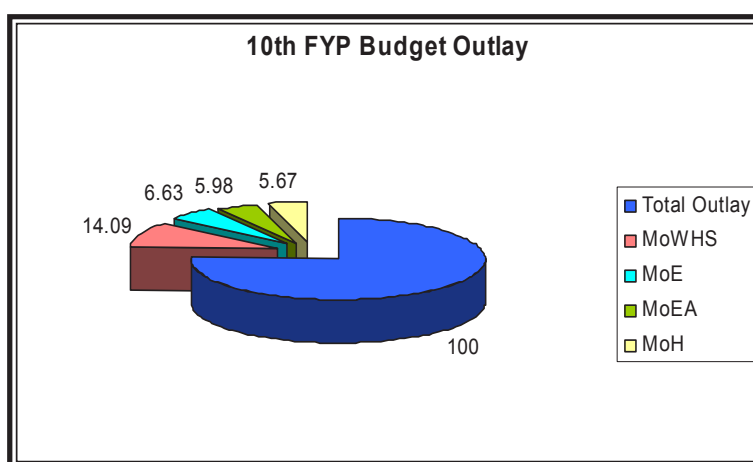
The total outlay of Nu. 480.295 million for human resource development for health is featured under RCSC (Royal Civil Service Commission) and is therefore not reflected under the sector plan to avoid duplication.

Table 3: program wise budget outlay

Programme	Current	Capital	Total
Health Management and Development Programme	52.400	31.200	83.600
Health Promotion and Disease Prevention and Control Programme	502.357	653.11	1155.469
Diagnostic and Curative Services Programme	2995.614	3637.839	6633.453
Sustainability, Regulatory and Monitoring Programme	72.019	72.184	144.203
Total	3622.39	4394.34	8016.725*

* The total outlay does not include Nu. 480.295m allocated for Human Resource Development and budget for Medical College.

Figure 3: Sector wise budget outlay



Even during the 10th FYP, Health sector has received priority in terms of overall budget outlay. The sector even receives additional budget for the establishment of “Medical College” on and above its actual budget outlay.

• Monitoring and Evaluation:

The monitoring and evaluation of the Tenth Plan will be done within the framework of National Monitoring and Evaluation System (NMES). The NMES consists of two main components; the M&E institutional set-up and procedures and a web-based computerized system, the Planning & Monitoring system (PlaMS).

The unique M&E framework will facilitate the operational planning for the sectors. Through this system, a proper linkage of the operational plan with the strategic plan (FYP) can be ensured.

It will also allow both monitoring of the Plan's implementation progress and analysis of the potential causes of success or failure of the sectoral plan. International experience even suggests that results-based M&E is a powerful tool for ensuring the effectiveness of a country's development policies and the delivery of tangible results by the government.

There are two components to the New M&E framework:

- An indicator matrix containing indicators which facilitate harmonious progress towards the achievement of important national priorities.
- Baseline information and targets.

The introduction of this type of Matrix was a significant improvement; in previous Plans for many programs the indicators were embedded in the text without baseline information.

Figure 4: Major Health Sector Targets

Reduce IMR to 20 per thousand live births
Reduce U-5 MR to less than 30 per thousand live births
Reduce MMR to less than 100 per hundred thousand live births
Enhance Life Expectancy to more than 70 years
Sustain access to Safe Drinking Water to near 100%
Improve access to Safe Sanitation to near 100%
BHTF funds to reach 30 Million US\$
Improve proportion of population within 3 hrs walking distance of a health facility to more than 90%
Increase numbers of traditional medicine units at BHU level to 25
Establishment of a medical college in Bhutan
Every Dzongkhag Hospitals to have a minimum of 3 doctors
Every Dzongkhag Hospitals to have a minimum of 2 functioning ambulances
At least one super-specialized tertiary level hospital established through FDI.

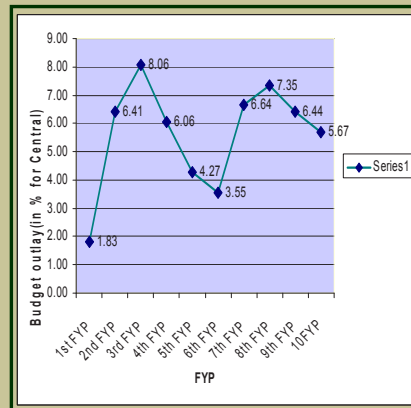
Summary:

The preparatory phase of 10th FYP could be narrated as more of a learning phase for many planners/implementers at all levels. The Concept of Results Based planning brought in lots of new planning skills and ideology.

It witnessed certain historical and political changes in the country. For the first time a plan has incorporated the manifesto of the elected constitutional democratic government (Druk Phuensum Tshokpa) of Bhutan.

Further, the sectoral and dzongkha plan preparation was guided by the newly created Gross National Happiness Commission. A proper synchronization between the operational donor plans and the sectoral strategic plan is foreseen. Furthermore, unlike in the past, the review of 10FYP is expected to give a measurable result-based outcome.

Figure 5 : Trends on budget outlay (central)



The budget outlay for the central level increased from 1.8% in 1st five year plan to 8.6% in 4th five year plan. That was the time where the major health facility constructions were taking place under the centralized planning system.

The budget outlay gradually decreased from 4th FYP till 7th FYP when decentralization system took place.

From 8th five year plan, major emphasis was given to improvement of delivery of quality services with focus on capacity building, secondary and tertiary health care. This further contributed in increasing the central level budget outlay for health.

However, the 10th FYP has introduced many new and silent features of planning like:

- Multi Year Rolling Planning and Budgeting System.
- Resource Allocation formula/mechanism
- Medium Term Fiscal Framework (MTFF)

This requires sensitization efforts to educate the planners and implementers at all levels. Nonetheless, it is anticipated to see things getting clearer during the implementation phase and beyond.

“The 10th plan period being the critical half-way point to the year 2020, presents an opportunity to refresh and recollect that special vision and assess what needs to be done to accomplish the milestone goals targeted in that vision”. (10th FYP Document, GNHC)

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State of Bhutan's Health 2008

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State of Bhutan's Health - 2008

Bhutan has an interesting history of health set up in the 1960s. There were just three doctors, two national doctors and one external expatriate, a Scottish Presbyterian missionary doctor, two nurses and twelve compounders who worked in all parts of Bhutan. The best part is that even then, with many challenges and very few health professionals, Bhutan did have a health care system that was functional. The diseases prevalent then were Malaria, Diarrheas, Worm Infestations, TB, goitre and venereal diseases like syphilis and gonorrhea. There were high maternal and child mortality mostly due to hemorrhage, prolonged labor and infections (Carl E. Taylor, 1962).

Since then, Bhutanese health care system has evolved into a fairly efficient system admired by many developed and developing countries. Bhutan has a strong primary health care delivery system as the backbone of the health care system, which is unique. The nation has come a long way in terms of health infrastructure, human resource development and preventive health programs. There were significant improvements in the health indicators as a result. The life expectancy at birth had increased significantly since 1950s, from 36.1 years to 66.1 years at present. Under-five mortality has declined from 108/1000 live births to 61.6/1000 live births and infant mortality has decreased from 185/1000 live births to about 40.10/1000 live births (United Nations Population Division, December, 2007).

