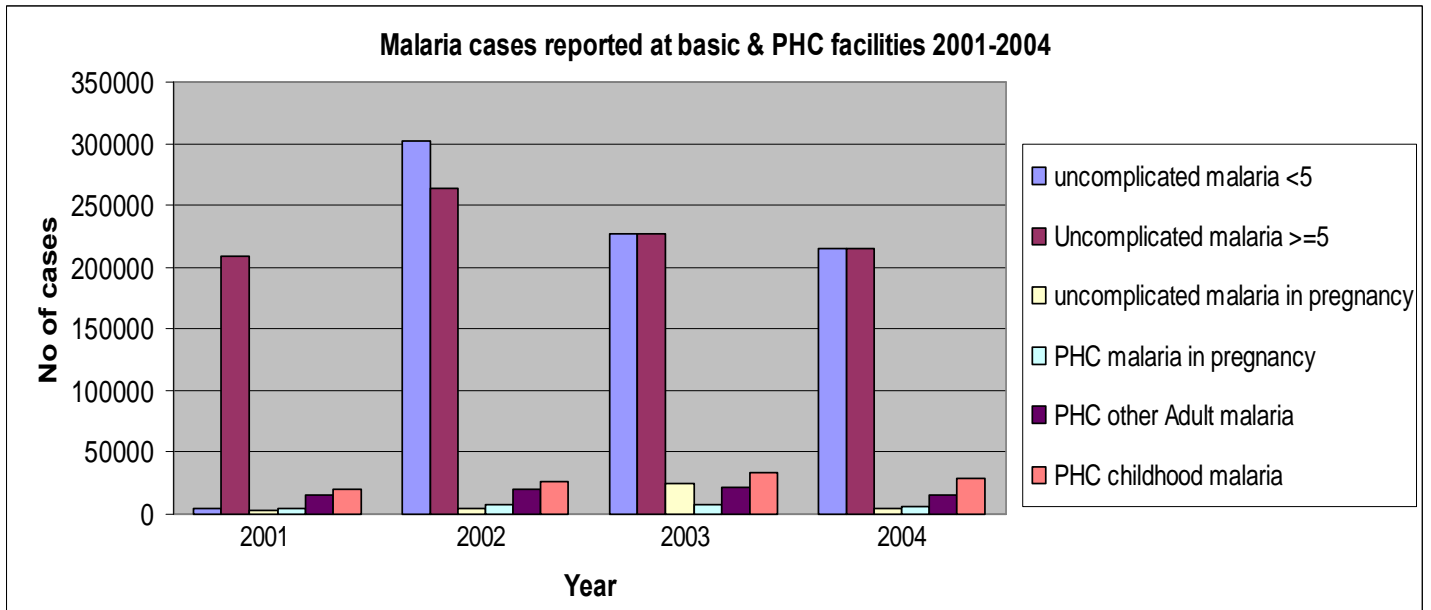




REPUBLIC OF THE GAMBIA

**DEPARTMENT OF STATE FOR HEALTH
HEALTH MANAGEMENT INFORMATION SYSTEM SERVICE STATISTICS REPORT
THE GAMBIA 2001 - 2004**



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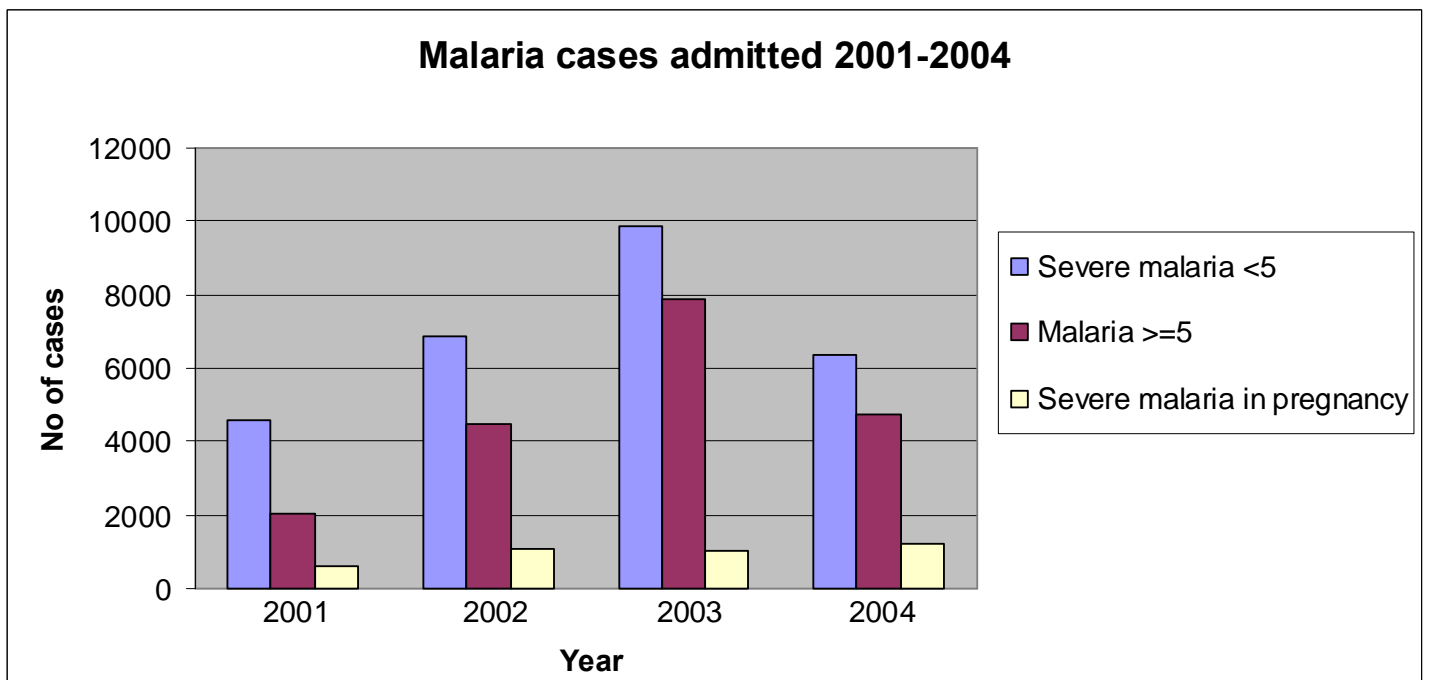


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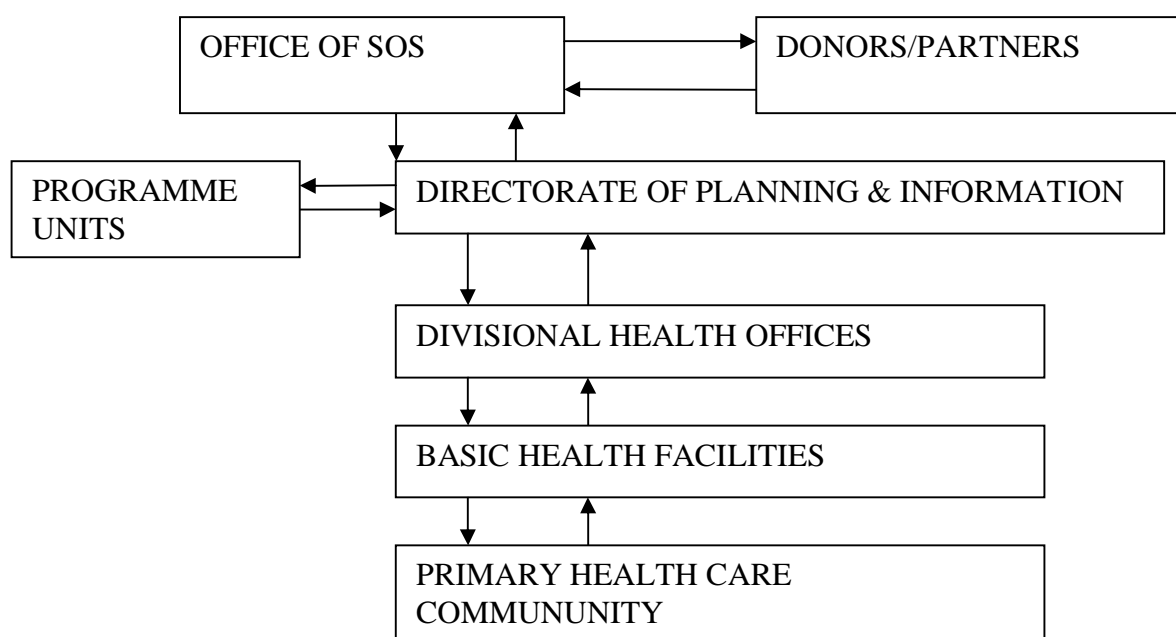
DEPARTMENT OF STATE FOR HEALTH
HEALTH MANAGEMENT INFORMATION SYSTEM SERVICE STATISTICS REPORT
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INTRODUCTION

The Health Management Information System (HMIS) Unit is under the Department of Health Planning and Information. This came as a result of the recommendation put forward by the University of Leeds Nuffield Institute for Health service study report on the Organizational structure for The Gambia Health Sector December 1989. It was previously under the Department of Health Services in the then Epidemiology and Statistics Unit (ESU), responsible for all statistical functions of the then Ministry of Health, Social Welfare and Women's Affairs. The HMIS Unit was created as a result of recommendations emanating from several consultancy reviews e.g. the Overseas Development Administration (ODA) in 1986-88, the Centre for Research on Population and Development (CERPOD) 1990-1992 and the World Health Organization (WHO) in 1995. The final review in early 2000, has established the final HMIS structures including an office space, Staff, Equipment and the policy. It was done by Dr. Margaret Grant and was funded by the World Bank/African Development Bank Participatory Health, Population and Nutrition Project. The creation of such a very important Unit was documented in the Health Policy 1995-2000 (Quality & Access) and the Health Policy 2000-2005 (Changing for GOOD). The Gambia Health Services delivery is a three tier system based on the Primary Health Care (PHC) strategy. Health service data is collected at all levels of the service delivery from the primary to tertiary country wide using carefully designed forms.

Below is a conceptual frame Work of the Health Information Flow within the Department of State for Health (DOSH) and Donors/Partners:

Department of State for Health & Social Welfare Conceptual Frame Work Health Management Information Flow Diagram



The following are forms used for collecting health service data in the Gambia;

1. **Monthly Health facility**
2. **Family planning**
3. **Public health**
4. **Inpatient**
5. **Primary health care**

As services are delivered data is generated and documented. Monthly facility summaries of the service statistics are collected by staff at basic Health facilities, Hospitals, Major/Minor Health Centers and Dispensaries country wide. Copies of all such data except for those from hospitals are sent to the Divisional Health Team Offices. All government hospitals have their records offices where data collected are kept. These facilities are semi autonomous, managed by a board. Similarly the family planning, the Public Health, Primary Health Care and the Inpatient returns are also sent there on monthly bases.

Terms of Reference

1. Collect, process the HMIS service statistics data 1998-2004
2. Analyze 1998-2004 HMIS service statistics data
3. Produce and submit HMIS service statistics 1998-2004 report

Main Objective

The main objective of this report is to produce a summary analysis Health Management Information system service statistics of the Department of State for Health (DOSH).

Specific Objectives

1. To produce service statistics report that can be used to assess the Overall performance of the Health Service Delivery system country wide.
2. To produce a report that can be used to assess the performance of the World Bank (WB) and African Development Bank (ADB) funded Participatory Health, Population and Nutrition Project.
3. To produce the HMIS service statistics sub-component report of the PHPNP.

