# QMAR

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# Quarterly Morbidity and Activity Report

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## Current Issue

Welcome to the first issue of QMAR covering the period from January to March 2008. This report is an attempt at presenting a general overview of the health system in the country and is meant to improve and enhance provision of health services.

IN THIS ISSUE



## INTRODUCTION

*"Global health is a study in contrast. While a baby girl born in Japan can expect to live for about 85 years, a girl born at the same moment in Sierra Leone has a life expectancy of 36 years. The Japanese girl will receive vaccinations, adequate nutrition and good schooling. If she becomes a mother she will benefit from high quality maternity care. Growing older, she may eventually develop chronic diseases, but excellent treatment and rehabilitation services will be available; she can expect to receive, on average medications worth about US$ 550 per year and much more if needed.*

*Meanwhile, the girl in Sierra Leone has little chance of receiving immunization and a high probability of being underweight throughout childhood. She will probably marry in adolescent and go on to give birth to six or more children without the assistance of a trained birth attendant. One of her baby will die in infancy, and she herself will be at high risk of death in childbirth. If she falls ill, she can expect, on average, medicines worth about US$ 3 per year. If she survives middle age she, too, will develop chronic diseases but, without access to adequate treatment, she will die prematurely. "(World Health Report 2003)*

The above situation reveals the stark global disparities and this would be true for many countries. However, for Bhutan, inequities within districts are not noticeable at least from the available administrative data. And this may be true as Bhutan developed and evolved health system based on the principles of primary health care (World Health Report 2003).

Bhutan enters 21st century and particularly 2008 with hope but also with uncertainty. Bhutan already witnessed the first successful parliamentary democratic election. Bhutan will witness the adoption of the first written constitution and the crowning of the Fifth Druk Gyalpo. All these changes initiated with the wisdom and farsightedness of the Fourth Druk Gyalpo instills hope and confidence.

Remarkable progress in health has been achieved – all legacies of our benevolent monarchs. Infant Mortality Rate has decreased from 103 in 1984 to 40 per 1000 live births in 2005. Similarly under-five mortality rate has decreased from 162 per 1000 live births in 1984 to 61 in 2005. Goiter amongst the younger generation are not see , small pox is eradicated, and poliomyelitis has not been reported for the last couple of years.

On the darker side, non-communicable diseases are already invading the more populous urban section of the society. What is worrying is that, it not only increases the cost of health care expenditure but seriously affects the quality of life an individual can lead. For the government to provide free health care would be a daunting task as Bhutan is facing the double burden of disease. In other words Bhutan is still grappling with the burden of infectious diseases and yet at the same time non-infectious diseases have started to invade our society at an alarming rate.

# Editorial



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*QMAR is published quarterly by the Health Information and Research Unit, Policy and Planning Division, Ministry of Health.* 

***NOTE***

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

Traditionally, the Ministry of Health has been publishing Annual Health Bulletin containing data of the peripheral health centers. The data are sent from the health centers to the District Health Office monthly and the Dzongkhags in turn sends the compiled data to Health Information & Research Unit of Planning & Policy Division Quarterly. Since Annual Health Bulletin is an annual publication, there is delay in information dissemination although the Ministry is collecting information quarterly. Ministry of Health strongly believes in the motto ***"Information delayed is Information Denied".*** Believing in the motto, Health Ministry is bringing out a quarterly publication titled "Quarterly Morbidity & Activity Report (QMAR)". The report would basically contain the types of diseases treated and number of different services provided during the quarter.

Charles Darwin has centuries ago concluded that species that are able to adapt to changes are the ones that have survived through ages. Bhutan undoubtedly is one country that has been able to adapt to global changes and therefore is rapidly advancing. Ministry of Health being one of the change agents needs to change with the changing times in the Kingdom. Publishing Annual Health Bulletin annually itself is a daunting task in light of the limited human resource. However with the merger of research and information unit and to bring about some positive changes to live with the changing times, PPD is happy to bring out quarterly publication.

QMAR is primarily intended for our health managers and health workers to further improve the management and health service delivery at all levels. QMAR should be useful for patient/client management, for health unit management, as well as for health system planning and management. This means not only policy makers and managers can make use of QMAR in decision making but also care providers including doctors, health technicians and community health workers.

Our collaborating partners can also use to see if the funds that are being committed are effectively used. Our planners and decision makers can use QMAR to evaluate, reassess, and prioritize so that more is achieved with less.

Subsequent QMAR publication intends to provide comprehensive information covering human resource and financial information. It is hoped that this inaugural publication despite its various shortcomings will achieve its main purpose to stimulate and enhance data usage thereby enhancing the efficiency and effectiveness in the delivery of health care services within the available resources.

