Introduction

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Introduction

Health service is a complex, dynamic system which influenced by different historical, economic, political and other factors. Decision-makers need reliable information on the cost, effectiveness and efficiency of the policies, interventions and programs, targeting the health of the population, in a timely and useable fashion. In additions, information on choice of health intervention, system design, quality of care and ways to encourage desirable and discourage undesirable programs. This requires improving the government capacity, especially in the area of stewardship, and adjusting approaches to financing and resource generation as well as provision of health services.

One of the most difficult challenges for enhancing performance of health system is the design of the overall system. Better evidence is needed on the relationship between the performance and the organization of different health systems, and on the ways to manage the complex process of change.

Decision-makers at different levels need the tools, information and capacity to assess health needs, choice of health system strategies, design policy options appropriate to their own circumstances, monitor performance and manage changes.

Without reliable data, it is impossible to assess effectively the impact of policies, programs or any interventions in the health sector. Without the right indicators, important problems might not be detected. And without a system-wide scope, solutions with unintended consequences might be developed. Therefore, World Health Organization WHO is continuously developing stronger norms and standards for overall health information systems at national and sub-national levels, with a focus on quality of data, methods for data collection and estimations to enable managers and decision makers to:

- Assess health situation and trends;
- Assess needs for health services;
- Define and measure goals, objectives and targets of health programs;
- Define the functions of health care services and units;
- Set priorities for the allocation of resources and, accordingly, plan the health services;
- Manage the health programs, monitor and evaluate their performance, and assess efficiency of recourses usage;
- Supervise and run training activities for the staff;
- Coordinate activities within the health sector, and with other sectors in the health related matters to avoid unnecessary duplication;
- Control communicable diseases.

General Discussion

This section will tackle a brief discussion on health status and health services in 2004. It is intended to be meaningful to educate members of general public as well as to health care professionals. The body of this report is structured as follows:

- Summary statistics of the population of the Kingdom (customers of the health system)
- Health resources (physical, financial, and human resources)
- Health services and activities
- Health status

The report consists of seventeen chapters. Chapter one shows a summary statistics of all Health indicators for the Kingdom. The chapter covers all the above items such as the socioeconomic & demographic characteristics, health resources, utilization of Health Institutions, and health status. Chapter two presents selected tables that show basic results out of the 2001 census. Chapter 3-9 focus on resources, facilities services, vital, morbidity and mortality statistics of Ministry of Health. Chapter ten present some of the activities in Military Hospital and chapters 11-17 cover the services at Private Hospitals.

The report was compiled by the Health Information Directorate and is based on the statistics collected from most of MOH health care business areas; Patient Management Information automated system, Central Informatics Organization (CIO), Ministry of Finance and National Economy (MoFNE), and Private hospitals and clinics.

Demographic and Socioeconomic Indicators

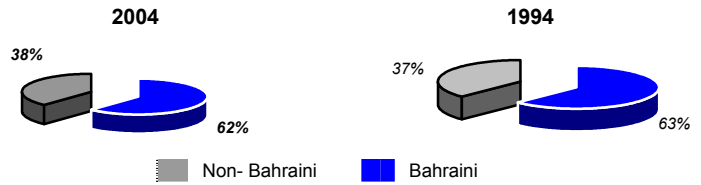
The estimated 2004 population was 707,160 and 561,872 in 1994. The proportions of the Bahraini Nationals to Non-Bahrainis were relatively equals over the last 10 years. In the year 2004, 62% of the population was Bahraini and 38% were Non-Bahraini, compared to 62.4% Bahraini and 37.6% Non-Bahraini in 1994.

Population by Census 2004 & 1994 ***Table 1***

Estimated Population	2004	1994	Annual % Change*
Bahraini	438,209	350,806	2.2
Non-Bahraini	268,951	211,066	2.5
Total	707,160	561,872	2.3

Ref: Central Informatics Organization, estimates based on 2001 & 1991 census
** Annual % Change= $[(Pop.2004/Pop.1994)^{1/t} -1]*100$*