Selected health Indicators			
Sl. #	Diseases	Year	Source
		2008	
1	Infant Mortality per 1,000 live birth	40.10	PHC, 2005
2	Under 5 Mortality per 1000 live birth	61.50	PHC, 2005
3	Deliveries attended by health professional	66.3	MoH
4	Maternal Mortality per 100,000 live birth	255	NHS 2000
5	Access to safe drinking water	82.5	MoH
6	Access to safe excreta disposal	90.8	MoH
7	Malaria Incidence per 10,000 population at risk	6.7	MoH
8	Tuberculosis Prevalence rate per 10,000 population	14.7	MoH
9	Immunization Coverage	94.5	2008 survey

Yet the challenges are many. With development come health challenges like every other developing countries. There is a shift in disease pattern from infectious diseases to chronic diseases like hypertension, cardiovascular disease, cancers and diabetes. The infectious disease trends also have taken a challenging shift from curable to incurable like HIV and other viral diseases. Although the prevalence of HIV is only about 0.01%, the country already has 160 HIV cases diagnosed till date and this could be just the tip of an iceberg. The magnitude of social and financial implications of such incurable diseases to the country is enormous. The demand on the quality tertiary care has increased over the years due to changing disease trends and awareness of quality care. Despite the increase in health work force and improvements in infrastructures, there are still limitations in health care delivery. At present, we have 171 national medical doctors (doctor population ratio of 2.6 per 10,000), 567 nursing staff and about 1250 other health workers delivering care at 30 hospitals and 174 Basic Health units (BHUs), (MoH 2008). We still have a long way to meet the total health workforce needs. Perhaps this situation is not unique to Bhutan because many developing and developed countries are facing the same situation as the epidemiologic disease trend are changing and many health care areas have sprung that demands extra resource and health work force.

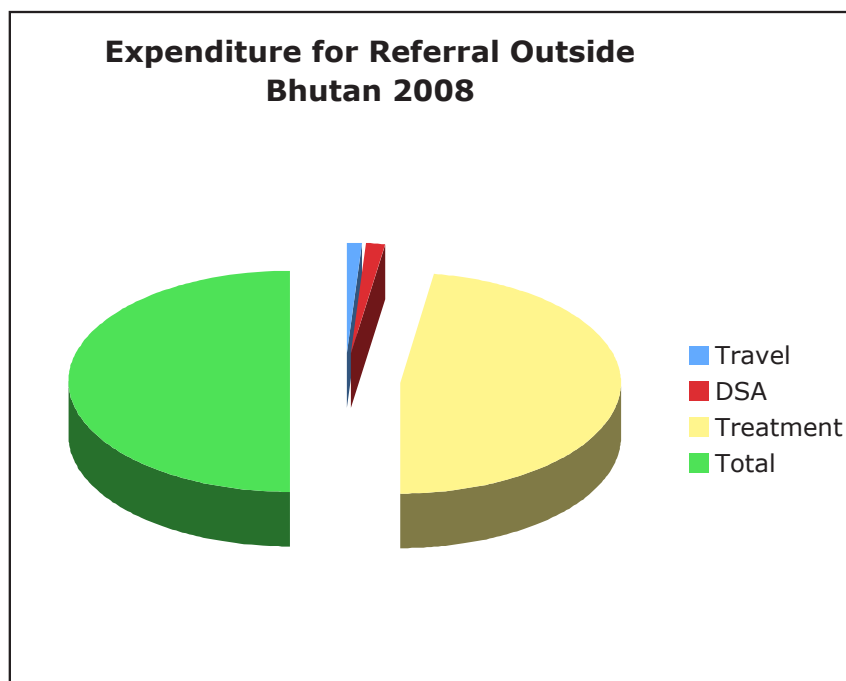
Nevertheless, understanding that health workforce is a highly skilled manpower and proper HRD planning, optimal utilization of the existing health workforce and forward planning of HRD will go a long way and play a critical role in delivery of quality care to the people of Bhutan.

Health Human Resource - 2008

Sl. No.	Categories of Health Workers	Total Existing
1	Doctors (MBBS/ BDS/Specialist)	171
2	Nurses	567
3	Nurse's Assistant	99
4	Health Workers (HA/BHW/PMW)	425
5	Assistant Clinical Officers (ACO)	43
6	DHOs/ADHOs	38
7	Drungtshos	36
8	sMenpas	54
9	Pharmacists	14
10	Pharmacy Assistants/Technicians	75
11	Lab. Technologists	10
12	Technicians/Assistants	453
13	Administrative & Support Staff	1429
Total Staff Strength, MoH		3414

The public health and preventive care have lately become as important as the curative services if not more, due to the shift in the disease dynamics and the lives that could be saved and diseases that could be averted as a result of effective public health programs. Internationally, the investments in preventive programs in terms of resource and manpower have been of high focus.

The health care cost dynamics have changed as a result of the shifts in the disease trends. Treatment for chronic diseases cost many times more than the infectious and other acute diseases. Health care costs have increased and disease dynamics have changed specially with the advent of HIV and increasing trends of non-communicable diseases like Cancers, Diabetes, Cardiovascular diseases, etc. in the country. The glimpse of expenditure for patients' referral outside Bhutan in 2008 is Nu. 89.125 million as shown below. This is just the referral cost excluding health expenditures within the country.



Equity in health, prevention, prioritization of tertiary care and reaching the un-reached had been the main strategy to meet the health care needs of the country. In terms of primary prevention, Bhutan is one of the few countries that have high immunization coverage of more than 90%. Leprosy was eliminated in 1997 and last case of Poliomyelitis was seen in 1984. Bhutan is also one of the first developing countries to eliminate Iodine deficiency disease (IDD) by 2003. These are some of the key health milestones that Bhutan has achieved so far but there are challenges of sustaining these achievements and meeting the increasing need for quality preventive and tertiary care. Bhutan too has miles to go like any other developing countries. The disease burden as reflected in the table below gives a clear indication where our focus lies. Diarrhea, Dysentery, Skin infection, Conjunctivitis, etc which are amenable to prevention still tops the list not only in under five age group but generally. It is imperative to think through if our interventions are right and how can we do better in our interventions and commitments.

The double burden of disease is a big challenge in terms of resource and health workforce, as many health care delivery areas need to be established to meet the needs of emerging and re-emerging diseases. The non-communicable diseases (NCDs) are on the rise, a harbinger of dual burden of disease which indicates it is also time to devise new interventions and make wise investments in preventing and controlling the NCDs.