Problem Statement

Lack of current and quality data to assess the performance of the PHPNP funded HMIS service statistics strategies and interventions implemented by the Department of State For Health.

Methodology

The HMIS has put in place an integrated data collection and management system at all levels of the Health service delivery throughout the country as dictated by the HMIS Policy. The method used for collecting the data used in this report was reviewing and updating 2001-2004 service statistics data by visiting all Divisional Health Team Offices and defaulting health facilities throughout the country. Missing data was collected from defaulting facilities and entered into the individual Divisional data sets which were up dated. The updated data

were reviewed and checked for entry errors and eventually corrected. The initial plan was to include all service statistics data as far back as 1998 but practically this was found to be impossible due to the following:

1. There were differences noticed between the data collection instruments used in 1998-2000 and 2001-2004 as a result of the HMIS review in 2000.
2. The data entry software for the 1998-2000 is not compatible to the present software
3. The 1998-2000 dataset were not found in server at the central level and those found at the Divisions are very scanty to produce any meaningful analysis.

The teams therefore decided to use the 2001-2004 dataset for the report.

Limitations/constraints

During the field exercise the teams encountered several problems and the following are major:

1. Lack of electricity in most of the DHT offices visited e.g. at Bansang the team made some arrangements with the Gamtel office where the Divisional data entry computer was physically moved to Gamtel to facilitate the update and review process of the CRD dataset.
2. Three Divisional Health Teams have no data entry clerks for almost two years now e.g. North Bank Division East (Farafenni), Lower River Division (Mansakonko) and Upper River Division (Basse) and data were not entered regularly and consistently.
3. Difficulty in recovering missing data from defaulting facilities because of very poor record keeping.
4. Some of the data entry computers were found to be faulty and not functioning.
5. The 1998-2000 dataset were not found in any of the DPI computers.
6. The data contained in this report does not include the hospitals and some of the NGO and private clinics.

Analysis

Microsoft Excel was used in analyzing the data. Descriptive analysis was found to be of the most appropriate methods that could be used in analyzing routine health service statistics data. This method involves a diagrammatic presentation of data using tables, graphs and using few sentences in describing the interpretation. The dummy tables developed as part of the analytic plan focused on the very key issues such as Health Service Utilization (Attendance), Burden of Diseases (Morbidity), Facility Based Mortality (Deaths at facilities), Mortality by cause (Inpatient), Deliveries (facility and community based deliveries), Weight at Birth, Proportion of births attended by skilled health workers, Family planning, Immunization uptake and nutrition

Results

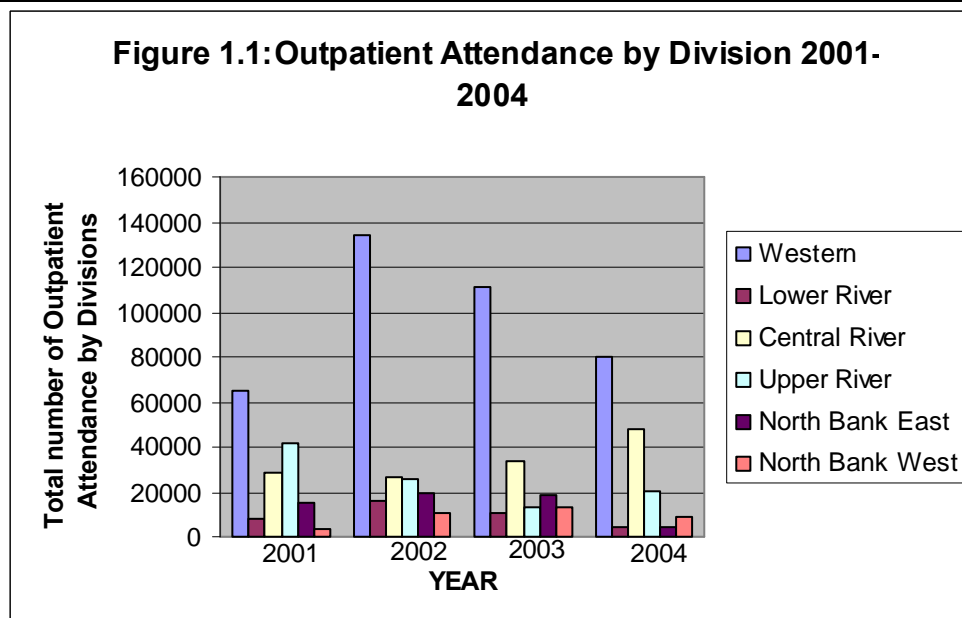
1.0 Health Service Utilizations (Attendances)

Health services utilization rate can be calculated by dividing by the total number of attendances by the reference population at the various levels and by type of services. This rate cannot be calculated because of difficulties that are often encountered in computing estimates of the reference population and the quality of the data set. The attendance data was disaggregated into type of services, Divisional summaries, National summaries, age and year. Tables and charts are used in presenting the results. Absolute numbers are used in

most cases and estimated proportions some times. It is a common knowledge that some of these people consult traditional healers prior to seeking for services at the modern basic health facilities.

Table 1.1: Outpatient Attendance by Division 2001-2004

Health Division	2001	2002	2003	2004
Western	64485	134243	111368	79740
Lower River	8296	16068	10632	4069
Central River	28381	26942	33589	48259
Upper River	42182	26193	13522	20752
North Bank East	15445	19162	18295	4802
North Bank West	3635	10974	13245	9158
Total	164425	233582	200651	166780

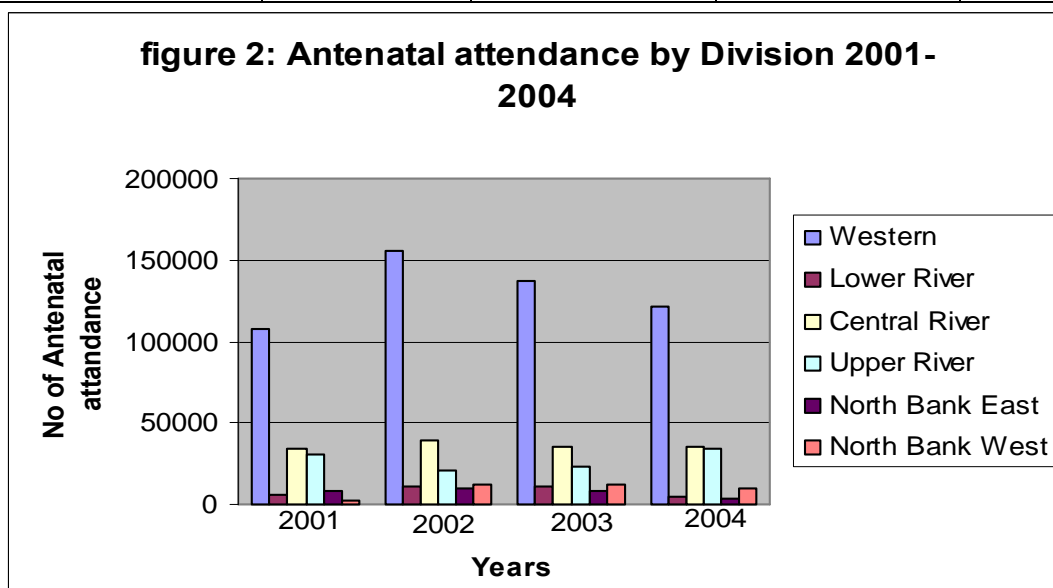


Source: DOSH HMIS 2001-2004 data Attendance report

Outpatient services are open to all ages and are provided at all levels of service delivery in the Gambia. It can be used to calculate of health service utilization. The data included both new and old attendance by age and sex. A detail analysis could have shown some very interesting picture of utilization but that is beyond the scope of this report. Table 1 shows divisional and annual summaries of outpatient attendances. It has shown a trend indicating an increase in attendance between 2001 and 2004. Western Health division registered the highest outpatient attendance in the period under review.

Table 1.2: Antenatal Attendance by Division 2001-2004

Health Division	2001	2002	2003	2004
Western	108174	155333	137,903	122,022
Lower River	6493	11635	10,771	4,689
Central River	34469	39232	35,169	35,261
Upper River	30505	20876	23,636	34,602
North Bank East	8729	9661	8,190	3,377
North Bank West	2167	12443	12170	10,335
Total	190537	249180	327839	210286



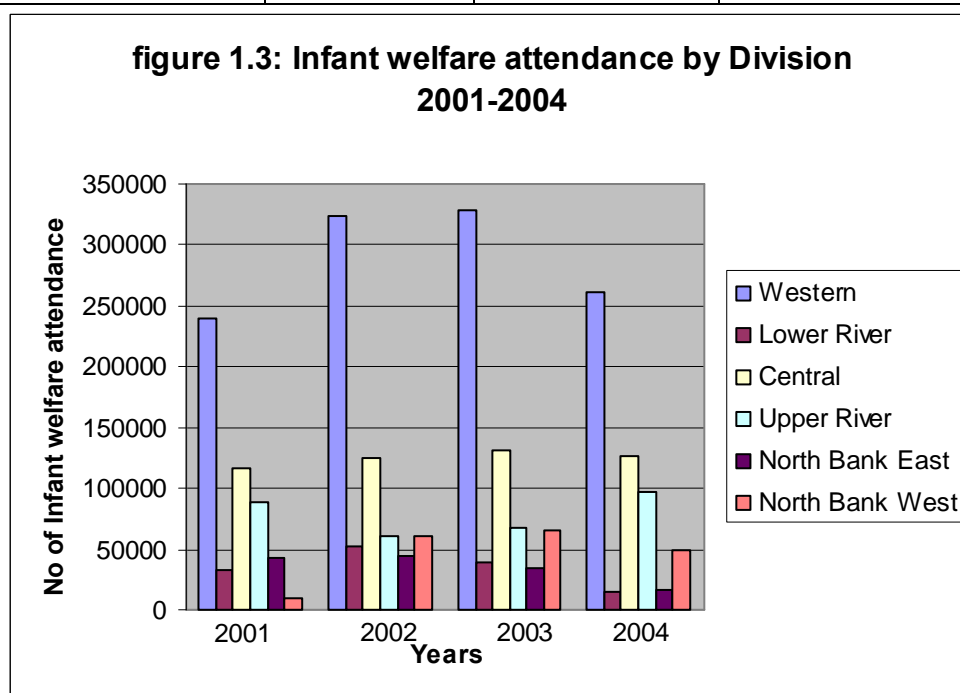
Source: DOSH HMIS 2001-2004 data Attendance report

Antenatal services target pregnant women and are available at all levels of service delivery. Women are expected to register during the first month of pregnancy and to continue visiting the antenatal clinic at least once every month for the entire duration of conception. At these clinics women are screened, treated, immunized and receive health talks.

Table 2 shows that Western health division registered the highest number of antenatal attendances during the period under review. The highest number of antenatal attendance was registered in 2003 compared to other years.

