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Quarterly Morbidity & Activity Report

Better Information, Better Decision, Better Health.

Vol.I, Issue 2 (April—June 2008) September 2008

In this issue:

HIV/AIDS General Population Survey 2006- A Summery

27 Years since the detection of first HIV case, the disease has killed around 25million people globally. In 2007 it is estimated that there are 33 million people living with HIV and 2.7 million people were newly infected. About 2 million people died of AIDS related illness in 2007.

In Asia there is an estimated 5 million people living with HIV infection in 2007. And 380,000 were newly infected while the same number died of AIDS related sickness.

In Bhutan, the HIV detection has been increasing every year. 144 are detected of which 26 have died. 13 of the cases are due to mother to child transmission. A maximum of 23 HIV cases were detected in 2004 and 24 in 2006 and 2007 respectively.[1]

Since the detection of first HIV case in 1993, lots of intervention activities were carried out in the Kingdom. To see the effectiveness and reach of such activities as well as to draw a baseline for HIV related cases, a General Population Survey on HIV/AIDS was done in 2006. The following are the discussion of the key findings.

Sexual Behaviours and Condom Usage

Extramarital and premarital sex was common in both urban and rural areas and was reported more by males than females. Premarital sex was more commonly reported by unmarried males compared to extramarital sex by married males. It is noteworthy that the proportions of females having extramarital or premarital sex were also high compared to other countries in the SAARC region (Commission on AIDS in Asia, 2008, Govt. of Bangladesh, 2006).

Among those who had premarital sex, the average ages for males at first sex were 16-17 years, and for females this was 18-19 years; in both sexes it was lower in the rural areas. This finding is similar to that reported in the out-of-school youth survey of Bhutan (UNICEF/Bhutan, 2006). This is unusual as in most countries females are initiated into sex at an earlier age than males (Durex, 2005). It is not clear why this is the case in Bhutan but could be possibly due to increased education among females.

The most common partner was girlfriend or boyfriend for either extra or premarital sex. Males also commonly had extra or pre marital sex with casual acquaintances or neighbours particularly in rural areas. However, despite the high levels of reported casual sex, 13-15% of urban males bought sex from sex workers in the last one year.

In a newly published report of the AIDS Commission submitted to the UN Secretary General, the risk factors that may accelerate an HIV epidemic in Asia have been analysed (Commission on AIDS in Asia, 2008). According to this report, unprotected casual sex is not a major driver of HIV epidemics in Asia. One of the key determinants of the epidemic is the numbers of clients per sex worker, so that where the proportions

Contd. on page 12 >>

[1] All the Global & Regional Figures are quoted from "2008 Report on Global AIDS Epidemic" published by UNAIDS.

EDITORIAL

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NOTE:

The views and opinions expressed herein are the author's own and may not necessarily reflect the policies of the Ministry of

We can make a difference!!

Chador, a health worker has been working in Yangbari for almost 20 years. This was his first posting and went there with lots of enthusiasm and willingness to serve the people. However life was not easy, community were reluctant to heed to his advice of modern medicine. Hardly any patients turned up. Life was very boring. Hardly any visitors visited him. Health officials from the centre and districts sometimes visited for supervision. However, Chador noticed that his works were hardly supervised and therefore neither applauded nor reprimanded. It appeared to him that officials determined his performance based on how they were entertained.

In his mid forties, Chador so far has not seen the world beyond Bhutan. Yangbari still does not have a road and electricity. Therefore Chador now owns a mule to ride to Mongar Town unlike his batch mates who are driving cars.

Like Chador there are many other health workers who are continuously rendering health services and who are rhetorically lip serviced as pillars of health services. Many of them are de-motivated and many will get de-motivated, if initiatives are not taken to look into matters such as training, posting and promotions.

Leader and Managers have realized with experiences that human resource is the most valuable asset of any organization. People are more valuable than capital or equipment. Unfortunately de-motivated and grumbling human resource can become your biggest liability.

What is the greatest motivator? Is it out country training? Is it favorable posting? Is it money? Is it recognition? Is it authority? People will do a lot for money, more for a good leader, but do the most for a belief. People die for their belief. This happens every day, all over the world.

According to Shiv Khera, incentive motivation is like a donkey with a carrot dangling in front and pulling a cart behind. The motivation works if the donkey is hungry enough, the carrot is sweet enough and the load is light enough. Incentive motivation, therefore, can be short lived and not gratifying in the long run.

Recognition and responsibility can be a sustainable motivator. Health Worker being appreciated rightly; being treated with respect and dignity; and giving a sense of belonging can be internally motivating. Feeling of belonging and ownership can come through responsibility. With responsibility every health worker could become part of the larger health system. Lack of responsibility and responsibility without authority can be de-motivating sometimes.

Chador may not be de-motivated because they could not get the training or not got posted to a favorable place. They could most probably be frustrated because they received unfair treatment or they have seen non-performer being rewarded. Human Resource is the most talked about issue in both formal and informal gatherings.

And therefore training, posting and promotion are most sought after issue and managers at all levels try to please everybody. In the process the system loses as trying to please everybody results in failure as stated by Bill Cosby "I don't know the key to success, but the key to failure is trying to please everybody".