Population Percentage By Nationality ***Figure 1***



Population Sex Ratio

The sex ratios for the entire population were nearly stable in both years irrespective to the nationality (135 in 2004 and 137 in 1994). The sex ratio (male per 100 female) among Bahraini was constant in both years 102. In contrast to the Non-Bahraini population, this was relatively high in both years (233 in 1994 and 223 in 2004). This was due to the male-dominant immigration, especially the middle age group (i.e. the working age group). (see table2)

Population Sex Ratio ***Table 2***

Nationality	2004	1994
Bah	102	102
Non- Bah	223	233
Total	135	137

*Population Sex Ratio (male per 100 female) = (No. Male/No. Female)*100*

Population by Age, Sex and Nationality

As mentioned previously, although there has been an increase in the estimated population in 2004 from 1994 (as illustrated in table3), but the percentage of people under 15 years of age has decreased since 1994 from 30.1% to 27.6. In fact, this decrease was also true for both nationalities. Nevertheless, the Bahraini population of this age group took the bulk of these percentages which was 40.5% in 1994 and 36.2% in 2004, comparing to 15.4 in 1994 and 13.5 in 2004 for Non- Bahraini.

Population Distribution by Age Group & Nationality — *Table 3*

Population (%)	2004			1994		
	Male	Female	**Total**	Male	Female	**Total**
Bahraini						
Pop<15	36.6	35.7	**36.2**	41.2	39.8	**40.5**
15 –64	59.8	60.5	**60.1**	55.3	57.0	**56.2**
65+	3.6	3.8	**3.7**	3.5	3.2	**3.3**
Non-Bahraini						
Pop<15	10.1	21.2	**13.5**	11.4	25.8	**15.4**
15 –64	89.4	78.2	**85.9**	88.2	73.6	**84.2**
65+	0.5	0.6	**0.6**	0.4	0.6	**0.4**
Total (both Nat.)						
Pop<15	24.5	31.7	**27.6**	27.8	36.5	**31.1**
15 –64	73.3	65.4	**69.9**	70.1	61.0	**66.7**
65+	2.2	2.9	**2.5**	2.1	2.5	**2.2**

The proportion of middle age group or working group aged (15-64) years out of the overall population was two third of the total population 69.9% in 2004 and 66.7% in 1994. The population proportion by Nationality was 60.1% for Bahrainis and 85.9% were non-Bahraini in 2004. However, in 1994 it was 56.2% were Bahrainis and 84.2% were non-Bahrainis. There was a noticeable increase in the percentage among Non-Bahraini than Bahraini population of the age group 15-64 years in both estimates.

However, the percentage of persons aged 65 years and over has been maintained at a low proportion 2.5% during 2004 and 2.2% in 1994. While the distribution of that age group by nationality showed that, 3.7% among Bahrainis and 0.6% for non-Bahraini in 2004, and 3.3% for Bahrainis and 0.4% for non-Bahraini population in 1994.

As shown in the table above that sex differential is in favour of female in the youngest (age < 15 years) and oldest 65+, but not in the middle age especially among Non-Bahraini.

Age Dependency Ratio

The total dependency ratio in Bahrain (defined as the number of persons in a population who are not economically active for every 100 economically active persons in that population). It is usual to use as a rough guide the Childhood dependency ratio (age groups 0-14) and aging dependency ratio (aged 65+), to the population in the age group 15-64 years, since the retirement age in Bahrain is 65 years.

Dependency Ratios — *Table 4*

Population	2004	1994
Childhood dependency ratio (0-14)	39.4	46.6
Aging dependency (aged 65+)	3.6	3.4
Total	43	50.0

There is a significant drop in the dependency ratio for the past ten years. In year 2004 the dependency ratio was 39.4%, 3.6% and 43% for the childhood, aged and the total dependency ratio populations respectively. Comparing to 1994, the dependency ratios were 46.6%, 3.4% and 50.0%.

However, the number of individuals receiving welfare payments from the kingdom has increased for the past five years as reported by Ministry of Labour. The value of the payment rose from 3.9 million in 2000 to 4.0 million in 2004. Out of this amount 42.5% goes for the elderly.

Overall, the rate of disability among Bahraini population represented only less than 1% of the total population as per 2001 census .