Table 1.3: Infant Welfare Attendance by Division 2001-2004

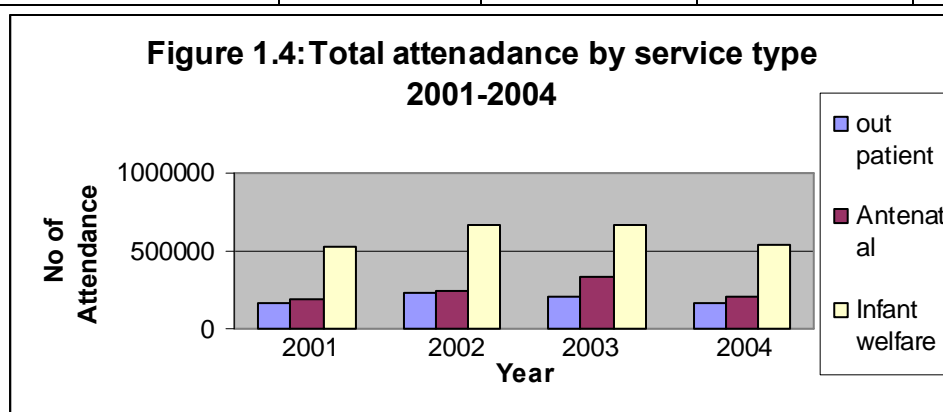
Health Division	2001	2002	2003	2004
Western	240383	324327	328,762	260,583
Lower River	32779	53224	39,075	14,686
Central River	116010	125326	131,993	126,551
Upper River	89433	61478	67,434	96,433
North Bank East	42372	44167	35,099	16,132
North Bank West	9407	60957	66318	49,791
Total	530385	669479	668681	544176



Source: DOSH HMIS 2001-2004 data Attendance report

Table 1.4: Total attendances by service type

Service Type	2001	2002	2003	2004
Outpatient	164425	233582	200651	166780
Antenatal	190537	249180	327839	210286
Infant Welfare	530385	669479	668681	544176
Total	885447	1152241	1197171	921242



Source: DOSH HMIS 2001-2004 data Attendance report

Table 1.3 shows summaries of infant welfare attendance for the last four years, 2001 to 2004. Annual summaries have indicated that a very high proportion of beneficiaries did use the service more compared to the outpatient and antenatal.

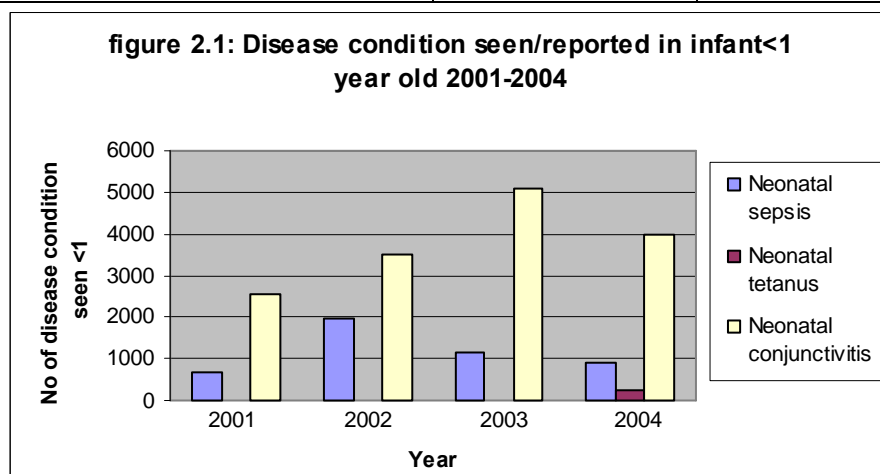
Table 1.4 summarizes health service utilization. It has confirmed the results found in table 1.3.

2.0 Burden of diseases (Morbidity)

The burden of diseases could be defined as the total number of disease episode that occurred in a population. This has both financial and economic implications. The cost of treating a person per disease episode can be used to calculation the financial cost of disease burden. The results derived from such calculations can form the bases to allocate resources to the health sector. That is beyond the scope of this report. The tables and figures are meant to show the total number of conditions/episodes reported at the various levels of the service delivery during the period under review.

Table 2.1: Disease condition seen/ reported in infants <1 year old 2001-2004

Conditions	2001	2002	2003	2004	Total
Neonatal sepsis	664	1988	1175	899	4726
Neonatal tetanus	9	12	10	230	261
Neonatal conjunctivitis	2537	3513	5110	3963	14023
Totals	3210	5513	6295	5092	20110

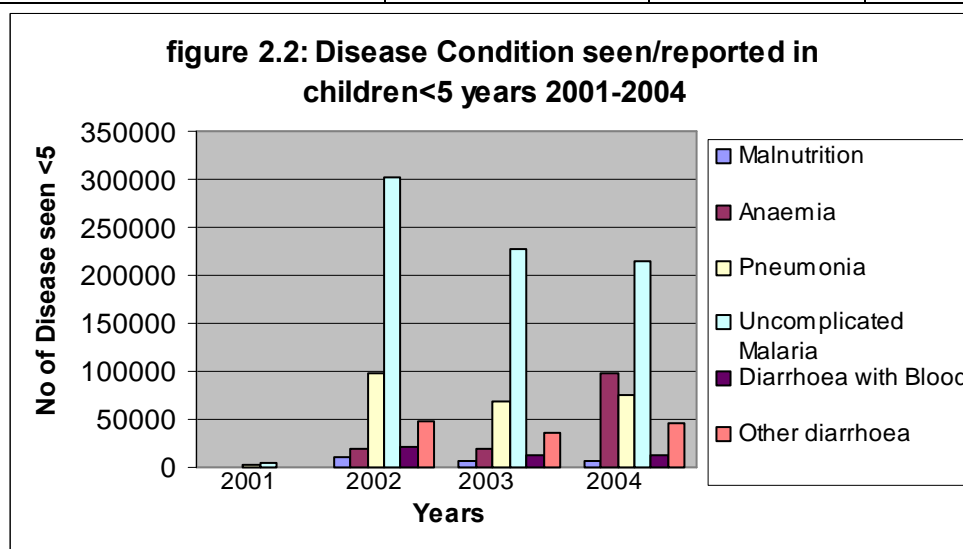


Source: DOSH HMIS 2001-2004 data Basic Facility reports

The summaries in table 2.1 shows that neonatal sepsis and neonatal conjunctivitis are major diseases conditions found to affect neonates more often than tetanus. The figures recorded for neonatal tetanus cases are highly suspicious and might be due to deficiencies in diagnostics techniques used. Most of the basic health facilities do not have laboratory services and therefore clinical methods are used most often.

Table 2.2: Disease conditions seen/reported in children <5years 2001-2004

Condition	2001	2002	2003	2004	Total
Malnutrition	118	9927	7232	6896	334156
Anaemia	243	18933	18933	98068	136177
Pneumonia	1592	98068	68418	74769	242847
Uncomplicated malaria	4969	302891	227034	215533	750426
Diarrhoea with Blood	134	21724	13369	12198	47425
Other diarrhea	423	48610	35083	46265	130381
Total	7479	500153	370069	453729	1641412



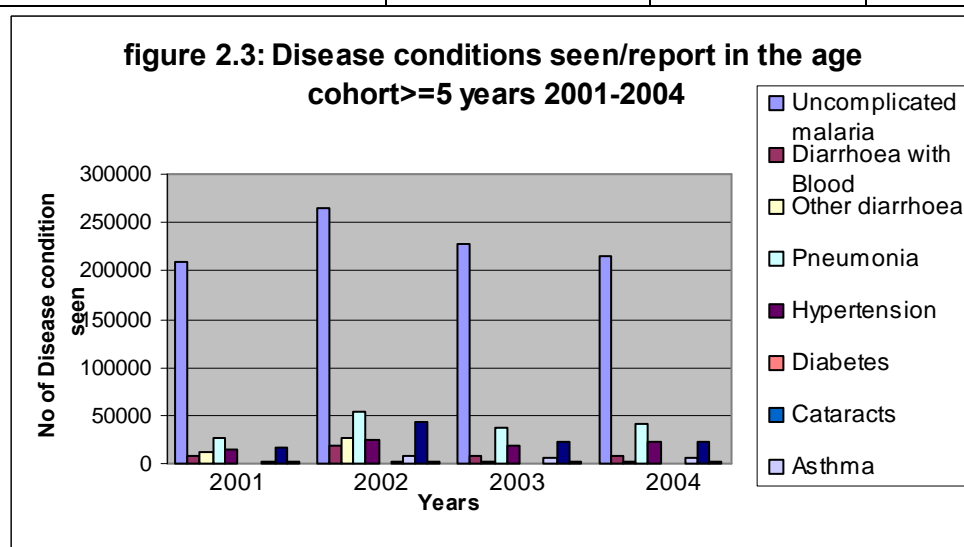
Source: DOSH HMIS 2001-2004 data Basic facility report

Children below age 5 years are more likely to have malaria episodes compared to other childhood illnesses.

Table 2.2 shows an increase in the trend of malaria during the last four years.

Table 2.3: Disease conditions seen/reported in the age cohort \geq 5 years 2001-2004

Condition	2001	2002	2003	2004	Total
Uncomplicated malaria	209182	264785	227034	215533	916534
Diarrhoea with Blood	7306	17662	8225	7605	40798
Other diarrrhea	12800	27739	2003	2004	44546
Pneumonia	27832	54454	38233	41128	161647
Hypertension	13573	24759	18790	23329	80451
Diabetes	231	1009	551	690	2481
Cataracts	614	1092	526	834	3066
Asthma	2857	7470	5819	5583	21729
Scabies	15596	43741	22077	23784	105198
Mental Disorder	1326	2298	1627	1954	7205



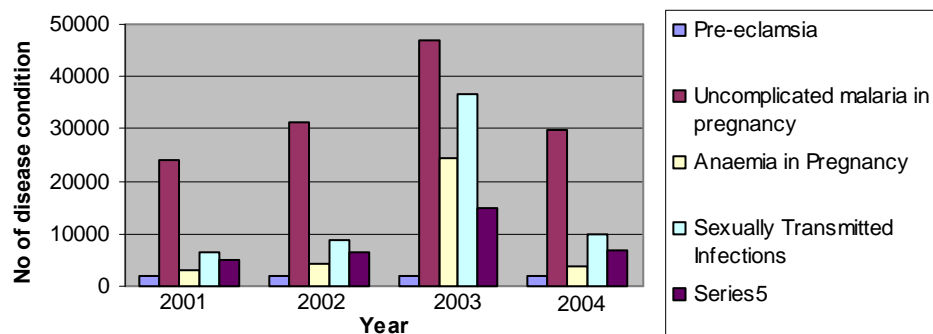
Source: DOSH HMIS 2001-2004 data Basic facility report

Malaria has featured once again as the major cause of illness in the age cohort 5 years plus. Malaria cases are shown to be on the increase annually for the years 2001-2004.

Table 2.4: Disease conditions seen in pregnant women 2001-2004

Condition	2001	2002	2003	2004	Total
Pre-eclampsia	24033	31407	46774	29864	132078
Uncomplicated malaria in pregnancy	2932	4295	24281	3886	35394
Anaemia in Pregnancy	6322	8937	36522	9742	61523
Sexually Transmitted Infections	4813	6512	15020	6823	33168

figure 2.4: Disease condition seen in pregnant women 2001-2004



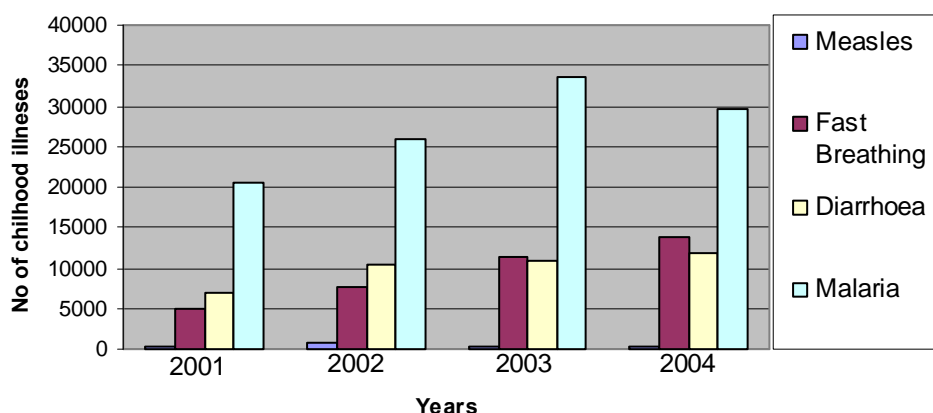
Source: DOSH HMIS 2001-2004 data Basic facility report

During pregnancy the most common cause of illness is due to pre-eclampsia as shown by the results in table 2.4.