Acknowledging human resource as one of the key factor in enhancing health system and by applying the 80/20 rule, with 20% effort in solving human resource issues a gain of 80% in health system performance improvement is possible.

Wish you a happy reading and Trashi Delek.

Kado Zangpo

1. Timeliness of the Report

The following descriptive analysis includes only 17 Dzongkhags . As per the policy directives of Health Ministry, all Dzongkhags should have sent the 2nd quarter data by 15th August 2008. However the following Dzongkhags has not sent the data as of 15th August 2008.

1. Punakha
2. Wangdue
3. Haa

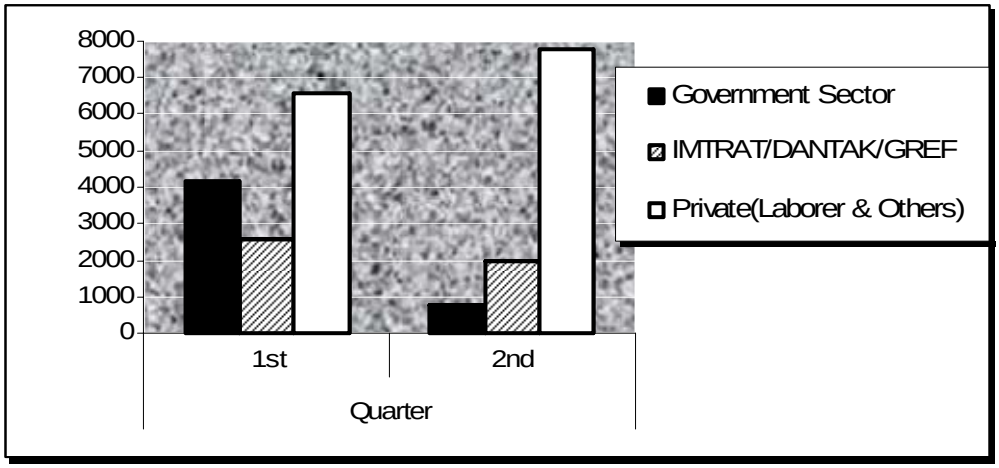
This report will cover only the data received by Health Information and Research Unit that is namely the morbidity and activity report. There are so many vertical reporting system and the number varies from district to district. The data of such reporting system are not included as its reliability and consistency is not assessed.

2. Health Service availed by Non-Bhutanese

In this quarter 10,519 Non-Bhutanese have availed the health services compared to 13,312 in the previous quarter. Of the 10,519 Non-Bhutanese who have availed the health care services, 74% are working in the private sector, 8% are working in the government organization and 18% are DANTAK/IMTRAT/GREF employees.

Fig. 1.

Health Service availed by Non-Bhutanese



Note: The figure does not include Non-Bhutanese who could have availed services from BHU

3. Hospital Mortality

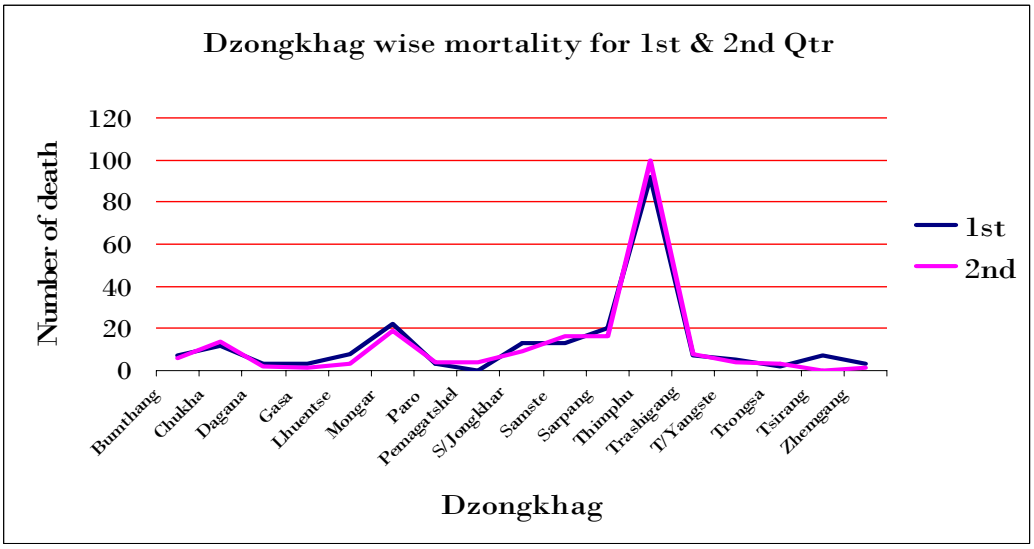


Fig. 2. Dzongkhag wise Mortality for 1st & 2nd quarter

The high mortality in Thimphu Dzongkhag could be possibility due to cases referred to the National Referral Hospital.