Top Ten Diseases in Bhutan in 2008:

Sl.No	Name of the diseases	Numbers in 2008
1	Common cold	2,66,164
2	Skin infections	97,514
3	Peptic ulcer syndrome	63,039
4	Musculo -skeletal	61,001
5	Acute Pharyngitis/Tonsilitis	60,510
6	Other Disorders of Skin & Subcutaneous-tissues	59,335
7	Diarrhea	58,537
8	Other Disease of the Digestive System	54,859
9	Other Respiratory and Nose Diseases	51,145
10	Conjunctivitis	37,240

Maternal and child health in Bhutan is another important area of focus. Maternal mortality in Bhutan at present is 255/100000 live births and under-five mortality is 61.6/1000 (MoH), which are the figures after 55 % reduction since the 1990s. These figures are still high and losing mothers to childbirth is preventable. The biggest challenge in preventing maternal and child mortality is the formidable terrain, lack of knowledge, lack of resource to access care and delay in care delivery. Even with high focus on institutional delivery, current status of deliveries by trained personnel is only about 66% and institutional delivery is about 54% of the total deliveries in the country.

The challenges in intervention lie in knowing how to minimize the three delays in country context and designing appropriate mechanisms and focused interventions. Knowing numbers best may help arrive at need assessment and focused interventions.

Delivery Attended by Trained Health Personnel - 2008

S #	District	Deliveries Attended			Total Deliveries	% Trained deliveries	Un-trained deliveries	% untrained deliveries	Forceps/Vacuum deliveries
		Home	Facility	Total					
1	Bumthang	25	122	147	298	49.3	151	50.7	1
2	Chhukha	26	1022	1048	825	127.0	-223	-27.0	22
3	Dagana	42	90	132	537	24.6	405	75.4	0
4	Gasa	30	5	35	43	81.4	8	18.6	0
5	Haa	24	42	66	182	36.3	116	63.7	0
6	Lhuntse	36	135	171	320	53.4	149	46.6	0
7	Mongar	95	668	763	797	95.7	34	4.3	8
8	Paro	14	529	543	531	102.3	-12	-2.3	27
9	Pemagatshel	58	86	144	402	35.8	258	64.2	0
10	Punakha	31	268	299	339	88.2	40	11.8	0
11	Samdrupjongkhar	109	221	330	710	46.5	380	53.5	3
12	Samtse	72	423	495	1208	41.0	713	59.0	19
13	Sarpang	20	612	632	833	75.9	201	24.1	1
14	Thimphu	16	2533	2549	3324	76.7	775	23.3	48
15	Trashigang	115	476	591	776	76.2	185	23.8	11
16	Trashiyangtse	19	99	118	404	29.2	286	70.8	0
17	Trongsa	32	36	68	226	30.1	158	69.9	0
18	Tsirang	17	87	104	323	32.2	219	67.8	0
19	Wangduephodrang	59	171	230	509	45.2	279	54.8	0
20	Zhemgang	87	69	156	409	38.1	253	61.9	0
Total		927	7694	8621	12996	66.3	4375	33.7	140

Four-tier health care system seems to be fairly functional in Bhutanese context with NRRH, RRH, BHUs and ORCs taking their preventive and curative roles to the best that is allowed by the available human capacity and resources. The numbers of cases seen by the respective institutions in 2008 are shown in the following table. It is important to note that numbers are not enough; the quality of care that is provided to the people who availed treatments is an important component of health care delivery. The ministry and the health workers who are in direct contact with these patients need to continually strive for best quality health care in the country.

2008 data on patient care:

Health Institutions	Inpatients	Outpatients
NRH (JDWNRH)	9,904	4,39,950
All Hospitals	43,570	8,60,691
BHU	-	7,04,319

*JDWNRH: Jigme Dorji Wangchuk National referral Hospital

*BHU : Basic Health Unit

*NRH : National Referral Hospital

Health is an important component for the growth and development for any country. We often think that health is produced at the hospitals or by the health ministry. Amazingly, most health is produced and natured at the household and community level. Mothers are the best nurses for their children and their care is unconditional, 24X7. A good household health in large numbers is the pool of nation's health. Hence, investing in better nutrition, sanitation, mother and child health and knowledge enhancement at the household and community level is key towards building a healthy nation. Health is not just the tertiary care that people receive when he/she becomes sick; the holistic health care is a good primary prevention where diseases are prevented before people become sick along with quality tertiary care when they are sick. Since the whole prevention component is not quantifiable and benefits are not immediate or tangible, the health benefits of preventive care are not easily perceived. However, preventive care is the key component of holistic health care approach.

Health workers in Bhutan are hard working and dedicated people who are in service of the community at all times and in all the remotest places of Bhutan. They are striving to prevent diseases, promote health and save lives to the best of their abilities, skills and knowledge. Because of the terrain and the limited resources, it is sometimes challenging to be a good health worker in Bhutan when they are up against all odds with limited skills and facilities. Yet the courage and the motivation that our health workers have in building healthy community are commendable. Creating a healthy community and a healthy nation needs multi-stakeholder involvement at all levels. Adequate food supply, clean water and other social and mental wellbeing are a part of health production of a nation. Hence, every one of us is responsible for production of good health and building a healthy country for now and for the next generation.

Bhutan is doing fairly well in terms of MDG goals like in the control of tuberculosis, the current achievement of case detection and cure rate 70.9/90.9 against MDG target 70/85. The immunization coverage is 94.5% against MDG targets of more than 90 %. Some additional MDG goals/targets are as shown below:

MDG Goals /Targets	Bhutan's current Achievement 2008	Source
Reduce under five mortality rate by 2/3 between 1990 and 2015	61.6/100,000	RHU program
Reduce MMR by 3/4 between 1990 and 2015	255/100,000	RHU program
Immunization coverage of more than 90 %	94.5%	2008 survey
Have halted and began to reverse the spread of HIV, malaria, TB and other diseases	The incidence of TB has declined more than 50%	WHO Report 2007
To reduce the Infant Mortality Rate by 2/3 between 1990 and 2015	40.1/100,000 live births	RHU program

To achieve MDGs, health sector alone is not enough as the determinants for health is multi factorial and factors such as gender equity, environment sustainability, education and poverty play a major in health indicator achievements. Hence, stakeholders like the government, multi sectorial leaders, community and households need to come together to celebrate our achievements and work together to address the challenges since good health is a result of good social, political and economic structure of the nation. A shared vision of a healthy nation by 2020 is our dream towards which, we are all working together hand in hand.

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A Summary Nutrition and EPI Survey 2008

Nutrition and VPDCP
Department of Public Health

Nutritional Status of Bhutanese Children

The National Nutrition and Infant and Young Child Feeding survey was conducted from November to December 2008. The survey encompassed all 20 districts with 120 gewogs/thromdes selected by Probability Proportional to Size Sampling Technique (PPS) and covered total of 501 villages. The study was designed to give national and regional level prevalence. A total of 2367 mothers were interviewed and an equal number of children were assessed for nutritional status using height and weight measured.

General characteristic:

The mean age of the mothers interviewed was 28.1 (± 6.0) years. Marital status of the women showed that 94% (2204) were married and living with their husband and 5% (117) were either divorced, single parents or widowed. 5.6% of the mothers were pregnant at the time of the survey and the mean number of children born was 2.7 (± 1.66) with the maximum number of children born to a single mother being 13. In the sample population 45% (1065) of mothers were literate, out of which 27.5% (292) had attended the NFE course, 29.8% (317) had primary level education and 42.6% (453) had gained an education level higher than primary school. 87.5% (2080) were primarily working as housewives doing multiple chores, 5.4% (128) were engaged in business and 6.3% (147) were employed or working outside their homes.