Table 2.5: Childhood illnesses/conditions 2001-2004

Condition	2001	2002	2003	2004	Total
Measles	236	786	141	218	1381
Fast Breathing	4928	7767	11422	13765	37882
Diarrhoea	6882	10444	10818	11966	40110
Malaria	20481	26025	33617	29580	109703

figure 2.5: Childhood illnesses/conditions 2001-2004

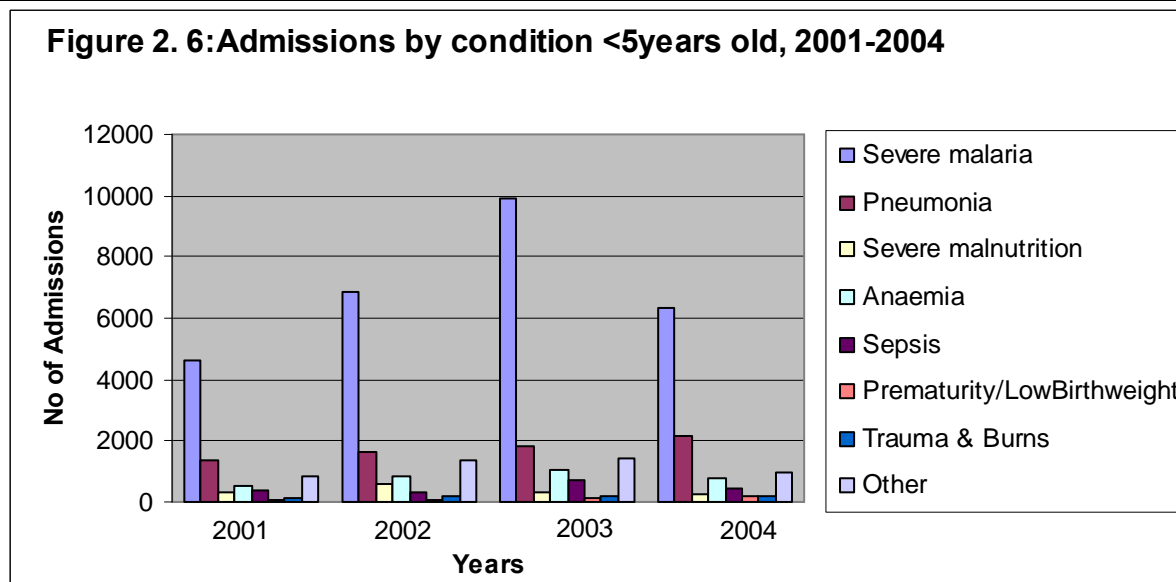


Source: DOSH HMIS 2001-2004 data Primary Health Care report

Table 2.5 shows the total number of childhood illnesses reported in the primary health care villages. The most common cause of these is malaria, although fast breathing and diarrhoea are on the increase.

Table 2.6: Admissions by condition <5years old, 2001-2004;

Conditions	2001	2002	2003	2004	Total
Severe Malaria	4601	6845	9883	6339	27668
Pneumonia	1397	1643	1811	2144	6995
Severe malnutrition	310	598	325	244	1477
Anaemia	535	850	1051	809	3245
Sepsis	370	350	707	449	1876
Prematurity/LowBirthweight	79	86	153	184	502
Trauma & Burns	126	168	187	188	669
Other	846	1373	1458	994	42432



Source: DOSH HMIS 2001-2004 data Inpatient report

The statistics on admissions for children shows that severe malaria is the most common cause of all childhood admissions in the inpatient facilities. It is also shown that pneumonia is the second highest cause.

Table 2.7: Admissions by condition >=5 Years 2001 - 2004

Condition	2001	2002	2003	2004	Total
Malaria	2048	4477	7887	4726	19138
Pneumonia	396	630	891	828	2745
Hypertension/stroke	229	552	771	756	2308
Heart Disease	63	111	227	165	566
Tuberculosis	22	53	97	84	256
Others	1294	2048	2805	2039	8186

Figure 2.7: Admissions by condition ≥ 5 Years 2001-2004

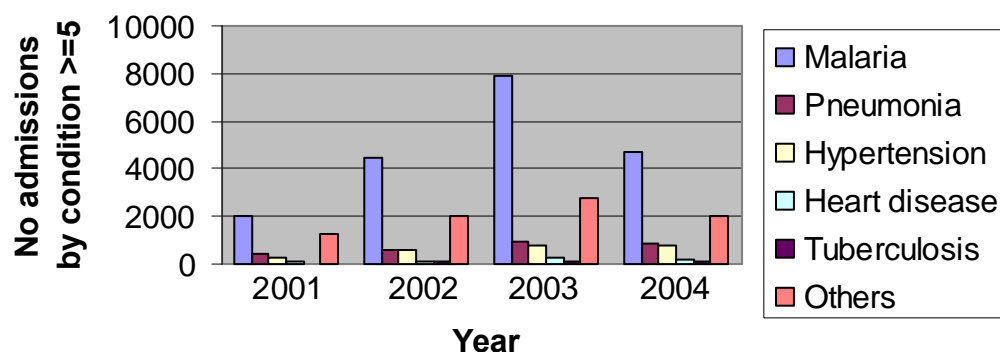
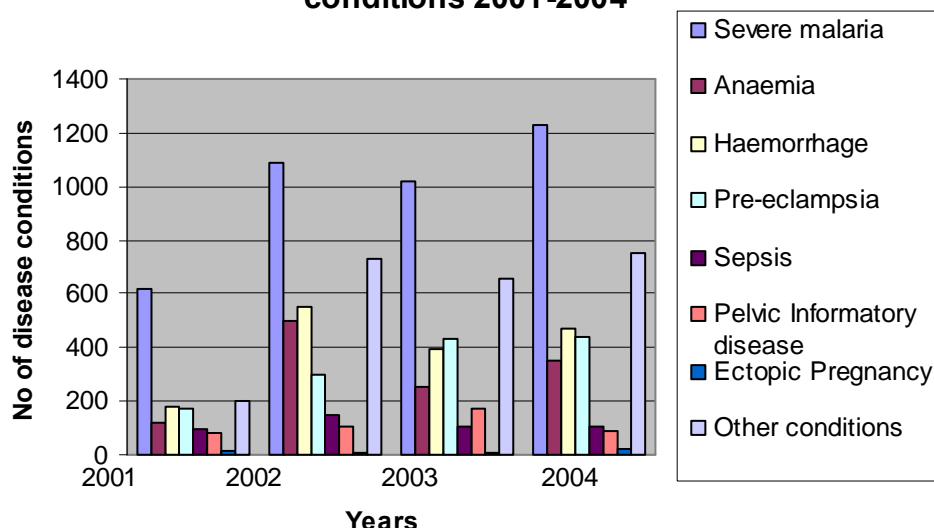


Table 2.8: Pregnancy related admissions by condition 2001-2004

Condition	2001	2002	2003	2004	Total
Severe malaria	617	1090	1021	1230	3958
Anaemia	121	496	250	348	1215
Haemorrhage	180	554	396	468	1598
Pre-eclampsia	169	298	435	437	1339
Sepsis	99	152	106	105	462
Pelvic Inflammatory disease	83	107	175	93	458
Ectopic Pregnancy	12	8	6	20	46
Other Conditions	203	731	654	755	2343

figure 2.8: Pregnancy related admission by conditions 2001-2004

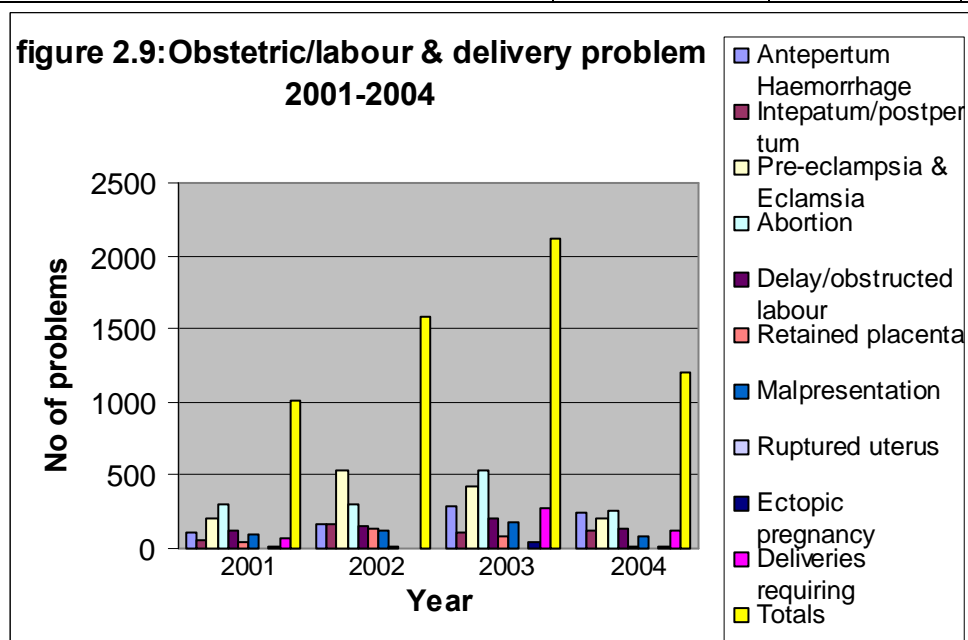


Source: DOSH HMIS 2001-2004 data Inpatient report

Table 2.8 shows about one third of all admissions during pregnancy was due to severe malaria. The figures indicate an annual increase in the number of severe malaria admissions. Ectopic pregnancy had the least number of admissions.

Table 2.9 Obstetric/labour and delivery problems-2004

Problem	2001	2002	2003	2004	Total
Antepertum haemorrhage	114	158	282	246	800
Intrapertum/Postpertum haemorrhage	57	162	115	124	458
Pre-eclampsia & Eclampsia	202	527	418	206	1353
Abortion	296	306	526	261	1389
Delay/obstructed labour	122	152	203	138	615
Retained Placenta	38	137	81	11	267
Malpresentation	92	122	176	81	471
Ruptured Uterus	1	13	2	1	17
Ectopic pregnancy	19	2	41	7	69
Deliveries requiring intervention	74	4	268	126	472
Total	1015	1583	2112	1201	5911



Source: DOSH HMIS 2001-2004 data Inpatient report

Problems relating to obstetric labour and delivery are many but the most common is abortion. This result could have shown an interesting information if the data were disaggregated into legal and illegal abortion. According to the results abortion had increased during the past four years. Pre-eclampsia & eclampsia were common causes for admission.