4. Communicable & Non-communicable Diseases

Table 1. Communicable diseases (January to June 2008)

Sl. no	Dzongkhag	Diseases/quarter									
		Diarrhoea		Dysentery		Intestinal Worms		Conjunctivitis		Pneumonia	
		1st qtr	2nd qtr	1st qtr	2nd qtr	1st qtr	2nd qtr	1st qtr	2nd qtr	1st qtr	2nd qtr
1	Bumthang	330	316	97	105	46	43	253	358	30	62
2	Chukha	1732	2546	357	514	525	697	773	1023	231	400
3	Dagana	355	684	196	369	191	267	277	296	229	228
4	Gasa	42	81	23	71	16	20	68	74	0	3
5	Lhuentse	220	467	99	204	99	125	329	336	90	137
6	Mongar	539	1064	189	638	181	198	698	1146	193	500
7	Paro	469	878	268	483	88	122	221	312	190	383
8	Pema gat-shel	169	574	93	292	65	124	292	484	132	268
9	Samdrup-Jongkhar	406	978	170	382	95	171	234	472	187	200
10	Samtse	1055	2512	254	536	363	418	620	814	264	430
11	Sarpang	652	1071	335	539	150	201	797	821	281	445
12	Thimphu	1199	1294	377	501	167	220	481	521	161	297
13	Trashigang	679	1566	288	720	195	245	846	1182	289	433
14	TrashiYang-tse	282	840	118	410	87	118	190	301	114	229
15	Trongsa	220	406	166	240	107	100	322	364	39	30
16	Tsirang	253	763	187	424	183	301	367	527	106	163
17	Zhemgang	472	900	124	155	138	268	528	552	100	238

Sl no	Dzongkhag	Diseases/quarter			
		Hypertension		Alcohol Liver Diseases	
		1st quarter	2nd quarter	1st quarter	2nd quarter
1	Bumthang	224	176	5	3
2	Chukha	469	610	47	33
3	Dagana	137	111	2	1
4	Gasa	16	23	0	0
5	Lhuentse	58	161	5	29
6	Mongar	142	299	38	40
7	Paro	295	338	9	5
8	Pemagatshel	204	334	14	17
9	SamdrupJongkhar	177	237	6	16
10	Samtse	548	469	13	11
11	Sarpang	500	569	31	42
12	Thimphu	437	481	41	28
13	Trashigang	400	519	35	45
14	TrashiYangtse	139	282	10	6
15	Trongsa	118	130	7	8
16	Tsirang	170	211	1	4
17	Zhemgang	136	166	7	14

Table 2: Non-communicable diseases (January to June 2008)

Non-communicable disease like HTN and ALD are on the use. HTN cases dominate in certain Dzongkhag like Chukha, Sarpang, Thimphu and Trashigang.

5. Nutritional Status of under 5 children who have visited health centre:

Table 3: Nutritional status of under 5 children who have visited health centres:

Nutritional status

Sno	Dzongkhag	Nutritional status					
		1st quarter			2nd quarter		
		Normal %	Over weight %	Under weight %	Normal %	Over weight %	Under weight %
1	Bumthang	63.20	26.93	5.79	72.73	13.14	8.30
2	Chukha	74.11	20.05	8.79	76.33	14.66	11.56
3	Dagana	62.85	24.89	11.82	78.94	12.44	18.48
4	Gasa	82.43	2.70	4.05	77.37	15.26	10.88
5	Lhuentse	73.60	26.30	10.50	61.23	26.54	20.38
6	Mongar	68.66	21.20	9.19	66.61	20.50	19.15
7	Paro	57.86	39.98	2.05	42.99	36.95	8.04
8	Pemagatshel	63.69	10.88	8.35	75.37	10.38	15.50
9	Samdrup Jongkhar	67.70	16.88	7.29	70.79	10.00	12.67
10	Samtse	76.80	13.62	9.58	77.96	10.53	14.76
11	Sarpang	70.68	21.25	8.06	67.61	20.63	17.39
12	Thimphu	63.76	31.71	4.53	74.68	18.81	8.71
13	Trashigang	73.64	23.26	10.11	75.28	13.73	16.48
14	TrashiYangtse	66.21	21.75	12.24	69.78	13.78	23.55
15	Trongsa	72.65	17.73	6.37	79.06	17.49	9.50
16	Tsirang	72.23	19.03	7.05	70.74	15.25	19.80
17	Zhemgang	67.79	22.80	8.99	63.37	25.89	18.48

The above figures may not be representative of the entire Dzongkhag since it is based only those children coming to the health facility.