Health Facilities and Health Resources (2000-2004)

Physical Resources

The Health system delivery is partnership between both government and private sectors. The Health facilities have improved rapidly during the past five years which illustrated in table 4. This can be witnessed clearly through the remarkable evolution in regard to the size and

quality of the services at Salmaniya Medical Complex (main hospital in Bahrain). The building has been expanded to enable the introduction of new services such as Oncology and Kidney Transplant. The installation of new sophisticated medical equipment contributed in the diagnosis, treatment and rehabilitation of the patients. In addition to that a great attention was given to improve the quality of the services provided at the Psychiatric Hospital, Geriatric and the five Maternity Hospitals.

The expansion of the services was not limited to the Secondary Health Care, but it included also the Primary Health Care. To maximize the capacities and accessibility to the services in Primary Health Care, many steps were taken during the past five years such as:

- Laid down the foundation stone of new Dair Health Center on March 2004
- Building Al Zallaq Health center on September 2004
- The expansion of services at Budaiya Health Center including adding X-Ray department, New Mother and Child Health Care, upgrading pharmacy, laboratory, nursing services and two new consultation room.
- The expansion and upgrading the physiotherapy services at Ibn Sinna Health center by providing hydrotherapy.
- Introducing Short Stay Services and upgrading the nursing services at Kuwait Health Center.
- Opening a physiotherapy department at Mohammed Jasim Kanoo Health Center to cater all Western Region and Hamad town citizens.
- Introducing eleven new medicines to all pharmacies at health centers same as in the secondary
- Formulation of the primary health care quality improvement committee to improve the overall performance at the health centers.
- Strengthening postnatal care services by adding three midwives to the nursing section at all health centers
- The implementation the premarital examination for both genders decree was the responsibility of primary health care aiming to control some of the hereditary diseases.
- Empowering the staff through decentralization the decision making,. The scheme was implemented at A'Ali and Bliad Al Kadeem Health Centers as pilot.
- Setting up standard procedures and policies for Health Centers.
- Plans for building three new health Centers were completed: Al Nakheel H.C. at Northern region, Ahmed Ali Kanoo H.C.and second Isa Town H.C. at Central Region.
- As part of Health Centers Automation project, six health centers were connected to MOH WAN network at Health Information Directorate, Mohammed Jassim Kanoo, East Riffa, Hamad Town, Budaiya, Kuwait Health Cnters. Currently, 19 Health Centers are fully automated.
- Set up plan to operate all health centers 4 hours evening session.

Health Facilities ***Table 5***

Description		2004	2003	2002	2001	2000
Hospitals	Govern*	9	9	9	9	9
	Private	6	6	6	5	3
Beds	Govern	1,694	1,691	1,680	1,696	1,678
	Private	215	213	244	150	134
Primary Health Care	Govern	23	23	23	23	22
Inpatients	Govern	78,356	77,710	76,624	71,756	72,478
	Private	10,863	8,387	6,838	4,435	4,616
Outpatients	Govern	3,953,299	3,862,871	3,768,188	3,619,036	3,594,914
	Private	483,786	420,463	341,478	309,003	294,332

** Govern = Government- Including Directorate of Health & Social Welfare Previously Public Security Health Center Private Primary Health Care is provided through the private companies clinics.*

From the above table it showed a remarkable increase in the health care facilities especially in private sectors, which nearly doubled from the past five years.

Financial Resources

With growing population, health care budgets are coming under mounting strain as the country strives to maintain and improve its services. Financial allocation for medical care has been raised substantially in recent years. But still they are not sufficient for the demands placed upon them.

Nowadays, the major challenge that the Ministry faced is to maintain current health services and strive for health for all. With the continuous increase of public demand on the health care services that has direct impact on the increment on the Ministry's resources (see table 6), the Ministry requires to find alternative sources to bring additional financial resources in order to at least sustain the best quality of health services.