Table 2.10: Notifiable and reportable Diseases reported 2001-2004

Condition	2001	2002	2003	2004	Total
HIV/AIDS	23	4	22	30	79
Anthrax	7	2	5	0	14
Cholera	0	0	0	0	0
Guinea worm	0	0	0	0	0
Meningococcal meningitis	85	68	16	0	168
Neonatal Tetanus	1	1	0	0	2
Plague	0	0	0	0	0
Poliomyelitis	0	0	0	0	3
Yellow Fever	0	3	4	0	7
Acute viral haemorrhagic fever	0	5	2	0	7
Diphtheria	0	0	0	0	0
Hepatitis A & B	4	2	5	0	11
Lymphatic filariasis	0	0	0	0	0
Measles	120	96	205	60	481
Perturssis	0	1	4	0	5
Schistosomiasis	12	15	27	44	98
Trachoma	283	160	98	37	578
Leprosy	28	11	92	2	133
Tuberculosis	659	387	494	20	1560
STI with discharge	733	1041	846	611	3231
STI with ulcer	64	125	213	142	544
Syphilis	157	129	216	0	504

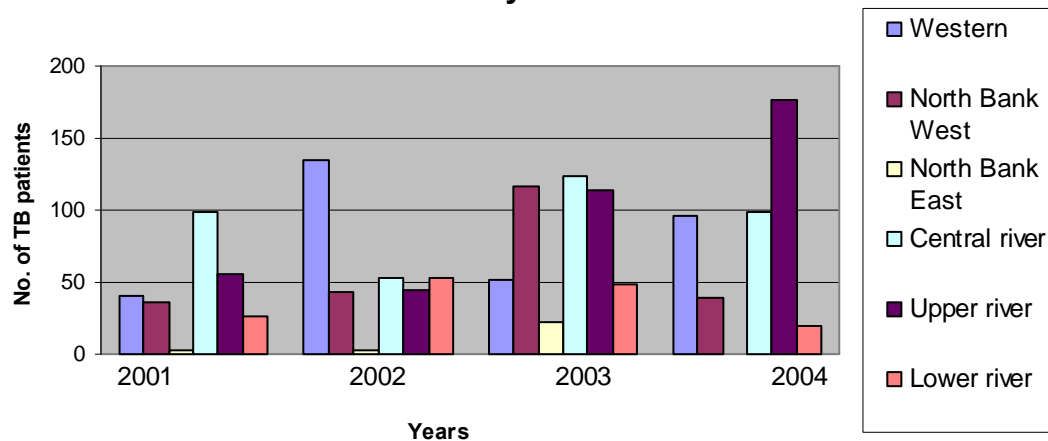
Source: DOSH HMIS 2001-2004 data Public Health report

Table 2.10 shows that Sexually transmitted Infection with discharge had the highest number of cases reported and it also shows an increase in trend during the past four years. Tuberculosis is the second highest reportable disease reported although the numbers have decreased drastically between the years 2001 to 2004. About 14 suspected cases of anthrax, 79 cases of HIV/AIDS, 2 cases of Neonatal tetanus and 7 cases of Yellow fever were reported and these figures do not seem reflect the complete statistics may due to deficiencies in the disease diagnosis at the health facilities.

Table 2.11: Total number of TB Patient that received DOTS treatment by Division 2001-2004

Division	2001	2002	2003	2004
Western	40	135	52	96
North Bank West	36	43	116	39
North Bank East	3	3	22	0
Central river	98	53	123	99
Upper river	56	45	114	176
Lower river	27	53	48	20
Total	260	332	475	430

Figure 2.11: Total number of TB Patient that received DOTS treatment by Division 2001-2004



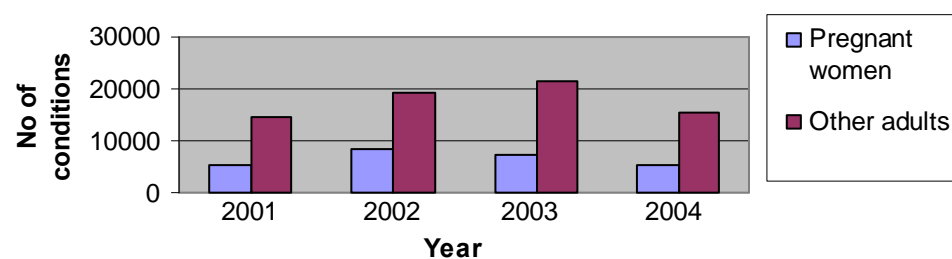
Source: DOSH HMIS 2001-2004 data Primary Health Care report

Results in table 2.11 shows the number of patients put on the DOTS treatment had increased annually for the past four years. Few Tuberculosis cases will be expected if that trend should continue into the future. Unfortunately figures for patients using the basic facilities were not available for analysis because the TB/Leprosy control Unit collects and keep that data.

Table 2.12: Malaria cases reported in adults 2001-2004

Population	2001	2002	2003	2004
Pregnant Women	5282	8300	7284	5441
Other adults	14649	19406	21501	15570
Total	27706	28785	21011	75897

Figure 2.12: Malaria cases reported in adults 2001-2004



Source: DOSH HMIS 2001-2004 data Primary Health Care report

Malaria is shown to be the major cause of illness reported at all levels of the health service delivery, in both sexes and all age groups. It is also interesting to note that most of the diseases reported had increased annually. This has indicated the need to review the health strategies and interventions currently being implemented. The results have clearly indicated that a rise in the disease burden has both financial and economic implications for the country and the population more so for the poor. There is a need to conduct an operations research to study the factors responsible for the problem. The situation requires an urgent attention.

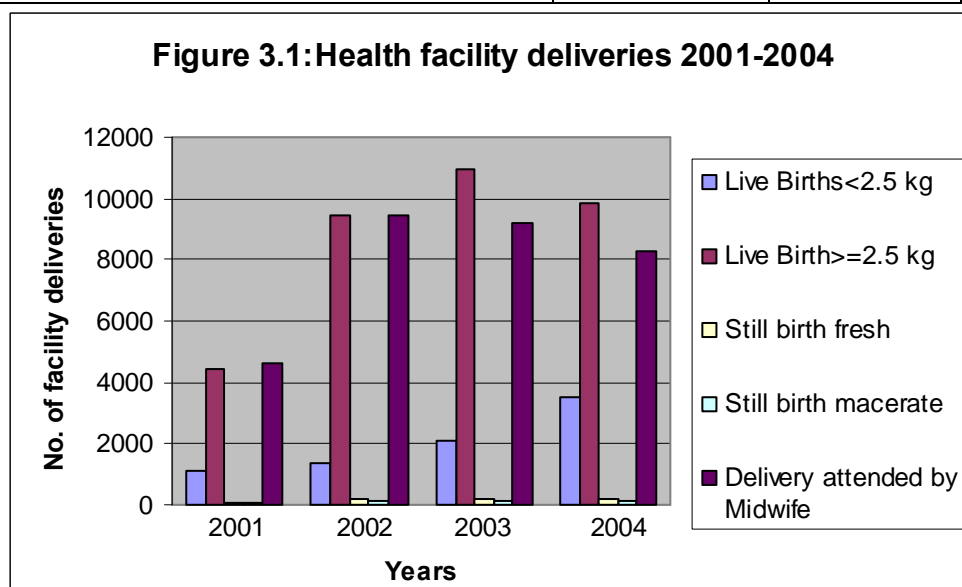
3.0 Health facility and Primary Health Care (PHC) Deliveries

Delivery service is available at all levels of the health service system throughout the Gambia. The Traditional birth attendant provide such services at the community levels although they do refer some to the next highest level, the minor/major health centres. State Registered Nurse Midwives, State Enrolled Midwife and Community Health Nurse Midwife conduct deliveries at the basic health facilities e.g. major and minor health centres respectively. The atrisk pregnant women are often advised to deliver at hospitals or major health centres with functioning theatre, where they could be assisted by a specialist. All such deliveries should be recorded on the monthly inpatient report/return. A copy of the report should be sent to the Divisional Health Team for processing.

This report has looked at deliveries that had occurred at the community and basic facility levels including those not attended by trained health personnel. The data covers the whole country for the periods 2001-2004.

Table 3.1: Health facility deliveries 2001-2004

Type	2001	2002	2003	2004	Total
Live Births <2.5 kg	1117	1390	2106	3538	8151
Live Birth \geq 2.5 kg	4439	9427	10945	9851	34662
Still births fresh	90	198	200	211	699
Still birth macerated	73	134	124	138	469
Delivery attended by Midwife	4655	9451	9188	8314	31608
Total	10374	20600	23563	22052	75589



Source: DOSH HMIS 2001-2004 data Inpatient report

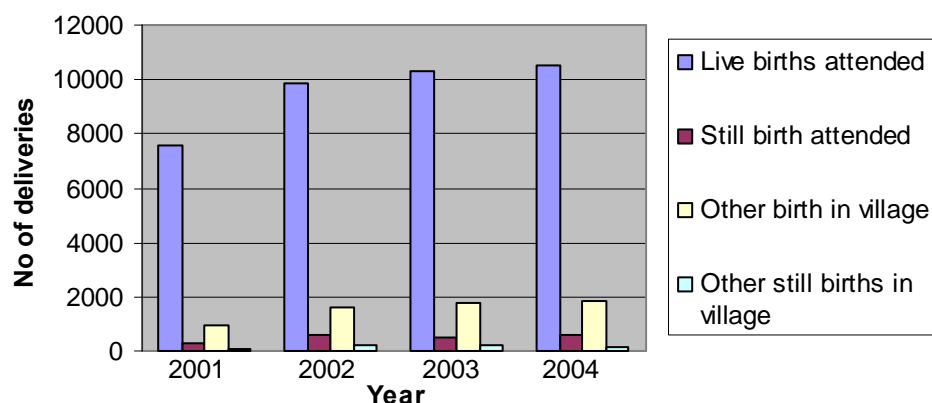
Results in table 3.1 shows deliveries at health facilities disaggregated by number of live births by weight, still births fresh or macerated. The data is further disaggregated by delivery attended by Midwife. The four levels of classification are key health indicators. The overall aim/objective of the RCH and the National Health Policy is to reduce the number of low birth weight babies and to prevent still births. Attendance at delivery by skilled health workers is another very important key indicator in the safe motherhood and child survival strategies and interventions..

The figures showed that the proportion of babies \geq 2.5 kilograms had increased during the past four years. Similarly the proportion of deliveries attended by a Midwife had increased annually from 2001 to 2004. This has indicated that the safe motherhood and child survival strategies and interventions did achieve policy goals.

Table 3.2: Primary Health Care village deliveries 2001-2004

Type	2001	2002	2003	2004	Total
Live Births attended	7612	9900	10328	10543	38383
Still births attended	267	564	526	557	1914
Other births in village	959	1586	1752	1871	6168
Other still births in village	67	201	201	112	581
Total	8905	12251	12807	13083	47046

figure 3.2: Primary Health care village deliveries 2001-2004



Source: DOSH HMIS 2001-2004 data Primary Health Care report

The overall objective of the safe motherhood interventions is to ensure the good health of both the mother and baby during the antenatal and postnatal period. The expected outcome of those interventions should result into a surviving health mother and baby.

Table 3.2 shows the proportion of deliveries that occurred in the primary health care villages. The data is disaggregated into attended live and still births and the unattended live and still births in the villages. Over 75% of the births were attended by skilled health workers, although significant proportion were not attended by skilled health worker. The data also showed an annual increase in the number of live births attended.