The average household size among the study group was 5.6 people with maximum family size of 18 members. The main source of income for the family was selling of agricultural products followed by Business and salary. 43.1% (1025) of the mothers had attended at least one health education session and 96.8% (2290) of the mothers had attended one antenatal care clinic during pregnancy. Institutional delivery was found to be 52.2% (1240) which is close to the figure of 47.4% (1126) mothers who gave birth in their homes. Among the home deliveries, 40.6% were assisted by husbands, 28.7% by mothers, 10.9% by mother in-laws and 8.3% by health workers.

97.9% of the households had access to safe drinking water (piped drinking water or protected water source). Only 3.6% (80) of the water taps in the study area did not have water at the time of the study.

Nutritional Status:

The national level stunting has decreased from 40% to 30.2% and under weight has decreased from 18.7% to 15.2% when using the NCHS standard. However, WHO now recommends using the new WHO child growth standard and therefore all the data in this study has been analyzed using the new WHO Standard. Using the new WHO standard, the current national level prevalence was **37% for stunting, 11.1% for under weight** and **4.6% for wasting**. Difference in the nutritional status between the regions and place of residence (rural/urban) was statistically significant while differences between sexes were not statistically significant.

Table: Nutritional status at the national, regional and by area

	National Level	East	West	Central	Rural	Urban
Wasting	4.6%	3.3 %	8.2%	2.4%	5%	3.1%
Underweight	11.1%	10.7 %	11.4%	11.2%	12.2%	7.3%
Stunting	37%	44%	33.8%	33.3%	38.8%	31.2%

Infant and Young Child feeding: The exclusive breastfeeding for first four months was 37% and for first six months was only 10.4%. The median duration of breastfeeding was 23 months with the maximum duration being 57 months. 81.5% of the babies were breastfed within one hour of delivery. 92% of the mothers gave colostrum to their babies and only 8% of the mothers expressed it out because they considered it as rotten milk which could put the health of the baby at risk. The most common food given in the first 24 hours apart from breast milk was butter (5.6%) followed by water (2%).

Low birth weight: Of the 5981 deliveries with recorded birth weight (for 2006 and 2007), 9.3% of them had low birth weight and further analysis showed that the prevalence of LBW was more among hospital deliveries compared to BHU deliveries.

Iodized salt and vitamin-A coverage: The iodized salt coverage (>15 PPM) at the household level was 98.4%. In supplementation of Vitamin A, 87.9% of the babies had received one dose in the last six months (oral compliance).

Conclusion: The present survey showed a very high prevalence of stunting across all regions. Western region had more acute malnutrition while the eastern region had more chronic malnutrition. The Royal government needs to review the existing nutrition strategies and develop a national nutrition policy in light of these recent findings. A long term plan to increase access to protein rich diet and change the food consumption and dietary habits, in collaboration with Ministry of Agriculture is necessary. Although the prevalence of wasting was only 4% at the national level, some districts had acute malnutrition at critical level (as defined by WHO) and these districts requires immediate interventions. There is also an immediate need to develop a communication strategy to bring about change in Infant and young child feeding practices. The current breastfeeding policy also needs to be changed to meet the WHO/UNICEF recommended 6 month's exclusive breastfeeding.

Overall this study clearly indicates that food and nutrition status requires more attention of the Ministry of Health and the Royal Government.

Immunization Coverage Survey 2008

Since the declaration of universal child immunization (UCI) in 1991, Bhutan has successfully sustained universal coverage ensuring a healthy future for its children. This has been possible due to strong government commitment, support from the international community and the objective health policies of the Ministry of health. The Expanded program on Immunization (EPI) has been one of the most successful programs and has been restructured into the Vaccine Preventable disease program (VPDP). This has been done mainly to address emerging vaccine preventable diseases and over the years some newer vaccines have been included in the national immunization schedule. This includes Hepatitis B vaccine which is given in combination with DPT, and Rubella vaccine which is combined with Measles vaccine. The program keeps abreast of the disease burden situation in the country and initiatives are being taken to add other vaccines to the schedule.

It has been six years since the last EPI coverage survey was done in 2002, and therefore there was a need to conduct another survey to evaluate the most recent immunization coverage. Besides studying the coverage at the national level the present survey was designed to compare the results between the three regions in the country. The main objectives of the survey was to evaluate the coverage of all EPI antigens in children 12-23 months, reasons for partial or non immunization and to assess TT 2 + coverage in mothers with infants of 0-11 months of age.

The target age group was thus children 12-23 months of age and mothers with infants of 0-11 months of age.

The country was divided into three regions longitudinally as specified by the National Statistical Bureau and these formed the study areas. From each area 40 clusters (gewogs/thromdes) were selected using probability proportional to size (PPS) of population making a total of 120 clusters for the whole country. Using cluster sampling technique, 10 children from each age group was selected for the study.

Information on child immunization was obtained from 1193 children aged 12-23 months.

A total of 1223 mothers with infants of 0-11 months of age were interviewed to assess TT vaccine coverage.

Table 23: EPI Indicators for children 12-23 months

Indicators	N	Freq	Percent	95% CI
Availability of Card	1193	1169	98 %	
PROGRAM COVERAGE	1193	1168	97.9	96.8-99.1
OVERALL COVERAGE (CARD+HISTORY)				
Fully Vaccinated	1193	1179	98.8	98.0-99.7
Partially Vaccinated	1193	14	1.2	0.3-2.0
Not Vaccinated	1193	0	0	
VALID COVERAGE BY 1 YEAR	1193	819	68.7	64.9-72.4
PROGRAM ACCESS				
DPT1 (Card + History)	1193	1193	100	
Not ever Vaccinated	0	0	0	
PROGRAM CONTINUITY (CARD + HISTORY)				
Dropout rate DPT1-Measles	990	11	1.1	
Dropout rate DPT1-DPT3	990	1	0.1	
Dropout rate DPT1-DPT2	990	0	-	
Dropout rate DPT2-DPT3	1131	1	0.01	
Drop out BCG-Measles	1151	11	0.96	
VALIDITY OF IMMUNIZATION SCHEDULE				
Proportions of Valid doses				
BCG	1193	1151	96.5	95.0-98.0
Measles	1193	982	82.3	79.3-85.4
DPT 3	1193	1126	94.4	92.5-96.2
DPT 1	1193	990	83.0	80.0-86.0
OPV0	1193	814	68.2	64.5-72.0
OPV3	1193	1167	97.8	96.6-99.0
Proportion of Invalid doses				
BCG	1193	42	3.5	2.0-5.0
Measles	1193	211	17.7	14.6-20.7
DPT 3	1193	67	5.6	3.8-7.5
DPT 1	1193	203	17.0	14.0-20.0
OPV0	1193	379	31.8	28.0-35.5
	1193	42	3.5	2.0-5.0
OPV3	1193	26	2.2	1.0-3.4

Table 24: Reasons for Immunization failure in children 12-23 months
(History + Card)