QMAR will try to promote evidence based planning and decision making at every level. QMAR will not be here for the sake of publication. QMAR will be here henceforth to affect positive changes. And that is what QMAR will do every quarter, all the time.

Wish you Happy Reading and Tashi Delek.

Editorial Team

# 1. Timeliness of the Report

The following descriptive analysis includes only 13 Dzongkhags and the Indoor Patient data of JDWNRH. As per the policy directives of Health Ministry, all Dzongkhags should have sent the first quarter data by 15th May 2008. However the following Dzongkhags has not sent the data as of 25th June 2008.

1. Bumthang
2. Lhuentse
3. Pemagatshel
4. Samdrup Jongkhar
5. Dagana
6. Haa
7. Thimphu

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.

# The Health of Bhutanese Citizen

# 2 Costs of Health service delivery

In this quarter, Nu.394 million was budgeted as recurrent cost and Nu.131.75 million budgeted as capital cost. However the expenditure on the planned budget could not be retrieved from the system and therefore not able to determine the implementation status.
202967 new cases and 63965 old cases were seen by our doctors and health workers around the Kingdom. Over 55% of the total new cases and around 66% of the old cases were seen in the hospitals. 8797 patients or 5.6% of the total cases seen by hospitals were admitted in the hospitals around the country and 235 of those admitted absconded. The admitted patient spent 30388 days in the hospital. In other words each admitted patient on average were kept 3.5 days in the hospital. In the BHUS, 520 patients were admitted of which 209 were for delivery.

Over Nu. 29 million is costed as consultation fee for hospital cases and over Ngultrum 11 million for cases seen at BHUs. The cost of the indoor patient charged at Ngultrum 400 per night per patient would amount to Ngultrum 12 million. Around Nu.5.7 million are costed for 3804 major, minor and laparoscopic surgeries assuming Nu.1500 per surgery. Similarly lab diagnostic, X-ray and ultrasound amounts to Nu.12.4 million, 0.78 million and 1.8 million respectively. The charges for lab diagnostic, X-Ray and Ultrasound for all types are assumed at Nu.45, Nu.80 and Nu.200 respectively. The unit cost for all the above are taken from "Draft Health Care Costing" done by PPD, Ministry of Health.

# 3. Morbidity

The top ten morbidity alone accounts for over 65 % of the total cases. The top ten health problems for the quarter is as given in the below table.

***Table.1 Top Ten Health Problems***

| Rank | Health Problems | Under 5 Years | | Above 5 Years | | Total |
|---|---|---|---|---|---|---|
| | | Male | Female | Male | Female | |
| 1 | Common Cold | 5045 | 4839 | 15666 | 19377 | 44927 |
| 2 | Skin Infections | 1747 | 1636 | 6642 | 5869 | 15894 |
| 3 | Peptic Ulcer Syndrome | 33 | 38 | 4607 | 6144 | 10822 |
| 4 | Musculo-Skeletal disorders | 62 | 62 | 5026 | 5416 | 10566 |
| 5 | Acute Pharyngitis/Tonsilitis | 671 | 720 | 3864 | 5230 | 10485 |
| 6 | Other disorders of skin & subcutaneous-tissues | 818 | 894 | 3898 | 3916 | 9526 |
| 7 | Diarrhoea | 1981 | 1846 | 2534 | 2388 | 8749 |
| 8 | Other Respiratory & Nose Diseases | 1118 | 873 | 2970 | 3737 | 8698 |
| 9 | Other Diseases of Digestive System | 468 | 440 | 2983 | 3720 | 7611 |
| 10 | Conjunctivitis | 555 | 553 | 2486 | 2973 | 6567 |

The indoor morbidity starkly varies from the overall morbidity as shown in Table 2. While common cold, skin infection etc are the general health problems encountered at the outpatient department, complications of pregnancy, injuries & poisoning are the top indoor morbidity. The top ten indoor morbidity alone contributes to around 50% of the total admission.

| Table. 2 Top Ten Indoor Morbidity | | Under 5 Years | | Above 5 Years | | |
|---|---|---|---|---|---|---|
| Rank | Health Problems | Male | Female | Male | Female | Total |
| 1 | Complications of pregnancy | 0 | 0 | 0 | 978 | 978 |
| 2 | Injuries & Poisoning | 19 | 20 | 312 | 137 | 488 |
| 3 | Other Kidney, UT/ Genital Disorders | 16 | 16 | 131 | 301 | 464 |
| 4 | Other Respiratory & Nose Diseases | 63 | 45 | 171 | 172 | 451 |
| 5 | Pneumonia | 172 | 144 | 62 | 47 | 425 |
| 6 | Other Diseases of the Digestive System | 36 | 23 | 206 | 158 | 423 |
| 7 | Hypertension | 0 | 0 | 154 | 112 | 266 |
| 8 | Diarrhoea | 92 | 75 | 39 | 46 | 252 |
| 9 | Other Disorders of Skin & Subcutaneous-tissues | 26 | 19 | 104 | 54 | 203 |
| 10 | Other Musculo-skeletal disorders | 4 | 6 | 100 | 61 | 171 |
| 11 | Alcohol Liver Diseases | 0 | 0 | 101 | 67 | 168 |