6. Human Resource Development

Fig. 4. Training

Sl	Name	Designation	field of study/Training	institute/country	funding
1	Ms Kanjur Wangmo	Staff Nurse II, JDWNRH	B.Sc Nursing	Univeristy of Canberra, Australia	Private funding.
2	Ms Sonam Pemo	Staff Nurse III, JDWNRH	Certificate course in Nutrition (Research)		
3	Mr Tandin Dorji	Medical Technician, JDWNRH	Diploma in Diagnostic Radiology	Siriraj Hosp. BKK, Thailand	RGoB
4	Mr Tashi Tshering	Medical Technician, JDWNRH	Diploma in Diagnostic Radiology	Siriraj Hosp. BKK, Thailand	RGoB
5	Mr Damber Gurung	Opthalmic Assistant, CRRH, Gelephu	Diploma in Opthalmic Assistant	Ins.of public health and hygine, Delhi	RGoB
6	Mr Govinda Mishra	Sr.Medical Tech. Paro Hosp.	Diploma in Pharmacy(Clinical)	Silpakorn University, Thailand	RGoB
7	Mr Sangay	Medical Technician II, Monggar	Diploma in Prothesis and Orthosis	SNRcenter, MoPH, Thailand	RGoB
8	Mr Chador Phuntsho	Medical Technician II, JDWNRH	Diploma in Ultrasonography	Sri Ramchandra, Chennai, India	RGoB
9	Mr Phuntsho Norbu	Staff Nurse I, S/jongkhar Hospital	M.Sc. In Nursing Administration	Bhurapa University, Thailand	TICA & RGoB
10	Dr Kunzang Wangdi	GDMO, Sarpang Hospital	Masters in Orthopedics	Lerdsin Hosp.BKK, Thailand	RGoB
11	Mr Nima Wangdi Gyeltshen	APO, VDCP, Gelephu	Masters in Entomology & Parasitology	Mahidol University, BKK, Thailand	GFATM (Malaria)
12	Dr Kinley Wangdi	Sr. MO, Yebilaptsa, Zhemgang	Masters in Tropical Medicine	Mahidol University, BKK, Thailand	RGoB
13	Dr Pema Choden Buthia	Medical Officer, Damphu Hospital	MD in Gynecology/ Obstetrics	Mahidol University, BKK, Thailand	UNICEF
14	Dr Mahesha Gurung	GDMO,Paro Hospital	Specialization in Internal Medicine	Mahidol University, BKK, Thailand	1st yr pvt. & rem. 3 ys RGoB

Table 5. CONFERENCE/MEETINGS/SEMINARS (APRIL—JUNE 2008)

Sl#	Name	Conference/Meeting
1	Mr. Wangdi Gyeltshen, Project Director, HIDP	Regional consultation on SEAR member countries on keeping health facilities safe from disasters
2	Mr. Chador Wangdi, APO, DoMS	
3	Mr. Tenzin Thinley, Dungpa, Gelephu	
4	Mr. Tshoki Dorji, Dungpa, S/jongkhar	
5	Mr. Karmala, ACO, T/gang	Regional W/Shop for trainers on sub-national/district Health Mgt. Development
6	Ms. Choki Dema, ACO, Bajo Hospital	
7	Mr. Tshewang Nidup, Admin. Officer, RIHS	
8	Mr. Tshewang Rinzin, Program officer, TB Program	Training workshop on Planning and Budgeting for TB Control
9	Ms. Kinzang Wangmo, PO, PPD	
10	Dr. Dorji Wangchuk	Intergovernmental working group on public health, innovation and intellectual property
11	Mr. Dorji Tshering, Lab Tech, JDWNRH	Meeting on strengthening influenza diagnosis & networking
12	Ms. Lhamu, ACO, Haa Hospital	International development grant for young women physicians and scientist 13th International congress on infectious disease
13	Dr. Kunzang Gyeltshen, Opthalmologist, JDWNRH	Establishing keratoplasty services in Bhutan & finalizing the modalities of transport of Donor corneal tissues
14	Mr. Chhini Palden, Statistical Officer, HMIS	Health information systems strategic planning (HMN)
15	Mr Sonam Rinchen, PO, DoPH	2nd International conference on reproductive Health
16	Mr. Lhaba Tshering, PO, GNHC	
17	Dr. Dorji Penjor, GDMO,T/gang	17th Governing board meeting of SAARC TB/HIV/AIDS
18	Mr. P.B.Gurung, TB In-charge, Paro Hospital	
19	Mr. Tobgay, PO, RH, DoPH	second meeting for the technical committee on health and population activities
20	Ms. Sangay Wangmo, PO, HIV/AIDS, DoPH	South Asia regional development Market place 2008.
21	Ms. Wangmo, Cyto-technician, JDWNRH	Cytopath 2008
22	Dr. Krishna Prasad Sharma, Cytopathologist, JDWNRH	
23	Dr. Tshewnag Thinley, Head of Dept. Orthopedic, JDWNRH	5th Conference of Orthopedic Association of SAARC OASAC)
24	Dr. Pandup Tshering, TB Program Manager, JDWNRH	Meeting of Regional TB and HIV/AIDS program Managers of Member States
25	Mr. Sonam Wangdi, APO, HIV/AIDS, DoPH	
26	Ms. Thinley Zangmo, HRO, HRD	Inter country workshop on research management
27	Dr. Bhaktaraj Guru, Medical Specialist, JDWNRH	
28	Dr. Kunzang Jigmi, Registrar, BMHC	
29	Mr. Sonam Phuntsho, Research officer, Research unit, MoH	
30	Mr. Kaka Tshering, Sr. Leprosy Program officer, Gidakom	Leprosy management Workshop
31	Ms. Deki Wangmo, Dy Director, RIHS	2008 International conference on Healthy people for the health world
32	Mr. Namgayel Wangchuk, Head, IHR, MoH	Second meeting of National IHR Focal Points
33	Dr. Dorji Wangchuk, DG, DoMS	Expert Group Meeting on Revitalizing Primary Health Care
34	Ms. Karma Choden, GNM, JDWNRH	Regional W/Shop to Improve Inpatient Hospital care of Children
35	Ms. Norbu Yangzom, GNM, Monggar RRH	
36	Mr. Sonam Dorji, CPO, PPD	Regional Consultant on Utilization of Health Information for decision making
37	Mr. Kado Zangpo, HIMS	
38	Mr. Tshewang Rinzin, DHO, T/gang	
39	Dr. Bimnath Subedy, Medical officer, P/gatshel	W/shop for Masters Trainers for the use of Mid Level Management
40	Dr. Chencho Dorji, Director, RIHS	

7. Injury Report (Jan-June 2008):

Trongsa hospital reported the highest injury rate with 11.3% followed by Punakha hospital (9.3%) then by Central Regional Referral Hospital, Gelephu with 8.7%.