Financial Resources — *Table 6*

Financial data	2004	2003	2002	2001	2000
% of allocated budget to MOH from total Government expenditure	7.4	7.5	7.1	7.8	7.8
MoH Budget* (BD. in Million)	88.4	80.6	71.0	64.4	61.0
MoH average recurrent health expenditure/ capita	120.9	113.8	103.1	96.6	85.8
Cost per MOH Visits (BD.)					
Primary outpatients	3.7	3.4	3.0	2.9	2.6
Secondary outpatients	32.2	30.7	27.8	26.6	27.3
Secondary Inpatients (per day)	129.3	122.7	112.2	106.6	109.3
Deliveries (maternity Hosp.)	347.5	315.5	278	287	267
% MOH recurrent expenditure on:					
Primary & Preventive H.C.	22.5	22.7	22.2	21.9	21.0
Secondary H.C.	58.2	58.8	59.1	60.0	59.5
Total Other	19.3	18.5	18.7	18.1	19.5

1US$ = 0.377 BD

** Source: Ministry of Finance & National Economy - MOH budget include projects received*

The Ministry of Health took all the burden of providing free health care with a budget 88.4 million in 2004, approximately 7.4% of the total government expenditure. The Ministry's recurrent expenditure was BD. 85.5 million with an increment of 9% from 2003 budget, whereas in 1994 the Ministry's budget was BD. 55.9 million which represented 8.5% as percentage of the total government expenditure. The Ministry's recurrent expenditure was BD. 46.4 million with an increment of 5.8% from previous year.

The Ministry of Health average expenditure per capita has increased from BD. 83 (equivalent to U.S $220 per person) in 1994 to BD. 120.9 (equivalent to U.S.$ 320.7) in 2004. More than half of the Ministry budget was devoted to Secondary Health Care (58.2% in 2004 which is equivalent to 2000). However, only 22.5% of the Ministry's budget was devoted to Primary and Preventive Health Care in 2004 and 21 % in 2000.

The average cost per visits for primary Health care clinics was BD. 3.7 in 2004 relatively at the same range in 2000 (BD. 2.6). On the other hand, the cost of the services per person in the secondary health outpatient clinics has been increased since 2000 from BD. 27.3 to BD. 32.2 in 2004. Moreover, the cost of the inpatient per day has also increased from BD. 129.3 in 2000 to BD. 129.3 in 2004 (see table 5).

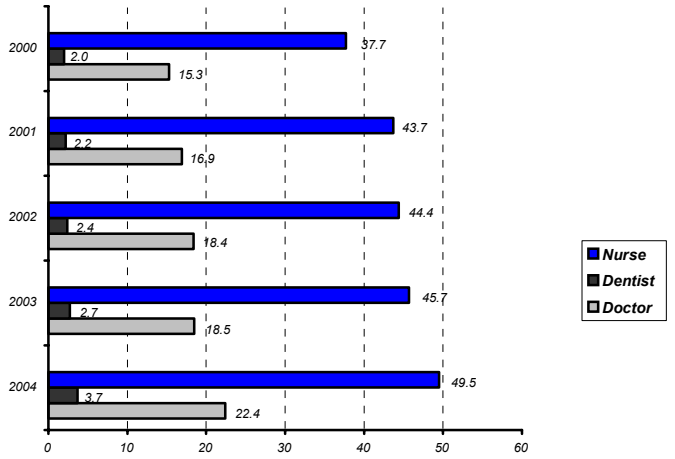
Human Resources

Table 7 below shows the development of the medical resources over the past five years at the national level respectively. During the 1994, per 10,000 populations, there were 11.2 doctors, 1.2 dentists and 25.8 nurses, while they were 22.4, 3.7, and 49.5 respectively in 2004. The nurse-doctor ratio was 2.2 in 2004 and 2.3 in 1994.

Human Resources — *Table 7*

Indicators (per 10,000 Population)	2004	2003	2002	2001	2000	1994
Doctors	22.4	18.5	18.4	16.9	15.3	11.2
Dentists	3.7	2.7	2.4	2.2	2.0	1.2
Nurses	49.5	45.8	44.4	43.7	37.7	25.8
Nurse per doctors	2.2	2.4	2.4	2.6	2.5	2.3
Bed	27.0	27.6	28.6	28.2	26.2	28.9

Human Resources per 10,000 population — *Figure 2*



Health Status of the Community

The following are selected standard health indicators that reflect Bahrain's improving health status.

Child Birth

Although the birth and fertility rates show a downward trend the volume of births has risen consistently due to the size of childbearing female population. Relevant socio-economic factors affecting childbirths include income, nutrition, and education. Literacy among woman is one of the highest in the Gulf region at 83% (census 2001). It is desirable to improve on woman education in order to improve family health and reduce the incidence of unnecessary premature births, still births and prenatal deaths.