Studies have confirmed that children under 5 years of age are most likely to suffer from diseases as well as has higher chances of dying than children over 5 years of age. In this quarter, 33391 children have visited health centre for treatment and over 84% of these children suffered from the top twelve health problems as given in Table 3. Pneumonia and diarrhea in children are usually an area of concern because it is preventable through public health effort.

*Table. 3 Top Ten Health Problem for Children under 5 years of age.*

| | | Under 5 Years | | |
|---|---|---|---|---|
| Rank | Health Problems | Male | Female | Total |
| 1 | Common Cold | 5045 | 4839 | 9884 |
| 2 | Diarrhoea | 1981 | 1846 | 3827 |
| 3 | Skin Infections | 1747 | 1636 | 3383 |
| 4 | Other Respiratory & Nose Diseases | 1118 | 873 | 1991 |
| 5 | Other Disorders of Skin & Subcutaneous-tissues | 818 | 894 | 1712 |
| 6 | Acute Pharyngitis/Tonsilitis | 671 | 720 | 1391 |
| 7 | Pneumonia | 749 | 641 | 1390 |
| 8 | Dysentery | 601 | 603 | 1204 |
| 9 | Conjunctivitis | 555 | 553 | 1108 |
| 10 | Other Diseases of the Digestive System | 468 | 440 | 908 |
| 11 | Otitis Media | 358 | 350 | 708 |
| 12 | Intestinal Worms | 330 | 318 | 648 |

# 4. Non-Communicable Diseases

Non-communicable disease is on the rise although it is not on the top ten list of the morbidity. However in the death occurrence in the hospital, it is the non-communicable disease that tops the list for mortality.

Table 4. Non-Communicable Diseases

| ***Sl. #*** | ***Non-communicable disease*** | ***OPD*** | ***IPD*** | ***Percent Admitted*** |
|---|---|---|---|---|
| 1 | Cancer | 217 | 206 | 95% |
| 2 | Diabetes | 379 | 66 | 17% |
| 3 | Hypertension | 3774 | 266 | 7% |
| 4 | Alcohol Liver Diseases | 264 | 168 | 64% |
| 5 | Injuries & Poisoning | 4544 | 488 | 11% |
| 6 | Transport Accidents | 278 | 127 | 46% |

As seen in Table 4, almost all the cancer patients had to be admitted followed by those afflicted with alcohol liver diseases. Similarly most of the transport accidents accident cases brought to hospital had to be admitted. Non-communicable diseases usually needs longer days of hospitalization which not only increases the health care expenditure but also is a loss to economy of the country as he/she will not be able to work. Nevertheless, non-communicable diseases are preventable.

# 5. Health of Pregnant Women and Mothers

The health of women and children received spotlight in Europe at the end of 19th century with the hindsight that healthy mothers and children were thought of as an economic and military resource by the government at that time (World Health Report 20065). Josephine Baker, then chief of Child Hygiene of New York summed it up as follows;

*"It may seem like a cold-blooded thing to say, but someone ought to point out that the World War was a back-handed break for children……. As more and more thousands of men were slaughtered every day, the belligerent nations, on whatever side, began to see that new human lives, which could grow up to replace brutally extinguished adult lives, were extremely valuable national assets. The children took the spotlight as the hope of the nation. That is the handsomest way to put it. The ugliest way-and, I suspect, the truer-is to say flatly that it was the military usefulness human life that wrought the change. When a nation is fighting a war or preparing for another … it must look to its future supplies of cannon fodder" (Quoted in World Health Report 2005).*

*Whatever the reasons it may be for starting, over the years it gained a legitimacy of its own. Today globally mother and child health is given top priority advocated through WHO. All countries believe that healthy future of society depends on health of children and mothers. Despite receiving the due attention, 10.6 million children and 529,000 mothers are still dying each year mostly from avoidable causes ( World Health Report 2005)*

In Bhutan there is a policy that all maternal deaths are investigated and annually it is reviewed by the expert group. Over the last couple of years annual maternal deaths has varied from 20 – 30. The cause of most of maternal deaths are post partum haemorrhage. Even in this quarter there were two maternal deaths due to post partum haemorrhage who died in the hospital. However there is no reporting system on post natal clinic and what level of care is given after the delivery is not assessed.