Reasons for immunization failure	Frequency	Percent
Unaware of need to return for 2nd and 3rd dose	1	7
Fear of side effects	1	7
Postponed until another time	2	14
Time of immunization inconvenient	2	14
Vaccinator absent	1	7
Vaccine not available	2	14
Mother too busy	1	7
Child ill not brought	1	7
Child ill brought but immunization not given	1	7
No reason	1	7
Total	14	100

Table 25: Number of TT dose received in last pregnancy with number of pregnancy

Pregnancies		Number of TT dose received in LAST pregnancy					Total
Total number of pregnancy in lifetime		0	1	2	3	4	
	1	39	25	396	4	0	464
	2	4	303	34	3	1	345
	3	1	192	15	1	0	209
	4	7	88	11	0	0	106
	5	16	32	5	1	0	54
	6	12	8	0	0	0	20
	7	6	7	1	0	0	14
	8	2	2	0	0	0	4
	9	4	0	1	0	0	5
	10	0	0	1	0	0	1
	12	0	1	0	0	0	1
Total		91	658	464	9	1	1223

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Years of Primary Health Care In Bhutan

A Perspective

What does Primary Health Care (PHC) mean to a Health Worker?

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“Work without hope draws nectar in a sieve, and hope without an object cannot live”. S.T Coleridge lines encapsulate the very purpose of our existence. Our work, he suggests, must have hope to maintain its value. But where do we find that hope? Is not the health, the wealth of the nation?

Our legendary monarch was of view that Bhutanese people should be ‘prosperous and happy’. The concept of Gross National Happiness is seen as a unique and primary developmental philosophy initiated by His Majesty the 4th king.

More than a decade, the Health Ministry endeavors in realizing the noble vision of His Majesty the King and in fulfilling the aspiration of common people. To this end, many health workers have sacrificed their life in rendering the service to the nook and corner of the kingdom. We need to salute the selflessness and hardships faced by the health professionals in making and reaching PHC to the grass root level.

I take the privilege of paying my deepest and humble gratitude to the Royal Government of Bhutan for entrusting and recognizing my potentials as Health Worker.

According to WHO, ‘Primary health care is essential health care made universally accessible to individuals and acceptable to them, through their full participation and act at a cost that the community and country can afford’. The achievement of Primary Health Care in Bhutan can’t be measured or seen as a concrete as we want, but if one happen to pass by the community, we will come to learn where we stand. Following the Alma-Ata-Declaration on PHC, Royal government of Bhutan strives to use PHC as its core thrust to reach the rural population scattered over the rugged mountainous terrain of Bhutan. Today more than 90% of Bhutanese population is reached by primary health care. Beginning from 1961, through successive five year plans, Bhutan has made remarkable progress in every aspect. The health services till now are provided totally free of cost and the country is committed to the achievement of universal health for all.

Some of the key health indicators in respect of understanding PHC achievement in Bhutan.

Sl.No	Indicators	1984	1994	2007
1.	Infant Mortality Rate (per 1000 live birth)	102.8	70.7	40
2.	Maternal Mortality Rate (per 1000 live birth)	7.7	3.8	2.55
3.	U5MR (per 1000 live birth)	162.4	96.9	62
4.	Crude Birth Rate (per 1000 Population)	13.4	9.0	7
5.	Crude Birth Rate (per 1000 population)	39.1	39.9	20
6.	Population Growth Rate (%)	2.6	3.1	1.3
7.	Life expectancy (both sexes)	NA	66.1	66.1
8.	General Fertility Rate	170	172.7	142.7
9.	Trained Birth attendance (%)	NA	10.9	57

The introduction of Primary Health Care approach to health delivery system in 1974 led to a change in the organizational structure of the health sector. All elements of health services are now delivered through 176 BHU's located throughout the country. Many of the community were linked to the nearest health centers not more than three hours reach.

Apart from dealing with thousands and thousands of curative cases annually, PHC teams are also entrusted to give public health education on preventive aspects. It is generally believed that large part of the health care provider's time is spent on preventive aspects. Health sector strongly believes that prevention is not only better but cheaper.

This is what I believe and respect the achievement of Primary Health Care in this small landlocked country and I would further like to share how I became a part of Primary Health Care Service provider.

My field adventures.....,.....

I took the risk simply to help another and that was what I thought I must do. I plunged into dangerous situations not for any laurels or medals but for the little voice in my heart which told me to help others.

In the year 1996, plagued by fear, hostile heart, I started the perilous voyage as a sailor on the ship of Primary Health Care service. Perplexed, but with determination and faith in God to reach to my first duty station safely, I carried myself forward. I was handicapped by the language barrier too, what next? Alien! I was in Denchukha, one of the most remote dispensaries. Unlike in hospitals, where every procedure are well arranged and services delivered faster, here I was left all alone to deliver the services to more than 3000 people of two giant geogs of Denchukha and Myona, under Dorokah Dungkhag, Samtse. No outside communication, nor helping hand, my first year as the primary health care service provider came to an end, fortunately without much mishaps. I kicked off the odds and tackled the harsh situation that gave me insight of self accomplishment. My first year tenure saw me in tears of desperation at times. With years passing by my courage sprinted, rashness drifted, and round the clock work load provided me the strength to overcome any hurdles. Experience stems from belief, what you believe, that you will be.....charisma in drawing people for monthly immunization, attending ORC, running OPD, ANC checkup and many other was my daily routine. The catchments villages nearby dragged me off bed from 4 am to 8pm as daily visit ensuring and educating people on health and sanitation. Communication with the village folks was like pouring water on stones. People paid deaf ear and door to door immunization during ORC defoliated my energy and time. Many a times I was at the verge of giving up but the little voice in me told me once again to find a way out. There it was! Following them through dense and isolated jungle providing services to them among their cattle.

The exhausting journey through dense and dark forest of Dungana still remains alive in my memory as an unforgettable story. It was a case on profuse bleeding of cow herder's wife. The caller had pale and worried face which made me feel that every minute wasted might be risking his wife's life. After collecting necessary kits we took off immediately and after 10 hrs of walk I was there treating the

bleeding woman. I remembered to take the long relaxing breath only after the patient showed improvement. I am proud to say she is alive today and is a mother of two beautiful daughters and they never forget to stop by the BHU to thank me whenever they are passing by.

As a health worker my greatest joy and satisfaction lies in the programme of Family Planning in which I was able to motivate and encourage more than 80 clients for VO(vasectomy) of which 70 clients had successfully undergone VO during my initial service of six months, in the year 1996. I am also proud to announce that two successful model village was implemented in my first six years of service. Recently I have initiated village health committee in eight villages under Sengdhyen BHU to support Reproductive Health, especially during pregnancy and child birth. A sight of clean latrine, garbage pit, proper drainage and healthy kitchen garden around each household was the biggest challenge to fulfill. Hygiene and sanitation had to replace the stinking sight of smell. It had become the hall mark of my everyday topic for field visit. My daily routine of attending ORC, advocating the community on various health issues did indeed changed the life style of the community.