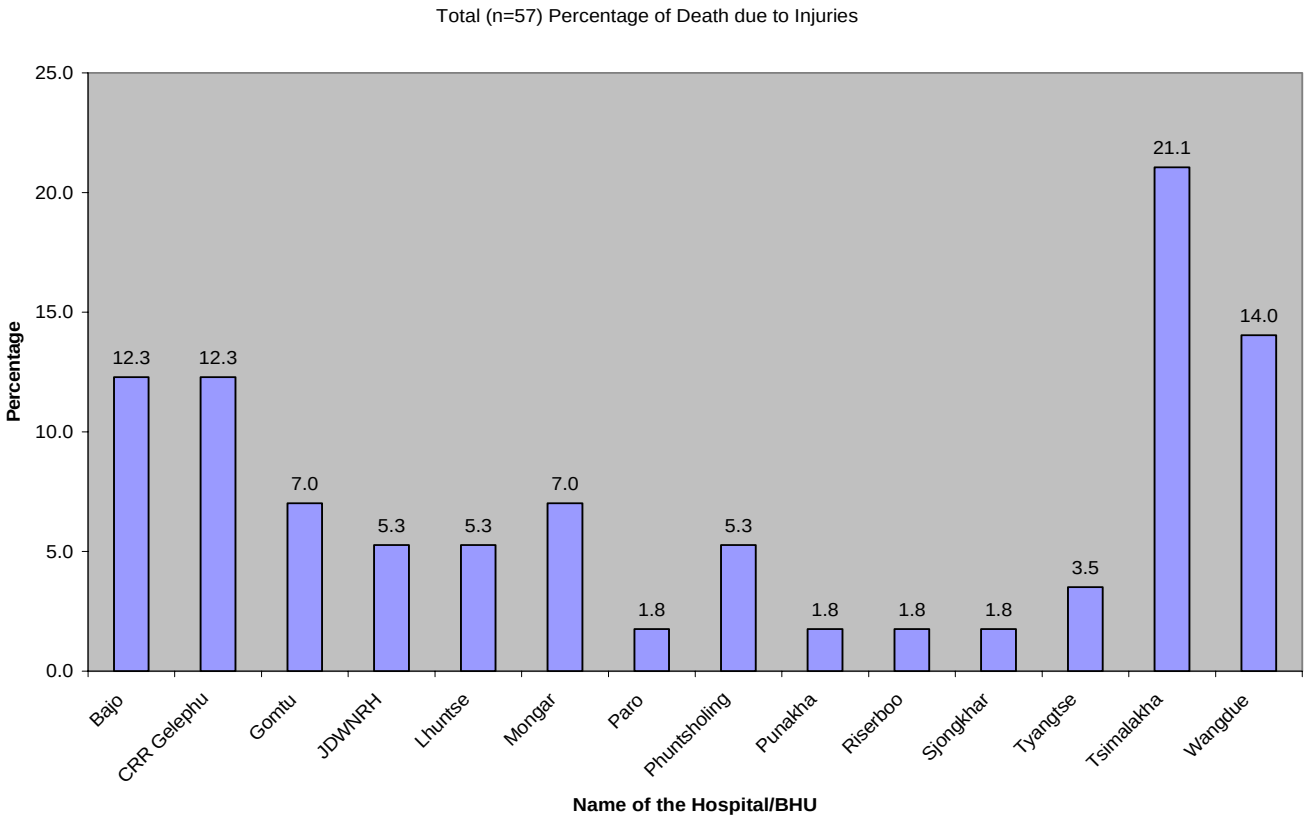
Amongst the selected five injuries taken into account the injuries due to exposure to inanimate mechanical forces was found to be the highest with 721 cases, followed by transport accidents with 537 cases reported. Next in line were injuries due to assaults (308), exposure to fire, smoke and flames (81) and contact with venomous plants or animals (74).

JDWNR Hospital reported highest percentage of Transport accident (12.7%), while Punakha Hospital reported highest percentage of injuries due to exposure to inanimate mechanical forces (16.8%), contact with venomous animals or plants (33.8%) and assaults (22.7%); Trongsa Hospital reported highest percentage of injuries due to exposure to fire, smoke and flames (16.7%).