On the other hand Ante-natal Clinic (ANC) is given its due importance. And it is a success story; demand has increased and continues to increase in all the Dzongkhags.

During the quarter, 1960 new pregnant women have visited health center for ANC check up. 1737 and 1452 pregnant women have come for the second and third ANC check up consecutively. 1499 women have completed four or more visits during this quarter. On average each pregnant women who came in contact with the health centre have visited 3.4 times for the ANC check up.

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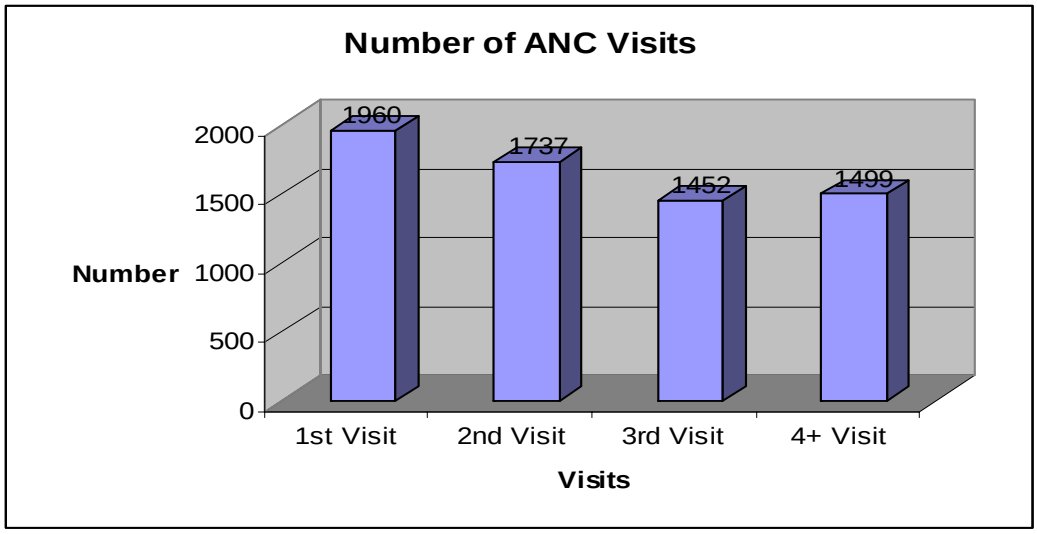


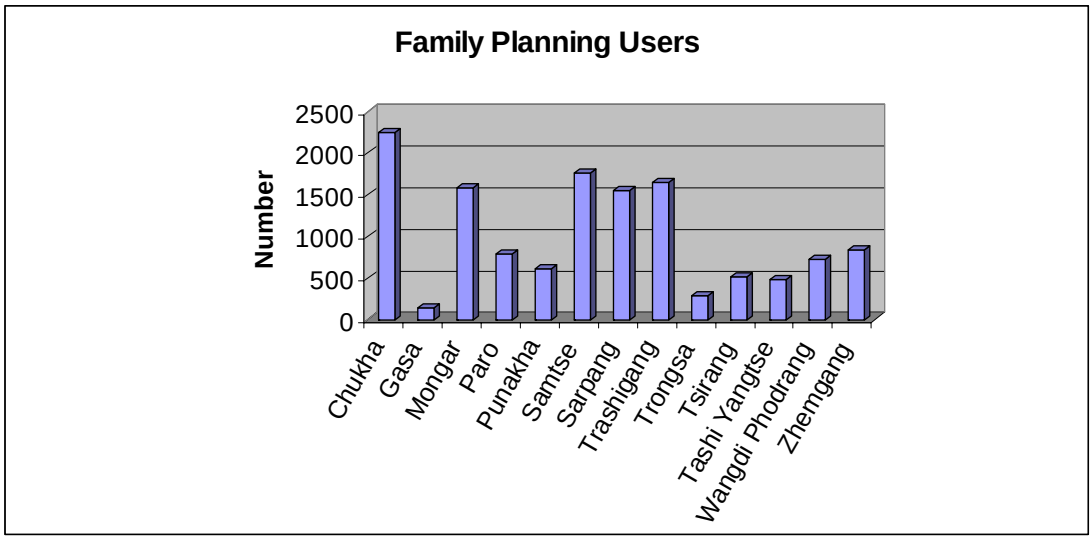

## 5.1 Deliveries

There were a total of 1197 deliveries. This excludes the home deliveries. 1036 babies were delivered in the hospitals and 161 were delivered at home but assisted by trained health personnel. Based on the Annual Health Bulletin 2008, (where 54% of the delivery is institutional and 46% is home delivery) for this quarter the home delivery would be over 1000.