The Village Health Workers (VHWs) in particularly had been instrumental in the promotion of preventive and promotive services. The high level of achievements in the promotion of sanitary latrines, hygiene, immunization and antenatal services are direct results of the VHWs in health activities.

I proved the saying right “chances and circumstances favored the brave” and I was brave.

Challenges ahead

Along with improved living standard of Bhutanese population, the health problems related to non-communicable diseases like diabetes, obesity and hypertension have stepped even in rural dwellings. Our nutrition, balanced meals are giving ways to fast food and junk food and soft drinks are replacing milk. We prefer to use a car or bus instead of walking. The Ministry has to incorporate both communicable and non communicable diseases into PHC services.

Inadequate staffs in the BHUs and absence of female staff in some BHUs have hindered delivery of quality service to some extent. Nurses should be placed for female privacy. Refresher course should be conducted in order to help health workers upgrade knowledge on health and quality service. Adequate spacing and separate rooms or enough infrastructures for BHUs should solve for better care in primary level itself. There is a great challenge in changing the organizational culture and mind set of rural folks.

I have spent 11 years of my service serving in the remote regions of the kingdom. I am keen in serving in remote and difficulty places, where people anticipates our professions as rain to the drought. I am continuing to render my service in remote and isolated place and I have no complaints as long as I can be of some use to my countrymen irrespective of where they are or from.

The Health Ministry has come a long way in rending the service to its fullest and if we happen to progress in the way that we have been in the past we will surely get to the top no matter how high and vast are the obstacles. This is the story we know, hear and experience in real, and this does not remain only a story and end here, we have the responsibility to carry the legacy forward.

Shall we put our mind and soul together in realizing the noble aspiration of His Majesty the King of making Bhutan “happy and prosperous”. Our Contribution can build a strong and disease free Bhutan, Hail Country Men!

Source:

- National health survey 2000
- The flow of life
- Annual health bulletin 2007
- Annual health bulletin 2006
- Essential of community health nursing.

30 Years of Primary Health Care in Bhutan : A Perspective

Kado Zangpo, HMIS, PPD

What is Primary Health Care?

As usual I was teaching the final year students of the Health Assistants (HA) course on Health Information Systems at the Royal Institute of Health Sciences (RIHS). This year I asked what they expected to learn from the ten-hour class spread over a week. Surprisingly almost all the twenty-one trainees in unison said, “Primary Health Care”. Over ten years in service in the Ministry of Health, I have heard Primary Health Care (PHC) time and again but never bothered to understand what PHC is? Anyway this time I went around hunting to learn a little more about it as I needed to get back to the trainees.

So what is Primary Health Care? A reading of series of articles shared to me by a colleague suggests that the blended practice of public health and primary care came to be called as Community Oriented Primary Care (COPC) as early as the 1940s. In 1978, 134 governments including Bhutan and sixty-seven agencies signed a declaration in Alma Ata in today's Kazakhstan after seven days of deliberation to adopt the concept of COPC re-packaged as Primary Health Care. Fifty year experience of successful COPC implementation prior to 1978 in countries such as South Africa, China, Sri Lanka, Costa Rica and the Indian State of Kerala had led to the signing of above declaration.

The concept of COPC started in 1940 when two young South African Physicians Sidney and Emily Clark went to live and work in an impoverished Zulu tribal reserve called Pholela. As they started working

Primary Care Functions

1. Demographic and Health Surveillance
2. Screening and treatment in clinical care
3. Counseling individual, family and community
4. Team responsibility for identifying health needs and addressing the prioritized health conditions

Public Health Functions

1. Health care for a defined population
2. Use of epidemiology, behavioral and social sciences
3. Identification/promotion of community involvement
4. Promotion of inter-sectoral coordination

Source : Gofin, 2006

they found that they were not only treating patients but also taking census of the local population and performing basic epidemiologic surveys to establish a baseline to be used for planned interventions. They carried out the day-to-day clinical works as well as the surveillance of various diseases and risk factor for health in collaboration with the local leaders. They also trained the local people as health workers. Their works resulted in the immediate improvement of health outcomes of the community.

Scenario from 1960 onwards

In 1956 when the first hospital was started in Thimphu, His Majesty Jigme Dorji Wangchuck, the Third King, has just put an end to feudalism in Bhutan. In 1961 when the first planned socio-economic development started, there were only two hospitals and eleven dispensaries in the country. People and communities were living and growing up within the confines of their valleys. Interactions between different communities were limited by rugged terrains and virtual non-existence of communication system. People, therefore, were content with what they had as they had limited information beyond the confines of their settlement.

Job Responsibilities at Pholela Health Center (Kark & Cassel 1952)

The Medical Officer

Each doctor on the staff is responsible for 400-500 households living in a defined area. Thus each doctor is responsible to about 2500 to 3000 people. His/Her functions included:

1. The treatment of the sick at the Health Centre and, where necessary, in their own homes.
2. Preventive services of which the foundation is the periodic health examination.
3. The direction of nursing services and health education programme that is carried out by the nurses and health assistants.

The Nurse

The nurse should also be concerned with both curative and preventive aspects of nursing. The preventive nursing service includes taking care of expectant mother, midwifery, and the care of mothers and baby. Special sessions for expectant mothers and mothers with their babies are organized at the Health Centre and at suitably located homes.

This was a typical scenario when the health workers from Health School went out to serve in different parts of the country. In the community, our health workers remained isolated as villagers were busy with agricultural works, tending cattle and other daily chores. People hardly came to avail health services including immunization. Therefore our health workers had to travel from one house to another which were scattered over hilltops and foothills to sensitize or stimulate the people in using the modern health care services.

Radio was the only source of entertainment for the health workers. Basic food items like vegetables, butter and cheese etc., were available in abundance. Infact during the household visits, health workers could walk into any vegetable garden and take any quantity of vegetables like they took from their own garden. Material greed at that time seemed almost non-existent. The health workers slowly got integrated into the way of life in the villages and many got married to the local beauties.

Health Assistants:

Their main function is health education. By means of home visiting, group discussion and practical demonstration, an intensive educational programme for better health is carried out. This persistent health education of people is directed towards achieving the following objectives:

1. Reduction of high incidence of preventable communicable diseases by explaining the nature of these diseases and their spread. Improvement in homes and more especially in respect of sanitary disposal of refuse by making of compost, the construction and use of latrines, the protection of food stored in homes, the protection of water supplies and improvement in the structures of huts built by people.
2. Improvement in the state of nutrition through improvement in diet. This involves increased knowledge in regard to the relationship between diet and health in general as well as in regard to the special needs of different age groups and the expectant and nursing mother.
3. An appreciation of the value of periodic health examination and need for treatment of diseases in the early stages. This requires fundamental education as to the meaning of health and various diseases. The people's own concept have to be studied in a

Similarly, many government officials got married to the villagers unconditionally. Since remittance from government official was, and still is, one major source of cash income in the villages, this practice somehow created equity in the society.

Given the above conditions, health workers were working day after day. Vaccines were carried from one valley to another, sometimes by keeping the vaccines in the river to maintain the temperature during their overnight halt on the way. Many of them, during such a halt in the midst of jungles, had made themselves vulnerable to the wild animals.