Table 6. 6 Injury Report

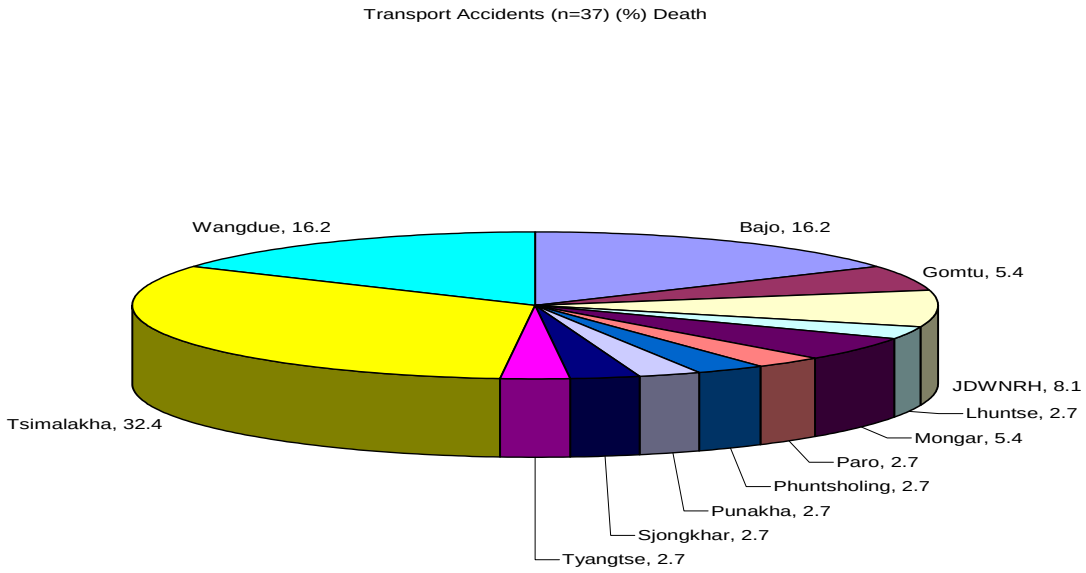
Hospital	Total (n=3255) (%)	Accidental falls (n=791) (%)	Inanimate mechanical forces (n=721) (%)	Transport Accidents (n=537) (%)	Assaults (n=308) (%)	Intentional self-harm (n=224) (%)	Animate mechanical forces (n=214) (%)
Bajo	1.6	1.9	0.0	4.1	1.9	0.0	0.9
Bali BHU	1.9	1.8	0.3	0.6	3.2	0.4	0.9
Bumthang	2.0	3.5	0.1	2.0	4.9	0.4	2.3
CRR Gelephu	8.7	15.9	5.0	7.8	6.5	3.6	7.5
Dagana	1.3	0.1	4.9	0.0	0.6	0.0	1.4
Damphu	6.7	5.6	11.5	6.1	7.5	0.9	10.7
Deothang	1.5	1.6	0.7	4.3	0.6	0.0	0.5
Gasa	1.2	0.1	0.0	3.2	0.0	0.0	0.9
Gedu	2.1	3.0	0.1	4.3	1.6	0.0	0.0
Gidakom	1.5	1.4	2.5	1.9	0.3	0.4	0.9
Gomtu	3.5	2.8	5.3	4.7	3.9	0.0	3.7
JDWNRH	5.5	5.7	2.2	12.7	4.9	8.9	1.4
Lhamoizingkha	0.4	0.5	0.3	0.6	1.0	0.0	0.0
Lhuntse	1.2	1.5	0.6	1.3	2.9	0.0	1.4
Lungtenphu	3.0	2.4	0.0	0.2	0.0	0.0	0.0
Mongar	5.2	6.3	9.2	3.2	3.6	1.8	7.5
Paro	4.9	4.8	5.0	4.8	3.9	0.0	16.4
Pemagatshel	5.2	4.8	9.8	3.2	2.9	0.0	6.1
Phuntsholing	2.8	2.3	3.2	3.9	3.9	0.9	4.7
Punakha	9.3	2.5	16.8	3.5	22.7	0.4	12.6
Riserboo	1.9	2.8	3.3	1.5	1.0	0.4	0.9
Samtse	3.3	6.3	0.3	1.3	1.0	0.4	0.0
Sarpang	2.0	3.2	1.2	1.1	2.3	0.0	3.3
Sipsoo	1.1	2.1	0.0	0.6	0.0	0.0	0.0
Sjongkhar	0.9	1.5	0.8	1.1	0.3	0.0	0.5
Tgang	3.5	4.8	4.4	5.0	2.3	0.4	2.3
Trongsa	11.3	6.6	4.4	4.7	9.7	80.4	3.3
Tyangtse	2.2	1.1	3.9	2.0	3.9	0.0	2.8
Tsimalakha	3.8	2.7	4.2	8.4	2.6	0.4	7.0
Wangdue	0.5	0.3	0.0	2.0	0.0	0.0	0.0

Fig. 3. Death due to injuries at different hospitals.



Tshimalkha hospital reported the highest percent of death with 21.1 % followed by Wangdue hospital as shown in the above figure. Hospitals where there are no death have been excluded. The report for Wangdue is only for 1 month.

Fig. 4. Death due to transport accident reported in different hospitals.