## 5.2 Family Planning

Family planning is important for spacing the birth so that the children and mother are both physically and socially healthy. Family planning is not introduced to control the population as is generally perceived.

There are four temporary family planning method services available including the condom. There were 123 new IUD users, 2042 oral pills user and 10986 DMPA Users. 282,797 pieces of condoms were distributed during the same period.




The above graph has not included condom as it is very difficult to determine the condom usage.

# 6. Nutritional Status of Children attending clinics

Table 5: Comparative nutritional status of children by Dzongkhags.

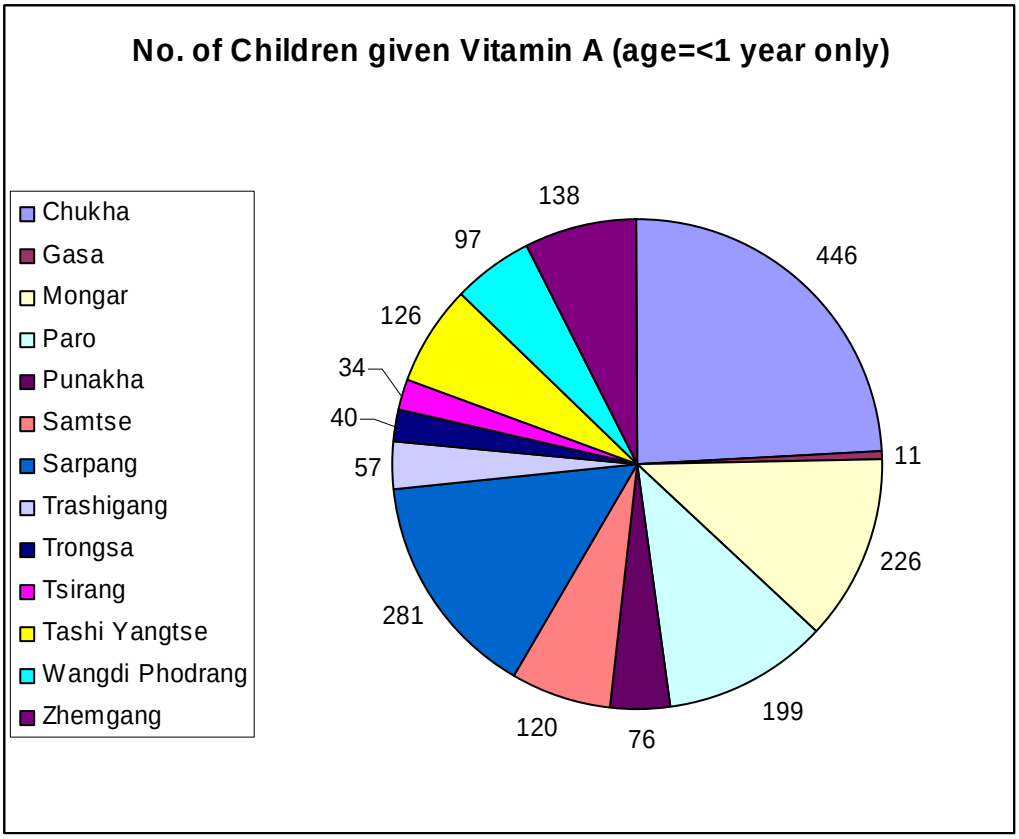
| Dzongkhag | Nutritional status | 2006 | 2007 | 2008 |
|---|---|---|---|---|
| **Chukha** | Over weight | 21.8% | 26.7% | 19.5% |
| | Normal weight | 70.7% | 66.8% | 71.9% |
| | Malnutrition grade I | 5.9% | 6.0% | 7.5% |
| | Malnutrition grade II | 1.2% | 0.5% | 0.9% |
| | Malnutrition grade III | 0.4% | 0.03% | 0.2% |
| **Gasa** | Over weight | 4.9% | 12.0% | 3.0% |
| | Normal weight | 86.7% | 83.6% | 92.4% |
| | Malnutrition grade I | 7.9% | 4.0% | 4.5% |
| | Malnutrition grade II | 0.5% | 0.4% | 0.0% |
| | Malnutrition grade III | 0.0% | 0.0% | 0.0% |
| **Mongar** | Over weight | 24.4% | 24.8% | 22.0% |
| | Normal weight | 71.3% | 67.6% | 71.3% |
| | Malnutrition grade I | 2.7% | 6.1% | 5.3% |
| | Malnutrition grade II | 1.3% | 1.2% | 1.4% |
| | Malnutrition grade III | 0.3% | 0.3% | 0.05% |
| **Paro** | Over weight | 19.1% | 31.8% | 37.0% |
| | Normal weight | 77.0% | 58.1% | 53.6% |
| | Malnutrition grade I | 3.5% | 9.3% | 9.3% |
| | Malnutrition grade II | 0.3% | 0.7% | 0.2% |
| | Malnutrition grade III | 0.05% | 0.06% | 0.0% |
| **Punakha** | Over weight | 5.5% | 16.0% | 14.4% |
| | Normal weight | 91.5% | 74.0% | 74.0% |
| | Malnutrition grade I | 2.6% | 9.5% | 10.9% |
| | Malnutrition grade II | 0.4% | 0.5% | 0.3% |
| | Malnutrition grade III | 0.0% | 0.0% | 0.3% |
| **Samtse** | Over weight | 20.0% | 18.2% | 13.7% |
| | Normal weight | 72.4% | 69.5% | 77.2% |
| | Malnutrition grade I | 6.1% | 10.7% | 8.3% |
| | Malnutrition grade II | 1.4% | 1.2% | 0.8% |
| | Malnutrition grade III | 0.1% | 0.4% | 0.03% |
| **Sarpang** | Over weight | 26.4% | 23.0% | 21.2% |
| | Normal weight | 69.2% | 67.9% | 70.5% |
| | Malnutrition grade I | 3.2% | 7.6% | 7.4% |
| | Malnutrition grade II | 1.0% | 1.4% | 0.9% |
| | Malnutrition grade III | 0.2% | 0.2% | 0.04% |
| **Trashigang** | Over weight | 9.6% | 19.1% | 22.3% |
| | Normal weight | 85.4% | 72.2% | 70.7% |
| | Malnutrition grade I | 3.3% | 6.9% | 5.5% |
| | Malnutrition grade II | 1.4% | 1.4% | 1.0% |
| | Malnutrition grade III | 0.3% | 0.3% | 0.4% |