Many health workers who remained in the communities never knew about the existence of promotion system in the Civil Service and, ignorantly, many never got promoted. As they did not know, they did not really bother and kept on working. Bhutan probably had the most dedicated and committed health workers during this period.

Thirty Years after the historic Primary Health Conference in Alma Ata, Bhutan have twenty-nine Hospitals and several Primary Health Care Units known as BHUs. By this time Bhutan also had one of the most successful Essential Drugs Programme in place. So many notable achievements were made. Universal Child Immunization was achieved in 1991. Goitre, once a common sight in Bhutan, is virtually eradicated. Leprosy and Iodine Deficiency Disorder was declared no longer a public health problem in 1997 and 2003 respectively. TB and malaria incidence rates have also decreased drastically. Infant & child mortality rates have gone down from 103 and 162 in 1984 to 40 and 60 in 2005 for every 1000 live births. 90% of the population has safe drinking water. Primary Health Care coverage today is 90%.

programme of this kind and their own experience related to various aspects of health and diseases which are discussed.

The clinical and preventive service provided by doctors and nurses is integrated with a promotive service carried out by health assistants trained as community health educators.

Annually Pholela Health Centre sees around 26,000 patient for curative and preventive services and visits around 14,000 households.

Amidst all these achievements, Bhutan still has a long way to go in meeting the principles of PHC. Equity is one of the most essential components of PHC and many indicators point out that Bhutan is moving from once an equitable society to one that is increasingly widening the gap between the haves and have-nots. The same is true globally and the gap is growing in health status between and within countries. While the overall status of health in many parts of the world has actually improved, inequity in health and health services is growing further, especially along the socio-economic line.

Equity : Key tenet of PHC

On the definition of equity, I think the Director General of Health has given me the clearest idea. He says, “if oranges are to be distributed equitably, it should be of same size, same color, same freshness, same caloric value and same in whatever way it is measured”. As indicated by the above definition, Bhutan needs to strive hard to achieve equity. Probably that is why the political party fighting with the motto of ‘equity and justice’ won the election in 2008. Even one modern Bhutanese song lyric runs on inequity “Druk Gi Gyalkhab Yargay Jho Dang Majo Gyalsa Thimphu Haep Dha Shay” which can be loosely translated as “The progress of Bhutan can be seen only when you reach Thimphu”. The 2007 Poverty Analysis Report estimates that 23.2% of the Bhutanese population is below the poverty line. And within the Kingdom, Zhemgang, Samtse, Monggar, Lhuentse and Samdrupjongkhar have high poverty rates. Similarly, in 2000, a majority of the poor people were found to be living in Pemagatshel, Zhemgang, Mongar, Samdrupjongkhar and Trashigang.

On the health front, infant mortality rate, and child malnutrition incidence are found higher in Wangdue, Mongar, Lhuentse, Yangtse, Pemagatshel & Samdrup jongkhar(PlanningCommission, 2000).

Where there is poverty literacy is also generally low. The districts of Gasa, Monggar, Trashigang, Yangtse and Pemagatshel have half of their population illiterate(NSB, 2007).

There is also a stark difference between rural and urban population. About 30% of the rural population is below the poverty line while only 2% are poor in the urban areas. Similarly about 75% of the population is literate in the urban areas while only half the population is literate in the rural areas. Teenage pregnancy is twice as common in the rural areas than in the urban areas.

The consumption of goods and services between the rich and the poor differs sharply. The top twenty percent spends close to 50% of total expenditures in the country while the bottom twenty percent spends only 6% of the total expenditures (NSB, 2007).

Although Bhutan is doing well on the economic front with GDP growing at 7% annually, many people feel the income gap is actually widening. The social structure itself is changing with modernization and globalization. In the 1960s and 1970s education was fair and equitable with Indian teachers willing to go to the remote parts of the country. Besides, all the students had access to the same kind of books and other educational materials. Therefore sons and daughters of rich and poor had equal opportunities. Today students of rich parents in the urban schools can afford to have access to a lot of other educational materials apart from prescribed text books including the internet. In addition, many teachers are unwilling to go to the rural areas. The rural students are therefore already disadvantaged. With the system opening up for free and fair competition in the job market, the rural students obviously will have less chances and therefore the rural poor have very slim chances of rising up unlike the glorious years of 1960s-1990s. Secondly the marriage structure is taking a u-turn. As explained above, marriage in the past was largely through love-at-first-sight without any consideration for other criteria. Today the marriages can only happen between building to building, between Prado to Prado, between Maruti to Maruti, between scooter to scooter and between poor to poor. With such a situation we can only hope for rich to become richer and poor poorer.

How does poor and rich matter to health? Many studies have pointed out that health and poverty are related. For instance, there is a need to understand how correlative risk influences child survival. It is often the same children in a community who are most susceptible to infection and malnutrition. Even if a poor child is saved from death by immunization or any other specific intervention, risk is always there that they he/she will die from another health problem simply because he/she is poor and live in a hazardous environment.

After thirty years of successful implementation of PHC, achieving equity looks very challenging because of the above arising situation.

According to Dr Carl Taylor, one of the two consultants who worked with staff of UNICEF and WHO in preparing the background document for the 1978 PHC

conference, there are three pillars for PHC : building infrastructure for peripheral health services; community participation; and inter-sectoral collaboration.

Building & Sustainability of PHC infrastructure

Most countries have done quite well in infrastructure building. I think Bhutan should fare far better than most countries. From one hospital in 1956 and two in 1961, Bhutan today has twenty-nine hospitals spread around the country. Similarly from sixty-seven BHUs and forty-six dispensaries in 1986, it has expanded to 178 BHUs and 519 ORCs. In fact, all the *geogs* now have a health centre in the form of BHU or ORC. The government policy so far has been to finance recurrent expenditure totally through domestic revenues while capital investments were mostly funded by donors. While major expansion of health infrastructure may not be necessary, the cost of maintaining the existing infrastructure would only escalate as many of these infrastructural facilities would become old and dilapidated.

With the recent changes in the political structure, now there

George Washington University emphasize on the following 6 elements for COPC approach. (Mullan and Epstein, 2002)

1. Community Definition:

Defining the population is a critical first step in COPC in order to establish geographical agreement and clarity among practioners and community leaders. It is also essential for subsequent application of epidemiological principles and external data to community in question.

2. Community Characterization

Bringing both quantitative and qualitative data to understand the community character and identifying particular health problem as a candidate for intervention is essential. It is important to emphasize that qualitative data that are generated from community opinion and inputs are as important as quantitative demographic and health data.

3. Prioritization:

In order to identify a single problem for intervention, it is important to weigh and prioritize the many candidate problems. And it is important to note community participation is key to this step as well.

4. Detailed assessment of the selected health problems:

A typical problem that emerges from prioritization such as teenage pregnancy or hypertension has many potential forms of intervention. Analyzing the problem and

are forty-seven constituencies with forty-seven MPs elected by the people. The MPs are going to make laws and give directions for the country to move. It is important that health infrastructure development and PHC approach may be reconsidered in the light of the above perspectives.