Malaria Report

April to June 2008

Variables	0 - 4 yrs		5 - 14 yrs		15 - 49 yrs		>50 yrs		Total		G. Total
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	
PF	0	1	6	0	16	2	5	1	27	4	31
PV	1	3	8	6	39	11	6	2	54	22	76
Mixed	0	0	3	4	9	3	1	1	13	8	21
Malaria death	0	0	0	0	0	0	0	0	0	0	0

PF: Plasmodium Falciparum

PV: Plasmodium Vivax

TB report Dzongkhag wise

Gender	Pulmonary Positive				Pulmonary Negative	Extra Pulmonary	Total	Case finding indicators A/(A+E+F)*100
	New	Relapse	Failure	Default	New			
	(A)	(B)	(C)	(D)	(E)	(F)		
Male	58	10	3	0	24	56	151	42.02
Female	46	5	3	1	17	60	132	37.39
Total	104	14	6	1	41	116	282	39.84

Table 6. Visit of pregnant woman for Ante-natal Clinic (ANC) check up.

Sl. no	District	1st Visit		2nd Visit		3rd Visit		More Visit	
		1st	2nd	1st	2nd	1st	2nd	1st	2nd
1	Bumthang	246	75	58	74	69	59	79	72
2	Chukha	393	454	316	386	286	305	540	1413
3	Dagana	111	121	75	94	54	97	64	53
4	Gasa	5	19	6	12	5	9	8	4
5	Lhuentse	72	88	68	98	56	58	54	75
6	Mongar	208	247	195	169	187	154	264	261
7	Paro	188	222	137	178	110	161	126	148
8	Pemagatshel	66	106	62	101	77	76	84	85
9	SamdrupJongkhar	148	178	119	154	88	119	133	162
10	Samtse	236	380	236	289	238	282	390	315
11	Sarpang	223	267	182	240	145	156	203	189
12	Thimphu	451	688	491	608	486	510	983	858
13	Trashigang	194	213	171	194	832	172	186	201
14	TrashiYangtse	81	90	75	66	47	66	70	46
15	Trongsa	54	72	45	65	37	43	18	34
16	Tsirang	75	92	94	76	71	64	65	65
17	Zhemgang	86	85	87	91	63	69	69	72
	Total	**2837**	**3397**	**2417**	**2895**	**2851**	**2400**	**3336**	**4053**

Table 7. Hospital admission & average length of stay

Sl. no	Hospital	Admission/Quarter					
		1st quarter			2nd quarter		
		Patient days	Total admission	Average length of stay	Patient days	Total admission	Average length of stay
1	BUMTHANG HOSPITAL	0	0	0	0	0	0.0
2	DAGANA BHU I	27	27	1.0	60	34	1.8
3	DAMPHU HOSPITAL	1105	234	4.7	491	162	3.0
4	DEOTHANG HOSPITAL	1591	219	7.3	1905	251	7.6
5	GAYLEGPHUG HOSPITAL	2927	644	4.5	3104	715	4.3
6	GEDU HOSPITAL	1543	360	4.3	1538	479	3.2
7	GIDAKOM HOSPITAL	801	86	9.3	2406	130	18.5
8	GOMTU HOSPITAL	134	45	3.0	599	140	4.3
9	JDWNR HOSPITAL	5253	1568	3.4	17148	2734	6.3
10	LHUNTSE HOSPITAL	516	114	4.5	1348	265	5.1
11	LUNGTENPHU RBA HOSPITAL	212	59	3.6	0	0	0.0
12	MONGAR HOSPITAL	3484	439	7.9	3577	547	6.5
13	PARO HOSPITAL	2316	1627	1.4	1945	606	3.2
14	PEMAGATSHEL HOSPITAL	455	104	4.4	945	565	1.7
15	PHUNTSHOLING HOSPITAL	69	584	0.1	1328	723	1.8
16	RISERBOO HOSPITAL	706	125	5.6	779	177	4.4
17	SAMDRUB JONGKHAR HOSPITAL	1154	245	4.7	600	103	5.8
18	SAMTSE HOSPITAL	2535	438	5.8	2866	501	5.7
19	SARPANG HOSPITAL	448	328	1.4	661	160	4.1
20	SIBSOO HOSPITAL	517	168	3.1	745	246	3.0
21	TRASHIGANG HOSPITAL	1793	453	4.0	2745	415	6.6
22	TRONGSA HOSPITAL	0	67	0.0	80	98	0.8
23	TSIMALAKHA HOSPITAL	742	191	3.9	520	212	2.5
24	YANGTSE HOSPITAL	1063	171	6.2	1371	225	6.1
25	YEBILAPTSA HOSPITAL	1255	177	7.1	1015	262	3.9

Table 8. Skilled birth attendance

Sl. no	Dzongkhag	Trained delivery &BCG,OPV0 vaccinated					
		1st quarter			2nd quarter		
		Attended delivery	BCG	OPV-0	Attended delivery	BCG	OPV-0
1	Bumthang	42	76	60	42	62	57
2	Chukha	175	293	240	252	306	259
3	Dagana	31	86	63	30	91	68
4	Gasa	5	9	7	14	17	12
5	Lhuentse	37	79	64	43	73	61
6	Mongar	183	236	213	173	254	225
7	Paro	119	158	147	137	182	153
8	Pemagatshel	30	72	48	39	104	92
9	SamdrupJongkhar	82	187	117	69	178	151
10	Samtse	153	298	217	68	232	179
11	Sarpang	152	240	199	144	187	169
12	Thimphu	755	816	797	471	742	797
13	Trashigang	163	220	149	159	216	936
14	TrashiYangtse	29	80	62	26	95	64
15	Trongsa	4	45	35	24	49	31
16	Tsirang	29	80	66	12	54	55
17	Zhemgang	41	81	68	35	71	46