A moderately high proportion of births occurring in the villages are unattended. The reasons for that cannot be explained by the dataset used in this report. An operational research might provide answers to the question.

4.0 Mortality and causes reported by health facilities

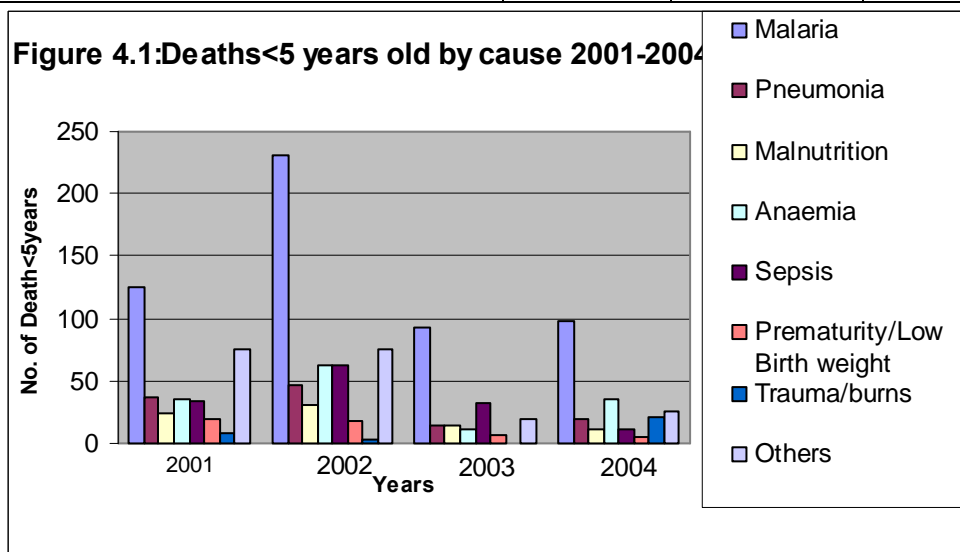
Most of the deaths do occur in the communities and some do happened at all levels of the health service delivery. It is a very important indicator to measures the successes of health interventions that were implemented. It is a key health performance indicator that could be used to measure the overall successes of the health system. Thus the need to put in place a proper recording and reporting system in place is very vital. DOSH HMIS has done more than that. It has facilitated the collection of mortality data at all levels of the services e.g. community, basic facility and other tertiary referral centre. Unfortunately, it is difficult to calculate mortality ratios from the HMIS data set. This is affected by the denominator which should have been the reference catchmentø area population of the basic facility. Most of those that died did not come from the catchmentø area population of the facility where the death had occurred. The data can be used to calculate facility proportional deaths. Facility based deaths are representative of the overall deaths in a given population.

Because of poor quality data the analysis used absolute numbers instead of proportions.

Table 4.1: Deaths < 5 years old by cause 2001-2004

Condition	2001	2002	2003	2004	Total
Malaria	125	231	93	97	546
Pneumonia	37	47	15	20	119
Malnutrition	24	30	14	11	79
Anaemia	35	62	12	35	144
Sepsis	33	62	32	11	138
Prematurity/ Low Birth weight	19	18	6	5	48
Trauma/burns	8	4	0	21	33
Other	76	76	19	26	197
Total	358	513	191	226	1286

Figure 4.1:Deaths<5 years old by cause 2001-2004



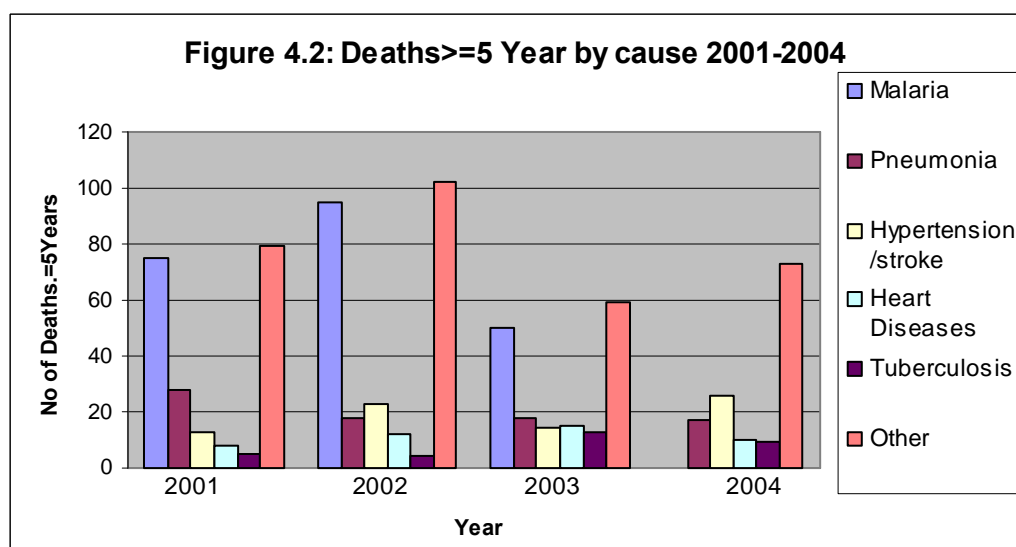
Source: DOSH HMIS 2001-2004 data Inpatient report

The analysis on deaths examined the total number of deaths and the causes of death that had occurred in the basic and primary health care facilities during the past four years. Table 4.1 shows the total number of childhood deaths by cause during the period under review. A high proportion of deaths in children were due to malaria although there were annual reductions in the trend.

Table 4.2: Deaths \geq 5 years by cause 2001-2004 Inpatient report

Condition	2001	2002	2003	2004	Total
Malaria	75	95	50	0	220
Pneumonia	28	18	18	17	81
Hypertension/stroke	13	23	14	26	76
Heart diseases	8	12	15	10	45
Tuberculosis	5	4	13	9	31
Other	79	102	59	73	313
Total	207	252	169	188	816

Figure 4.2: Deaths >= 5 Year by cause 2001-2004



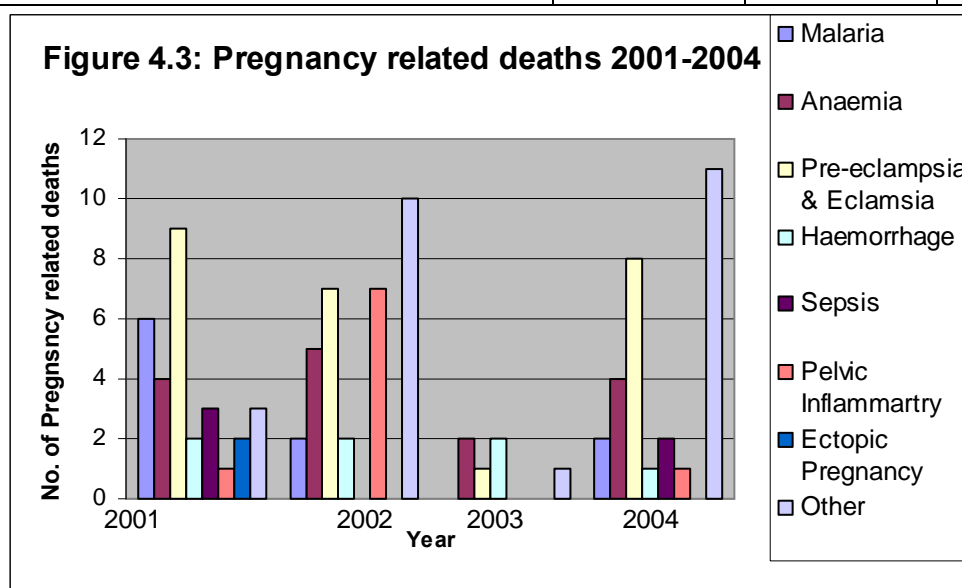
Source: DOSH HMIS 2001-2004 data Inpatient report

Table 4.2 shows that about 25% of deaths in adults were due to malaria. Hypertension and heart diseases were on the increase. Overall total deaths in this age cohort were grossly under reported although most of the deaths are expected to occur in the communities. There is a need to improve on facility based death reporting.

Table 4.3: Pregnancy related deaths 2001-2004

Condition	2001	2002	2003	2004	Total
Malaria	6	2	0	2	10
Anaemia	4	5	2	4	15
Pre-eclampsia & Eclampsia	9	7	1	8	25
Haemorrhage	2	2	2	1	7
Sepsis	3	0	0	2	5
Pelvic Inflammatory	1	7	0	1	9
Ectopic Pregnancy	2	0	0	0	2
Others	3	10	1	11	25
Total	30	27	6	29	92

Figure 4.3: Pregnancy related deaths 2001-2004



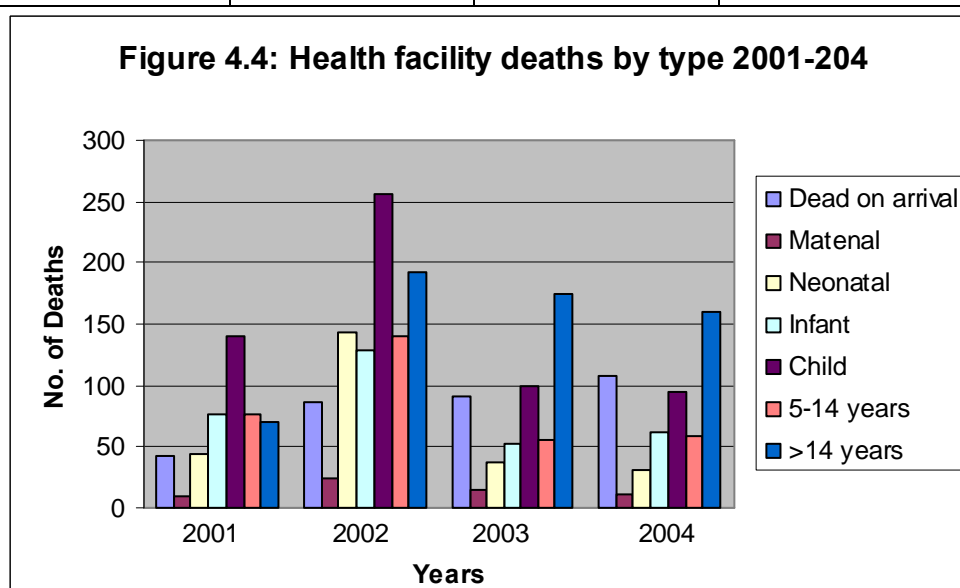
Source: DOSH HMIS 2001-2004 data Inpatient report

Anaemia and pre-eclampsia were found to be the major causes of death during pregnancy for the past four years. These might not be the primary causes. These were facility based deaths which are far less than the total number of deaths in the Gambia for the past four years.