The quality of antenatal care are improved via Mother and Child Health Care services at the Health centers, such as the introduction of ultrasound facilities at MCH units so that abnormalities can be identified earlier thus increasing the chances of survival.

The Ministry give Lots of attention on the quality of antenatal service provided at Mother and Child units at all the Health Centers. A great number of pregnancies have been subject to both primary and secondary care. 99.2% of births are attended by trained medical staff. There were an average of approximately 6 antenatal visits per live births in 2004

Births Statistics ***Table 8***

Health Indicators	2004	2003	2002	2001	2000
Total births*	15,039	14,674	13,659	13,555	13,667
Total live births	14,915	14,568	13,525	13,437	13,531
Total deliveries**	14,786	14,463	13,488	13,403	13,513
Abortion	1,505	1,630	4,105	2,165	2,059

* *Reported cases excluding those born abroad and home deliveries.*
** *A delivery may include one or more births*

Vital Statistics

Table 9 below shows that most of the vital statistical indicators were relatively constant for the past five years. For example, crude birth rate per 1000 population was 21.1 since 2002 while in 2001 was 20.5 and 19.6 in 2000. Infant mortality rate per 1000 live births recorded a significant increase in 2004 which was 9.5 comparing to 8.6 in 2000; Ministry of health formed a committee to investigate the main reasons behind this increment and the results will be published separately in a supplementary report.

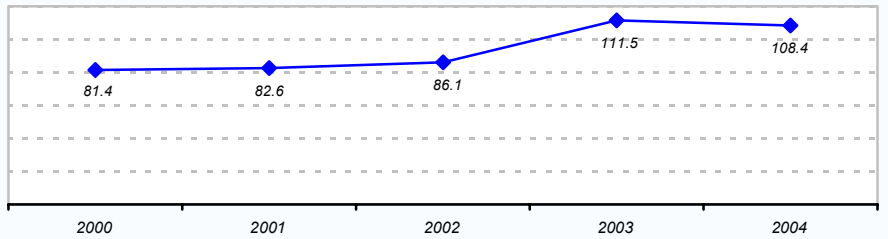
Vital Statistics as reported by Public Health Directorate **Table 9**

Health Indicators	2004	2003	2002	2001	2000
Crude birth/1000 population	21.1	21.1	20.1	20.5	19.6
Still birth rates/1000 births	8.2	7.2	9.8	8.7	10.0
Infant mortality rate/1000 live births	9.5	7.3	7.0	8.7	8.6
Maternal mortality rate/1000 live births	0.20	0.21	0.22	0.22	0.15
Under 5 yrs mortality/1000 live births	11.2	9.5	8.5	12.1	11.4
Premature birth rate/1000 live births	108.4	111.5	86.1	82.6	81.4
Under 5 yrs mortality/1000 child <5 yrs old	2.6	2.2	1.9	2.7	1.9
Total Fertility Rate per woman (Female 15-49)	2.6	2.6	2.6	2.6	2.6
Crude death rate/1000 population	3.1	3.1	3.0	3.0	3.0
Life expectancy rate at birth both sex	73.8	73.8	73.8	73.8	72.9

** Excluding 27 deaths under 25 weeks of gestation who died shortly after birth*

Pre Term Births

Premature birth rate/1000 live births ***Figure 3***



There seems to have been a rise in the number of premature births (birth occurring earlier than 37 completed weeks of gestation). The trend of the premature birth is tending to go upward see figure 3 above. A team was formed in conjunction with the Pediatric department to study this issue thoroughly and submit a scientific justifications and a proposed solution. The real concern not only because of the implied increase in death and disability but also because of the enormous costs involved in care of premature infants.

"Infants born prematurely have an increased risk of death in the first year of life. More than half of the born before six months gestation die within weeks of births; prematurely account for nearly a quarter of all deaths in the first month of life. (By Warren King**,** *Seattle Times medical reporter*). They are also at a greater risk for developing serious health problems such as: cerebral palsy, mental retardation, chronic lung disease, blindness or deafness.