Table 9. Referred cases January to June 2008

Sl.no	District	Referred			
		In		Out	
		1st	2nd	1st	2nd
1	Bumthang	23	40	22	26
2	Chukha	16		105	98
3	Dagana	2	0	28	14
4	Gasa	0	0	2	14
5	Lhuentse	9	18	30	41
6	Mongar	226	268	125	212
7	Paro	64	12	116	73
8	Pemagatshel	8	0	15	60
9	SamdrupJongkhar	82	79	75	62
10	Samtse	75	145	113	141
11	Sarpang	16	3	58	88
12	Thimphu	499	614	46	56
13	Trashigang	93	115	107	144
14	TrashiYangtse	12	12	29	44
15	Trongsa	2	16	25	32
16	Tsirang	19	22	48	18
17	Zhemgang	2	24	50	96
		1148	**1368**	**994**	**1219**

>> page 1. Contd.

of men buying sex are high but the numbers of sex workers are low, the risk of HIV transmission is greater. Furthermore, using the Asian Epidemic Model to predict the course of HIV epidemics (Brown and Peerapatanapokin, 2004), it has been shown that if 5% of males of the general population in any country buy sex from sex workers in one year, the HIV epidemic remains at low levels. However, if 10% visit sex workers the epidemic is accelerated and can reach high levels in a few years (Commission on AIDS in Asia, 2008, Govt. of Bangladesh, 2003). The data from the present general population survey show that large numbers of men are not only having casual sex but are also buying sex from sex workers and there are other data suggesting that the numbers of sex workers in Bhutan are few and very hidden (Rabten Associates, 2004). If, as suggested by the AIDS Commission Report, the client sex worker ratio is indeed a key determinant in the spread of HIV, Bhutan is very vulnerable to an HIV epidemic.

Both males and females who had extra or pre marital sex in the last 6 months, reported multiple partners, and the numbers were higher for males than females especially in urban areas. A global sex survey conducted in 41 countries revealed that among the countries surveyed, Indians reported the least average number of sex partners in their lives which was three (Durex, 2005). However, in the global survey the question was for lifetime sex partners whereas in our present survey the time frame was the last six months and the question was asked only to those who admitted having extramarital or premarital sex. Therefore, direct comparisons are difficult but given that these high numbers only reflect the numbers in the last six months, the numbers of lifetime partners are likely to be much higher. In fact, the earlier survey of out-of-school youth did show high partner numbers for male youth (UNICEF/Bhutan, 2006).

In general, knowledge about the uses of condoms was high but more so in men than women. Multiple sources were identified from where they had learnt about condoms - friends, peers, radio, TV, awareness programs, family members, health workers and even school teachers and the school curriculum. Interestingly, awareness programs were mentioned by approximately one third of all respondents but in urban areas this was stated more frequently by men than women. Since awareness programs have reached one third of Bhutan's population, it is worthwhile attempting to strengthen these programs so that all can benefit from them equally. The impact of mass media campaigns on behaviour change has been debated and a review of 24 mass media effectiveness studies published between 1990-2004 from developing countries (Bertrand et al., 2006) revealed that the experience was mixed – some studies showed an impact whereas others did not. However, overall significant differences in knowledge level and reduction in high risk sexual behaviours was observed. Therefore it can be worthwhile conducting awareness campaigns that are designed appropriately.

This survey found that condoms were frequently used in extra and premarital sex. The reasons provided for using condoms were multiple – contraception, prevention of HIV and/or STIs. The most common reason for not using condoms was disliking condoms. This is a common reason provided by men globally (Khan et al., 2004). More in-depth and qualitative studies are required to understand how this barrier can be overcome and approaches used by other countries can then be tailored to meet the needs of urban and rural Bhutanese.

Knowledge about HIV/STI transmission and prevention

In general, knowledge on HIV transmission and prevention was better than that for STIs; a substantial proportion did not know mode of STI transmission. The proportions who said they did not know modes of transmission and prevention were higher in rural areas and in females. This is indeed is a missed opportunity because STIs and HIV are closely related in their mode of transmission and certain STIs can facilitate HIV transmission. The ongoing programs on HIV awareness such as campaigns, leaflets and mass media programmes, are obviously not including messages on STIs. This gap needs to be bridged.

Regarding the barriers to seeking STI services, distance to service providers or their working hours were not issues for close to 90% of the respondents. The main barriers were concerns regarding maintenance of confidentiality and that services were not user friendly. Similar concerns were expressed by out-of-school youth in the survey conducted earlier (UNICEF/Bhutan, 2006).

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The Policy and Planning Division would like to solicit reviews and feedbacks for the betterment of the publication. Suggestions, views and constructive criticism are always welcome. Any queries may be forwarded to address given below.

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