| Dzongkhag | Nutritional status | 2006 | 2007 | 2008 |
|---|---|---|---|---|
| **Trongsa** | Over weight | 32.7% | 22.5%8 | 15.8% |
| | Normal weight | 64.5% | 68.9% | 75.3% |
| | Malnutrition grade I | 2.7% | 7.4% | 7.8% |
| | Malnutrition grade II | 0.1% | 0.1% | 1.1% |
| | Malnutrition grade III | 0.0% | 1.1% | 0.0% |
| **Tsirang** | Over weight | 11.6% | 14.1% | 19.6% |
| | Normal weight | 83.2% | 64.8% | 74.3% |
| | Malnutrition grade I | 3.3% | 20.4% | 5.3% |
| | Malnutrition grade II | 1.8% | 0.7% | 0.8% |
| | Malnutrition grade III | 0.08% | 0.1% | 0.08% |
| **Tashi Yangtse** | Over weight | 19.3% | 23.9% | 22.5% |
| | Normal weight | 74.8% | 66.4% | 68.6% |
| | Malnutrition grade I | 4.2% | 7.7% | 6.9% |
| | Malnutrition grade II | 1.4% | 1.6% | 1.4% |
| | Malnutrition grade III | 0.3% | 0.4% | 0.5% |
| **Wangdi Phodrang** | Over weight | 45.9% | 28.9% | 17.4% |
| | Normal weight | 48.5% | 61.9% | 72.4% |
| | Malnutrition grade I | 0.05% | 8.9% | 9.7% |
| | Malnutrition grade II | 0.7% | 0.3% | 0.4% |
| | Malnutrition grade III | 0.1% | 0.0% | 0.0% |
| **Zhemgang** | Over weight | 31.0% | 19.7% | 23.2% |
| | Normal weight | 63.8% | 73.9% | 69.0% |
| | Malnutrition grade I | 3.9% | 4.7% | 6.2% |
| | Malnutrition grade II | 0.9% | 1.6% | 1.3% |
| | Malnutrition grade III | 0.3% | 0.08% | 0.3% |

The highest percentage of children brought to health facilities was found to be under normal weight in all 13 dzongkhags. However, Paro and Trashigang dzongkhags seems to be experiencing problem with over weight, as the percentage of overweight children in 1st quarter of the year has noticeably increased for Paro from 19.1% of the year 2006 to 31.8% of the year 2007, which has further increased to 37% of the year the 2008 and for Trashigang it has increased from 9.6% of the year 2006 to 22.3% of the year 2008, on the other hand, for Trongsa dzongkhag the Percentage of children with overweight has decreased from 32.70% of the year 2006 to 15.80% of the year 2008.