Table 4.4: Health facility deaths by type 2001-2004

Deaths	2001	2002	2003	2004	Total
Dead on arrival	42	86	92	108	328
Maternal	10	25	14	11	60
Neonatal	44	143	38	31	256
Infant	76	128	52	62	318
Child	140	256	99	94	589
5-14 years	77	141	55	58	331
>14 years	70	193	174	160	597
Total	405	720	511	521	2165

Figure 4.4: Health facility deaths by type 2001-2004



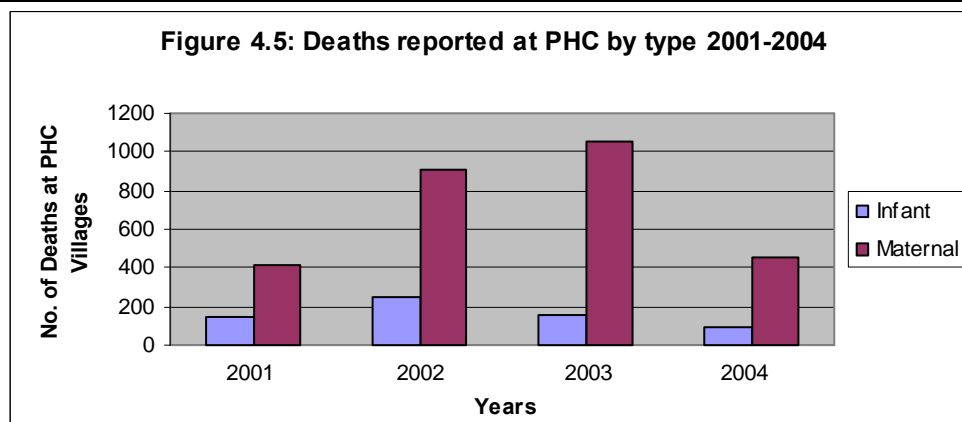
Source: DOSH HMIS 2001-2004 data Inpatient report

Table 4.4 disaggregated deaths into seven classifications, dead on arrival, maternal, neonatal, infant, child, 5-14 years and adults over 14 years of age. The table shows that a high proportion of deaths occurred during infancy and childhood. These results confirmed the results found by some major mortality studies done in developing countries. Adult deaths were also found to be very common at the basic facilities.

Maternal deaths were also considerably high and should be investigated. Neonatal deaths were high and alarming.

Table 4.5: Deaths reported at PHC villages by type 2001-2004

Type	2001	2002	2003	2004	Total
Infant	143	247	153	93	636
Maternal	413	913	1053	454	2833
Total	556	1160	1206	547	3469



Source: DOSH HMIS 2001-2004 data Primary Health Care report

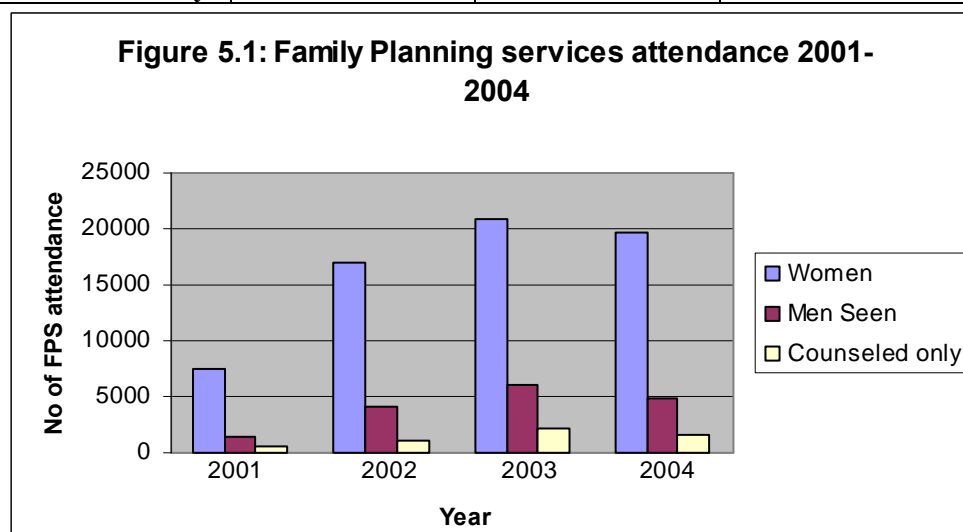
Death is a rare event that occurs in the community and the data is very difficult to collect especially in the developing world. The data is always deficient in coverage, quality and completeness. Table 4.5 disaggregated deaths by level of services and those that had occurred in the inpatient facilities of the basic health services, primary health care/community, by age and type. A high proportion of deaths occurred in children less than 5 years of age at facility levels. Contrarily a high proportion of deaths had occurred in women at the primary health care/community level. Malaria is shown to be the major killer, accounting for the highest proportion of all deaths.

5.0 Family planning services

Family planning services are provided at all levels of health service delivery in the Gambia although they differ in type. Counseling and provisions of family planning commodities such as the pill and condom are available at all levels. Others could be obtained from the basic health facilities and hospitals. The tables and figures below show both attendances and utilization of family planning services during 2001-2004.

Table 5.1: Family planning services attendance 2001-2004

Service	2001	2002	2003	2004	Total
Women seen	7569	17016	20882	19727	65194
Men seen	1435	4083	5997	4758	16273
Counseled only	492	1132	2109	1646	5379



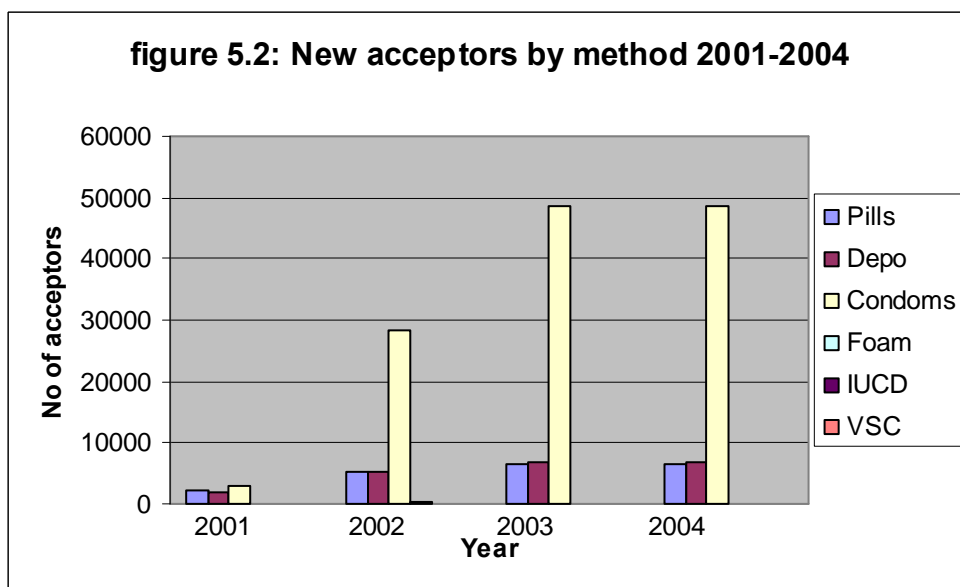
Source: DOSH HMIS 2001-2004 data Family planning report

Family planning services target both men and women. Table 5.1 shows the total number of family planning service attendance for the past four years. According to the results women used the services most and utilization had increased annually for the past four years. The total number of persons counseled only for family planning had also increased annually.

Table 5.2: New acceptors by method 2001-2004

Method	2001	2002	2003	2004	Total
Pills	2224	5185	6587	6587	20583
Depo	1810	5061	6743	6743	20357
Condoms	3055	28227	48442	48442	128166
Foam	64	427	82	82	655
IUCD	69	157	144	144	514
VSC	12	0	1	1	14
Total	7234	40888	61341	61341	170804

figure 5.2: New acceptors by method 2001-2004



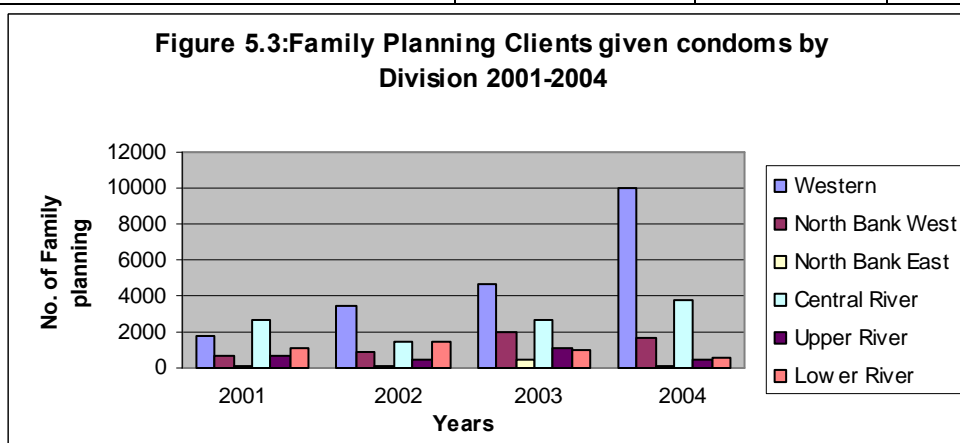
Source: DOSH HMIS 2001-2004 data Family planning report

Table 5.2 shows the total number of new acceptors by method for the past four years.. The most popular method was the condom and there were about 128166 new acceptors. The Pill was the second most popular method used and had increased annually for the past four years. About 21000 new acceptors were found to have used the method. VSC was the least popular method.

Table 5.3: Family planning clients given condoms by Division 2001-2004

Division	2001	2002	2003	2004
Western	1746	3452	4656	10043
North Bank West	668	943	1946	1693
North Bank East	126	126	415	66
Central river	2643	1472	2618	3769
Upper river	623	497	1113	483
Lower river	1120	1472	969	588
Total	6926	7962	11717	16642

Figure 5.3: Family Planning Clients given condoms by Division 2001-2004



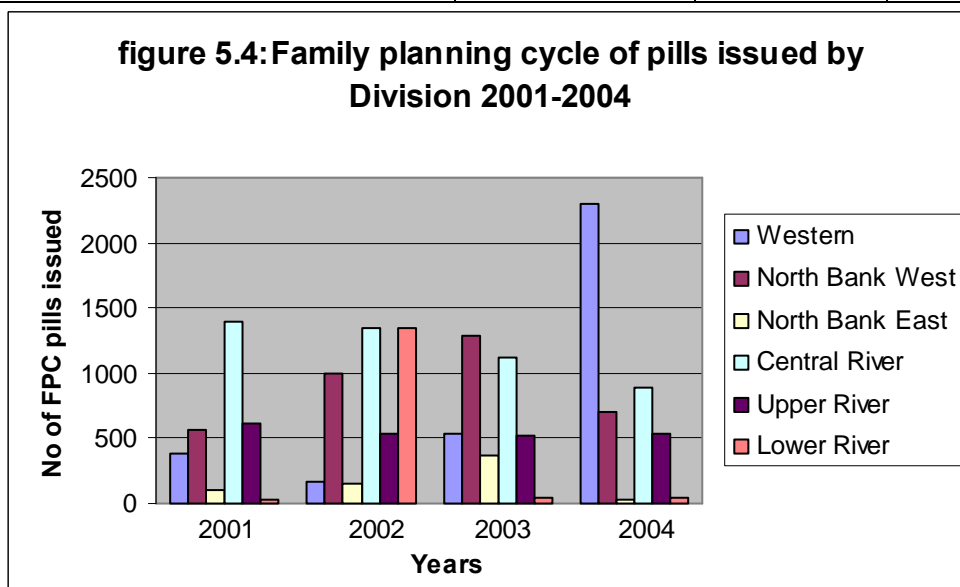
Source: DOSH HMIS 2001-2004 data Primary Health Care report

The primary health care services provide family planning at the community level. The Village health worker (VHW) supplies condoms whilst the Traditional birth attendant (TBA) supplies the pill. Table 5.3 shows the total number of condoms supplied during the period under review. The divisional distribution of condoms in communities had increased.