Although there are several known risk factors for prematurely (see below), nearly half of all premature births have no known cause. When conditions permit, doctors may attempt to stop premature labor, so that the pregnancy can have a chance to continue to full term, thereby increasing the baby's chances of health and survival. However, there is currently no reliable means to stop or prevent preterm labor in all cases. Listed below are some examples of known factors related to premature births:

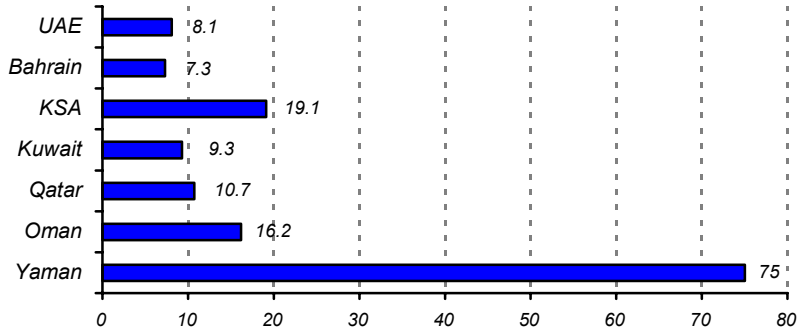
- A woman's previous history of preterm birth, or pregnancies that ended in miscarriage.
- Multiple pregnancies (twins, triplets, etc.) are at a higher risk for premature birth. Uterine or cervical abnormalities.
- Certain chronic disease such as high blood pressure, kidney disease and diabetes.
- Infections of the cervix, uterus or urinary tract. Certain STDs, Beta Strep.
- Substance abuse of tobacco, alcohol and other drugs.
- Women who have tried to conceive for more than a year before getting pregnant are at a higher risk for premature birth. A recent study done by Dr. Olga Basso of the University of Aarhus in Denmark and Dr. Donna Baird of the U.S. National Institute of Environmental Health Sciences suggests that women who had difficulty conceiving were about 40 percent higher risk of preterm birth than those who had conceived easily.
- Women under 18 or over 35 are at a higher risk for premature birth.

Total fertility rates (per woman of age 15-49) were consistent for the past five years at 2.6 in (3.4 for Bahrainis and 1.6 for Non Bahrainis).

Life expectancy rate at birth for both males and females was 73.8 years in 2004, 72.1 for male and 76.3 for female. Comparing to 2000, it was 72.9 for both sex, 70.4 for male and 75.3 for female respectively. This is a substantial achievement as the Global indicator No.10 stated that [the averaged life expectancy rate at birth should be 62 years].

Looking to figure 4, The Kingdom of Bahrain was the lowest among the GCC countries. In term of infant mortality rates in 2003.

Infant Mortality Rate/1000 live Birth for year 2003 – GCC Countries ***Figure 4***



"Vital Health Indicators - 2003", Executive Office of the Health Ministers Council for GCC, 9th Edition.

Nutritional Status of Children

Birth weight is an indicator of the health and nutritional status of mothers, as well as a prediction of infant health and development. In Bahrain, the percentage of newborns weighing at least 2.5 kg. has remained relatively constant for the past five years at 91.8%, 90.0%, 90.4%, 90.3% and 90.1 for the years 2004, 2003, 2002, 2001, 2000 respectively. In addition to that, the percentage of children below five years with weight-for-age values corresponding to acceptable standard reference values has significantly increased since the early Nineties from 77% to remain relatively stable around (92± .5%) for the past five years.

Mortality

In 2004, 2,215 deaths were reported to Public Health Directorate as compared to 2,045 in 2000, mostly from hospitals (45.5% deaths occurred at Salmaniya Medical Complex). The crude death rate continues to be very low and nearly constant (3.per 1000 population) since 2000. Most deaths by gender recorded in Bahrain were among male 58.5% rather than female.

Diseases of the circulatory system (cardiovascular diseases) constitute the highest single cause of mortality in Bahrain representing 69.0 per 100,000 populations, accounting for more than 31.1% of total deaths at Salmaniya Medical Complex.

The known risk factors for CVD such as smoking, and raised blood cholesterol, and the risk makers such as lack of physical activity, obesity, and alcohol consumption are expected to have increased in Bahrain over the last two decades. In addition to that, the continuing rises in the incidence of the cardiovascular in association with the rise in the size of the population over sixty five years of age who represent nearly 5.5% of the total population.