Malnutrition grade I seems to be of diminutive problem in almost all the dzongkhags other than Gasa, where it has decreased from 7.9% in 1st quarter of the year 2006 to 4.5% in 1st quarter of the year 2008. Malnutrition grade I and II seems to be fairly under control for the 13 dzongkhags as shown in the table number 5.

The following pie chart shows the number of children below age 1 of different Dzongkhags provided with Vitamin A in 1st quarter of the year 2008.




# 7. Mortality (Hospital Deaths Only)

Mortality as an outcome indicator is very important for health intervention. But it is very difficult to determine the cause of death. Therefore for this analysis, only hospital death is taken into account. Table 6 shows the death with its cause.

Death because of non-communicable disease leads the table. Twenty four people have died due to alcohol liver disease and same number due to circulatory diseases. Pneumonia which is preventable has taken toll of 12 people. 19 babies have died before reaching age of one month.

# Table 6: Indoor Mortality by cause

| Sl. # | Cause of Death | No of Deaths |
|---|---|---|
| 1 | Alcohol Liver Diseases | 24 |
| 2 | Other Circulatory Diseases | 24 |
| 3 | Neonatal Death | 19 |
| 4 | Foetal Death & Stillbirth | 14 |
| 5 | Other Respiratory & Nose Diseases | 13 |
| 6 | Other Cancers | 13 |
| 7 | Pneumonia | 12 |
| 8 | Hypertension | 7 |
| 9 | Cerebro-vascular Diseases | 6 |
| 10 | Injuries & Poisoning | 6 |
| 11 | Other Diseases of the Digestive System | 6 |
| 12 | Other Kidney, UT/ Genital Disorders | 6 |
| 13 | Other Infections (excluding ear, brain, STI) | 5 |
| 14 | Gall Bladder Diseases | 4 |
| 15 | Tuberculosis | 4 |
| 16 | Other Nervous inlcuding Peripheral Disorders | 3 |
| 17 | Cervical Cancer | 3 |
| 18 | Meningitis/Encephalitis | 3 |
| 19 | Diabetes | 3 |
| 20 | Transport Accidents | 3 |
| 21 | Burns and Corrosions | 3 |
| 22 | Conditions Orginating in the Perinatal Period | 3 |
| 23 | Post Partum Haemorrhage | 2 |
| 24 | Other Musculo-skeletal disorders | 2 |
| 25 | Blood & Immune Disorders | 2 |
| 26 | Others | 9 |
| | Total | 199 |

# 8. Referrals

In Bhutan, one factor for the success of Primary Health care could be attributed the three tiered referral system. A patient in the community would visit the first level of contact with health care system that is a BHU or ORC. The patient would be referred to the next higher level that is the District Hospital if BHU is not in a capacity to manage. The patients lastly get referred to the Regional Referral Hospital or JDWNRH in the event District Hospitals are not able to handle it. However over the last decade, health system is increasingly facing the problem of patient bypassing the system of referral. This has led to the clogging of patients at the JDWNRH. The problem is further compounded when district hospital seems to be contended just by referring the patient to the next higher level. Proper investigation might be able to throw clear picture as to whether there was really a necessity to refer the patient. In Sri Lanka such an investigation has resulted in significant reduction of referrals from lower to higher level health facilities.

The following table shows the referral situation in the Kingdom.