In five years time all the geogs would be connected with motorable roads. Information technology in the form of mobile, TVs and radios would be available in the remotest part of the Kingdom. With all the

developments taking place, there is a need for health sector to re-think and re-assess on the infrastructure plan. This is also necessary in the light of limited human resource pool and demand for quality health care services.

Therefore, can we have forty-seven quality health centers with several ambulances depending upon the constituencies' geographical terrain and settlement pattern? Currently people bypass our BHUs as well as district hospitals for reasons that need to be evaluated. BHUs were set up primarily to inform and educate people on public health importance. This function now can be conveyed through burgeoning information and communication technologies.

The Primary Health Care approach, if demarcated by political constituencies' can also help in putting health on the political agenda. The health outcome indicators can also be measured to generate competition amongst the constituencies' which I believe should result in progressive development.

Community Participation & Inter-Sectoral Collaboration:

History records that Bhutanese people always contributed in the form of labor for public goods. Even after the start of planned socio-economic development, people contributed labor while the other resources were financed by government through various means. In the process the relation between government and the people was that of a generous donor and a complacent recipient. The community

factors specific to community and the available strategies for combating is key to selecting a workable intervention.

5. Intervention:

A feasible and resourced practical intervention is essential to a successful COPC activity.

6. Evaluation:

Evaluation is necessary to measure the results of the investment and to plan for the future COPC activities.

in general form a perception that as long as it was government-funded it did not matter whether the scheme benefited or not. This is happening despite the fact that structural changes were initiated in the form of decentralization as early as 1981 with the establishment of Dzongkhag Yargye Tshogdue (DYT) and Geog Yargye Tshogdue (GYT) in 1991.

Decentralization is one means pursued by the Government to rope in community participation. In the 10th Five Year Plan, block grants would be provided to the Dzongkhags and Geogs. This means the communities will have full authority to allocate funds based on their needs. I also hope that the communities will monitor and implement the activities once the planning and resource allocation are completed. Dialogue would be essential for sharing knowledge between those who know and those who need to know especially when we are aware that the capacity at the local level is weak. Therefore it would be very important to balance top-down and bottom-up planning. We might only see results if we are only able to blend objective priority setting by experts and community felt needs. New practical mechanisms need to be developed that can be useful in defining the problems which are most important and can be readily solved.

The worrying factor for health is that such local allocations of funds are usually channeled to curative care than preventive. The PHC tenets such as equity, especially need to be protected. It is important in moving towards democratization, that the same mistake should not be made that are evident in countries such as the USA.

Most public health interventions have to be done with the people rather than for the people. Even immunization depends on social mobilization and complete surveillance. Continuing surveillance is needed at home to control pneumonia and diarrhoea in children which are still the leading causes of morbidity. Implementation of PHC will depend on behavioural change both for old problems such as child feeding and hygiene, and for emerging problems such as hypertension, diabetes and HIV/AIDS.

Intersectoral collaboration would be increasingly required to meet the demand of emerging health problems. HIV/AIDS, for instance, has demanded such collaboration and has resulted in the formation of MSTF (multi-sectoral task force) in all the Dzongkhags. The success of such group, of-course, needs to be assessed.

At the *geog* level it seems there are too many committees. There are over eight such committees; DOTS for TB, safe drinking water, community development for Health, live stock, agriculture, forestry, women and school. All these committees has more or less same members besides having similar functions.

Intersectoral collaboration, in theory, is supposed to pool resources for the same purpose and avoid duplication of work. This also means efficient use of resources.

Sustained motivation and commitment of health workforce

To assume we have health force with the motivation and commitment akin to health workers of 1970s and 1980s would be futile. Even the mindset of the same health workforce of that era has changed.

Modern development has changed the mindset of our people. Our health workers are no longer isolated. They are daily seduced by consumer products brought into their living rooms through TVs, radios and newspapers. Even the last days of death for, TV reality show-star of UK, Jade Goody is broadcasted live while I am writing this article. Materialism is taking over spiritualism.

Couples are seen living separately for want of more money. Wife is running a shop in urban centre while husband is serving in the remote corner of the Kingdom. It would not be surprising to know that our health worker is running a shop on the road head while health center where he is supposed to work is three to four hours walking distance from the road point.

Human Resource Management is increasingly becoming complex in light of the above situation. Our doctors may not be satisfied because their classmate who were sub-standard in schools by all means now are doing well materialistically in the same civil service system. If this hypothesis holds true, would matching source of income and the output which are usually land, buildings and cars in the Bhutanese context help motivate Bhutanese doctors?

In Sri Lanka, doctors working in government hospitals are allowed to work in the private hospitals during their off hours and this seems to be working quite well. Maybe Bhutan needs to look at their system.

Financing Healthcare

The organizers of PHC in 1978 had convinced the world leaders that PHC could be financed domestically if they had political will. However the harsh reality is that many governments could not finance or sustain the PHC activities through domestic revenues.

Currently about 70% of health care is financed through domestic revenue in Bhutan while the average Asian country finances 75% of the total health care expenditures through domestic sources. The Asian countries spend on an average 8.1% of the total government expenditure on health while Bhutan spends about 10-15%.

Most of the Asian countries rely on out of pocket payment although it is not the dominant funding source. Out of pocket payments are regressive as only the sick contribute to the financing system and the poor pay same as the rich. Such a financing mechanism will not ensure universal coverage, one of the key tenets of PHC, and measures should be taken to move away from the user fee system. Measures such as health contributions, pre-payment mechanisms, proved to be quite successful and have also contributed significantly.

Inefficiency and wastage of resources is chronic in the system. At one point of time whole village seems to be supplied with white tape used for bandaging from the BHUs to beautify the bamboo bows used for playing archery. Surgical gloves are often used while peeling *doma* (betel nut) as well as for painting roofs and windows. Even newspapers published stories on condoms being used by weavers for oiling their looms. There are scores of such examples cited by our people in addition to patients wasting the drugs and that too while patients are being admitted to the hospitals.

30% donor financing in Bhutan can mainly be attributed for health promotion and prevention activities. With the improvement in literacy and wider coverage of mass media, prevention and promotion activities can be done centrally. This should reduce the cost and thereby reduce dependency on donors.

Social health insurance and tax financing are known to have worked while out of pocket payment resulted in poor health outcomes for the population.

In Conclusion.....

All my above perspectives do not mean to say that PHC has not been a success. In-fact, Bhutan has been lauded for successful integration of PHC into the Health System. Bhutan has achieved notable health outcomes and for her recognition, has received several international awards like '**Sasakawa Health Prize Award**' and many others.

I have only tried to highlight some of the looming risks according to my perspective that might impede the achievements of PHC principles such as equity and access, universal coverage and some thoughts with regard to human resource and health care financing. It is important to highlight these social determinants as it is beyond the control of Health Sector. I only hope such thought sharing might help in convincing other stakeholders to keep health as top priority.

For the economy of space, I have limited myself in reflecting on PHC achievements as these are available from many other sources. Finally, this is my thought and do not, in any way, voice the policies or views/opinions of Ministry of Health.

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