Table 5.4: Family planning cycle of pills issued by Division 2001-2004

Division	2001	2002	2003	2004
Western	377	165	539	2305
North Bank West	572	997	1281	705
North Bank East	110	152	371	38
Central river	1395	1356	1113	882
Upper river	607	541	521	534
Lower river	36	1356	51	46
Total	3097	4567	3876	4510

figure 5.4: Family planning cycle of pills issued by Division 2001-2004



Source: DOSH HMIS 2001-2004 data Primary Health Care report

Table 5.4 shows the total number of cycle of pills issued during the past four years and at divisional level. There was total annual increase registered by all divisions for the period under review.

Generally there was an overall annual increase in the use of all family planning methods. New acceptors were also found to have increased. Unfortunately the data cannot be used to calculate the new acceptor and method specific rates. This has to do with the facility catchment area reference population, the denominator.

6.0 IMMUNIZATION UPTAKE 2001-2004 THE GAMBIA

Vaccination is a very important public health intervention that protects an individual from contracting communicable and contagious diseases particularly during childhood. In the Gambia immunization is given to children less than 5 years of age, pregnant women and tetanus toxoid booster to other adults. The antigens protect both the child and the adult from vaccine preventable diseases. Children are expected to be fully immunized by 1 year of age.

Table 6.1: Antigens <1 year of age 2001-2004

Antigen	2001	2002	2003	2004	Total
BCG	31623	27211	35009	42344	136187
DPT/HIB 1	34028	27144	36608	45387	143167
DPT/HIB 2	34262	25636	34727	46177	140802
DPT/HIB 3	31291	23932	32404	44779	132406
DPT Booster	533	268	397	361	1559
Polio 0	22556	25571	34155	41074	123356
Polio 1	21393	24482	35589	43465	124929
Polio 2	21401	23644	37422	44230	126697
Polio 3	18945	19750	36257	43642	118594
Polio 4 or more	18381	16012	27026	37817	99236
Measles	26657	23708	26449	41317	118131
Yellow Fever	18536	24185	27192	39475	109388
Hep B 1	32063	27641	34698	42978	137380
Hep B 2	31878	26630	34926	44780	138214
Hep B 3	29316	24485	31088	43297	128186

Table 6.2: Antigens >=1 year of age 2001-2004

Antigen	2001	2002	2003	2004	Total
BCG	550	407	256	148	1361
DPT/HIB 1	1550	575	531	391	3047
DPT/HIB 2	2805	800	841	710	5156
DPT/HIB 3	5020	1919	2360	1833	11132
DPT Booster	16176	13195	18094	26719	74184
Polio 0	395	283	247	100	1025
Polio 1	515	500	555	402	1972
Polio 2	916	853	1365	803	3937
Polio 3	1645	1998	3765	2962	10370
Polio 4 or more	14412	13352	23915	26784	78463
Measles	6504	3626	3467	2978	16575
Yellow Fever	5799	4121	3567	3047	16534
Hep B 1	1071	611	430	284	2396
Hep B 2	2074	508	531	484	3597
Hep B 3	3056	767	1030	862	5715

Table 6.3: Tetanus Toxoid Antigens for antenatal women 2001-2004

Antigen	2001	2002	2003	2004	Total
TT 1	7668	8046	9779	13694	39187
TT 2	6166	7927	11698.27	26127	51918.27
TT 3 and above	17608	13805	16105	8704	56222

Table 6.4: Tetanus Booster Antigens for antenatal women 2001-2004

Antigen	2001	2002	2003	2004	Total
Tetanus booster	10302	10412	9604	13677	43995

7.0 Nutrition

The National Nutrition Agency (NaNA) under the office of the Vice President at the State house is responsible for collection health nutritional data.. Few key indicator data is collected through the routine service statistics data system. The monthly Public Health return was revised last year to include and facilitate collecting data on Vitamin A supplementation and records the number of breastfeeding mothers that visit the health facilities. The data should be used to monitor and evaluate the trend in breast feeding of the baby friendly community initiative strategy and the Vitamin A supplementation intervention currently being implemented by the DOSH staff country wide. NaNA collects all other nutrition data through bi-annual household nutrition surveys and other special studies.

Health Management Information System (HMIS): Achievements and constraints

The major achievements of the HMIS can be enumerated as follows;

1. Health indicators were successfully reviewed, new form were designed introduced into the system.
2. The HMIS component was created and funded by the Participatory, Population and Nutrition project in the later part of 2000.
3. HMIS component coordinator recruited by PHPNP to guide and direct HMIS development
4. The HMIS database was developed at both central and divisional level.
5. The HMIS policy was successfully developed.
6. The HMIS unit created in the Directorate of Planning and Information
7. Data entry clerks were recruited for all the Health Divisions.
8. Most health personnel were trained on the uses of HMIS data processing and management skills.
9. The HMIS technical guidelines was developed and distributed to all the Divisional health teams.
10. HMIS staff capacity built.
11. Computers were bought and distributed to all the health divisions and program units at the central level.
12. Local area networking (LANS) for all DHT computers and at DOSH is ongoing and should connect program units at the central level to the main server in the HMIS office.
13. Email and internet services are available to most DHT offices and at the Department of state for Health and Social Welfare.
14. Annual health indicators data were collected and stored for past four years, 2001 to 2004.

Constraints:

1. PHPNP the sole funding agent of HMIS is closing on the 30th.June 2005 which implies diminishing resources.
2. HMIS unit has no trekking or supervisory transport, although it was stated in the project document.
3. Some of the HMIS sub-component data bases are not fully utilized, the Medical stores inventory and the human resource database..
4. There is need to further develop staff capacity in the HMIS unit and this will require funds that are not readily/presently available.
5. HMIS equipments maintenance and replacement would suffer because of very limited resources.
6. The unit has only one statistician and 2 ICT technicians and 1 data entry clerk and there is the need to recruit additional staff.
7. North Bank Division East, Lower River Division and Upper River Divisions are without data entry clerks for almost two years and data entry and management had suffered in terms of completeness and timeliness.
8. The recruitment of additional ICT officers is proving to be a problem.

Recommendations:

Based on the evidences contain in this report and to further strengthen and sustain the Health Management Information system the following are some very key recommendations to consider:

1. Information collection and management in the sector should be done through an integrated approach and to be coordinated by the Health Management Information Unit.
2. There is a need to strengthen information collection at the community level (Training the Community Health workers on data collection techniques and the use of health information at that level).
3. There should be a continuous training of all cadres of health workers on data collection and information use to help improve data quality.
4. Statistics for Health Management and Research should be included in the curricula of all the health training institutions in the country.
5. There is the need to recruit additional trained Statisticians, Assistant statisticians (Data Entry clerks), Information Communication Technicians, Systems analysts, Documentalist and hardware and software computer engineers.
6. Provide continuous in the service training for all HMIS staff.
7. There should be a budget line item in the 2006 estimates to purchase new equipments and to provide periodic maintenance and replacement of the old ones. Another budget line item in the 2006 estimate for stationeries, spare parts, DOSH webpage, Internet Service bills, Telephone lines and all other miscellaneous expenses.
8. HMIS unit should be provided with two transports to facilitate supervisory and maintenance treks country wide.
9. All Divisional health Team offices should provide a conducive environment to be exclusively used as data processing and management.
10. The Department of State for Health should consider changing Data Entry clerk to Statistical assistance to broaden the responsibilities and open up career prospects for that cadre.
11. Recruit and employ Statistical clerks in all major and minor health facilities throughout the country.
12. All Divisional Health Team Offices should be provided with back up electric generators to support data entry and processing.
13. Divisional Data Entry Clerks should not be used as office secretaries for it delays and interrupts data entry and processing at their levels.
14. The HMIS Office should be located in a conducive environment to house very important and expensive computer equipments.
15. The HMIS Office should be provided with a back generator to help in the smooth running of computer and information services.
16. There should be a periodic review of HMIS policy, the forms, software and the instruction manual.
17. The HMIS staff should be highly motivated to provide continuous and efficient services at all times.

Conclusions:

Health Service Utilization

The total number of attendance can be used to measure service utilization. Services provided at the basic health facilities are, outpatient, antenatal and Infant welfare. The Village Health Worker provides outpatient services in the Primary Health Care villages whilst the TBA provides family planning, antenatal and assist in delivery. Infant Welfare attendances accounted for the highest proportion of total attendance during the past four years, 2001 ó 2004.

Overall attendances or service utilization had increased annually by 25% from 2001 to 2003. Total attendance dropped by 20% in 2004. The cumulative total attendance included new and old attendances.

Burden of disease (Morbidity)

The disease indicator data records about 17 conditions but the most prevalent and a common cause of illness during 2001 to 2004 was malaria. It is found to have affected all ages and sexes. The cumulative total malaria cases reported included both new and old cases. Severe malaria accounted for the highest proportion of all admissions in the basic facilities.

Pneumonia (fast breathing) , anaemia, diarrhoea, and malnutrition were among the top five causes of morbidity in the age cohort < 5years, >= 5years and pregnant women. Pre-eclampsia and sexually transmitted infections were found to be the major causes of morbidity during pregnancy.

The reportable diseases data is very deficient in quantity, quality and coverage. The summary data of reportable diseases appeared to be grossly under reported and neonatal tetanus was one of those that were highly inflated and therefore very suspiciousø

Tuberculosis had increased annually during the past four years. About 93% of the total TB cases reported were on the Direct Observation and Treatment strategy (DOTS).

Deliveries (health facility& Primary health care)

The summary data on deliveries conducted at health facilities and primary health care villages indicated that about 85% of all deliveries at basic health facilities were attended by skilled health workers. About 60% babies born were found to weigh more than 2.5 kilograms. In the primary health care villages about 70% of all deliveries were attended by a skilled health worker but a significant number are attended by untrained Traditional birth attendances.

Immunization:

The immunization figures for all antigens and all ages looked very impressive but the data is deficient in completeness of reporting, quality and coverage. It was found out that several forms were used by different programs unit to collect immunization data, e.g. EPI and IDSR. Therefore the HMIS forms were not used in many basic facilities.

Nutrition:

The National Nutritional Agency is now responsible for the health nutritional data. The Public Health return was recently revised to include the collection of data on Vitamin A supplementation and breastfeeding. This

was done in the later part of 2004. It is interesting to note that the revised form has not yet reached some of the basic facilities.

Quality and timely Health information is very vital in the planning and management of health services. It could be used for health research and allocation of resources in the health sector. Therefore health service data should be using an integrated approach and should be well coordinated to avoid unnecessary delays and problems in the field.

There is a need to further strengthen HMIS structures at community and divisional levels to facilitate the collection and management of data and the timely production of health information. This will require recruiting Statistical clerks and Information Communication Technicians (ICT) at all the divisional health offices and minor/major health facilities. Computerized Information System requires constant flow of electricity and periodic purchase of new equipments and a regular maintenance and replacement of the old. All such equipments bought should be housed in environments conducive enough to prolong the life and maintain them in a good state.

The Statistical Clerks and ICT Officers should be regularly and properly supervised by HMIS central level staff and Divisional Health Officers and OICs of the basic facilities. A supervisory checklist should be developed by the HMIS Unit. HMIS Instruction manual should be printed and distributed to DHT Offices and all minor/major health facilities. HMIS Unit should be provided with Unit transport to facilitate supervision.

There should be a continuous dialogue and discussions between the HMIS Unit and Hospitals, NGO and private hospitals and clinic to enforce compliance to the timely submissions of all health data collect in this country to the HMIS Unit. This will improve completeness of reporting.