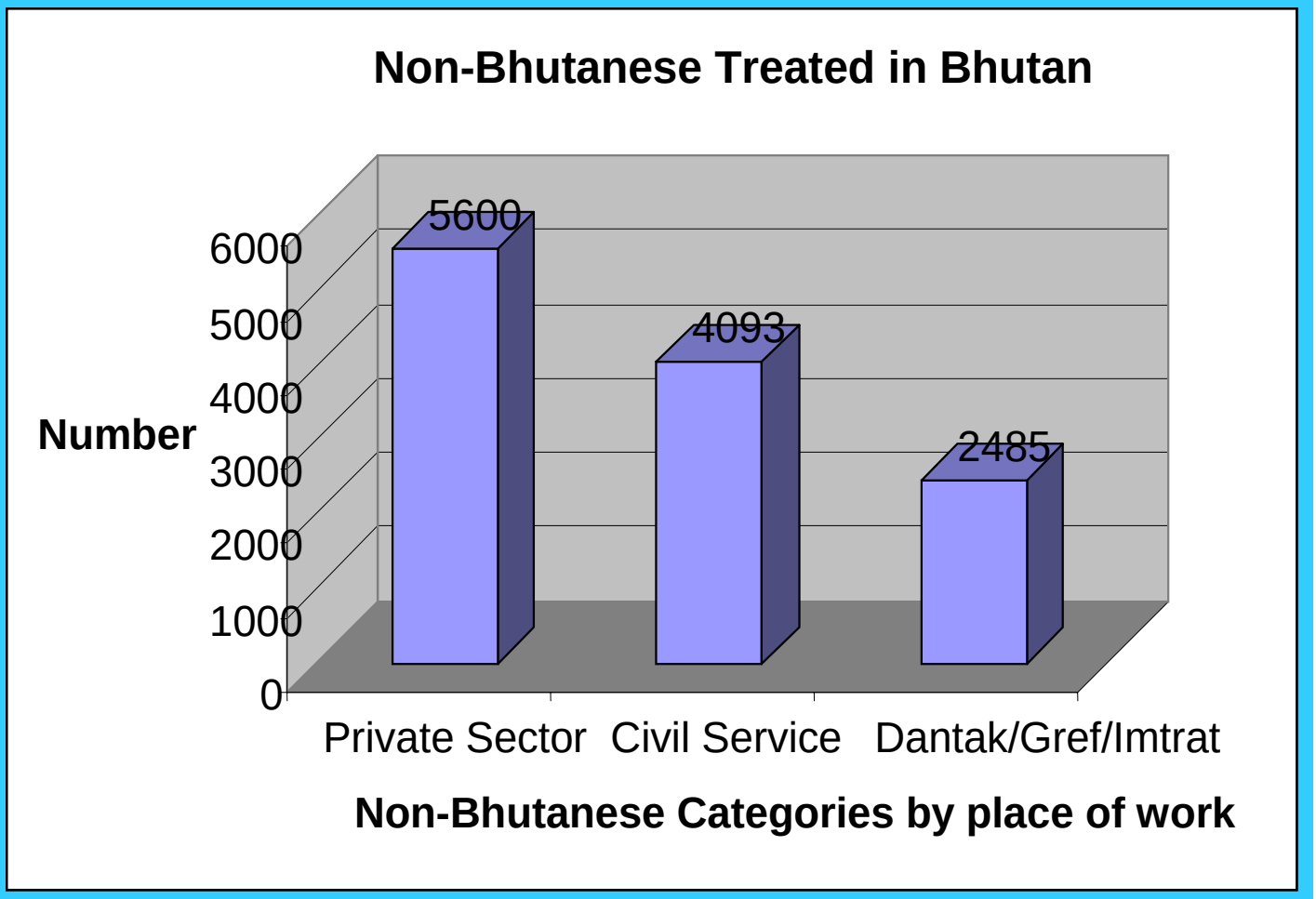
***Table 7. Referral Situation (Jan-March 2008)***

| Sl. # | Dzongkhag | Referred In | Referred Out | % Referred out |
|---|---|---|---|---|
| 1 | Chukha | 16 | 105 | 11% |
| 2 | Paro | 64 | 116 | 19% |
| 3 | Punakha | 22 | 43 | 12% |
| 4 | Gasa | 0 | 2 | 67% |
| 5 | Wangdi | 1 | 25 | 15% |
| 6 | Trongsa | 0 | 13 | 68% |
| 7 | Zhemgang | 2 | 50 | 32% |
| 8 | Mongar | 226 | 125 | 20% |
| 9 | Trashigang | 93 | 107 | 19% |
| 10 | TrashiYangtse | 12 | 29 | 21% |
| 11 | Samtse | 75 | 113 | 20% |
| 12 | Sarpang | 16 | 58 | 8% |
| 13 | Tsirang | 19 | 48 | 19% |

As seen in the table 7, Mongar has referred out the highest number of patients followed by Paro, Samtse and Tashigang in absolute number. Trongsa of the 19 patients admitted, thirteen were referred out. This makes Trongsa the highest with 68% out referral. Gasa had three patients admitted and two were referred out, therefore in terms of proportion it is the second highest with 67% out referral. Sarpang with 8% of the admitted patient referring out is the lowest for this quarter.
A total of 546 patient had been referred in and 834 referred out during the month from January to March 2008.

# Health Services availed by Non-Bhutanese

The statistics for Non-Bhutanese availing health services were collected from all the Hospitals and BHU 1 of all the 20 Dzongkhags for the period from Jan-March 2008. 12,178 Non-Bhutanese have availed health services from around the Kingdom's hospitals. This number does not include Non-Bhutanese who could have availed services from BHUs. This accounts to 12% of the total cases treated in the hospitals. Of the 12178 Non-Bhutanese who were treated, 34% are working in the civil service, 46% are working in the private sector and 20% are DANTAK/IMTRAT/GREF personnel.




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 the Health Information and Research Unit.

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