Deaths from Symptoms, signs and abnormal clinical and laboratory findings not elsewhere classified (Ill defined) was the second cause of deaths (61.5 per 100,000 population) with an increase of 56.5 from last year which is nearly 19.6% of the total deaths.

Neoplasms or Cancer is the third most common cause of death in Bahrain accounting for about 11.9% of total deaths with a decline of (-5.4%) from 2003. This accords with the world pattern. The great majority of deaths (61.6%) from Cancer were in age group over 60 years.

Deaths from endocrine, nutritional & metabolic disorders in 2004, an increment of 17.8% from previous year, while Injuries and poisoning stand as the fifth cause of death 28.1 (per 100,000 population) nearly . Other major causes of death were, congenital anomalies; infectious and parasitic; genitourinary diseases and diseases of the digestive system. (see table 10).

One of the recommendations of the World Health 2003 Report “Reducing Risks report” was that “countries should give top priority to developing effective, committed policies for the prevention of globally increasing high risks to health.” The main risk factors as defined by WHO are high blood pressure and high blood cholesterol are closely related to excessive consumption of fatty, sugary and salty foods. They become even more lethal when combined with the deadly forces of tobacco and excessive alcohol consumption and unsafe sex in connection with HIV/AIDS.

Top Leading Causes of Death ***Table 10***

Causes of Death (rates per 100,000 Population)	**2004**	**2003**	**2002**	**2001**	**2000**
Diseases of circulatory system	69.0	86.6	86.5	86.3	77.6
Symptoms, signs and abnormal clinical & Lab. Findings not elsewhere Classified	61.5	39.3	45.2	49.6	45.0
Neoplasms	37.2	39.3	41.4	36.9	35.8
Endocrine, nutritional & metabolic disor.	28.7	24.2	28.1	24.9	20.3
Injuries & poisoning	28.1	26.5	26.5	28.1	44.9
Respiratory system	17.7	20.7	18.0	16.2	12.2
Certain Infectious & Parasitic diseases	11.2	11.9	10.1	7.5	12.3
Genitourinary System	11.0	7.6	8.2	7.8	8.4
Digestive system	9.6	13.8	10.4	9.6	10.6
Congenital Anomalies deformations & chromosomal abnormalities	7.8	6.7	10.1	12.3	10.1

Morbidity

The health problems of Bahrain are those generally found in countries passing through the stage of transition from developing to developed nations. Communicable diseases are declining as the major causes of mortality and morbidity. They are being replaced by non-communicable ones such as cardiovascular diseases, cancer, metabolic diseases, congenital anomalies and accidents. The main causes of hospital admissions, based on the statistics of Salmaniya Medical Complex are illustrated in table 11.

Spontaneous abortion/miscarriages were the most common complication in pregnancies throughout the world. The SMC data showed that most of the listed morbidity have risen for over the past five years. This may highlight that more attention should be given to the environmental risks, community lifestyle and health education.

Top Ten Morbidity Based on Discharges from Salmaniya Medical Complex[1] *Table 11*

Morbidity (rates per 100,000 Population)	2004	2003	2002	2001	2000
Complication pregnancy, childbirth & puerperium (15-44)[2]	6002.6	6,231.7	6,226.4	6,132.1	6,248.5
Spontaneous abortion	885.5	895.0	1,017.4	1,057.2	1,012.1
Hereditary anaemias	414.3	363.8	277.5	227.2	233.4
Neoplasms	221.4	220.3	237.9	241.5	221.9
Ischemic heart disease	172.7	165.4	159.5	148.6	128.4
Diabetes	106.6	107.2	85.4	88.6	94.8
Asthma	62.4	56.6	66.1	61.1	69.9
Acute respiratory infection	23.9	30.9	43.7	41.7	43.4

1 Rates per 100,000 population
2 Rates per 100,000 females age 15-44 yrs

Immunization

Due to an efficient Expanded Program on Immunization (EPI) and high immunization coverage more than 98%, childhood diseases have been almost eradicated in Bahrain. According to the World Health Organization (WHO) Immunization Schedule, Measles vaccine as single antigen dose1 and MMR as dose2 were replaced by MMR1 given to children at one year of age MMR2 at 4-6 years of age since 1999. (See table 12)

The EPI team coordinates with the Ministry of Education to carry out the immunization activities on the schools children at all levels for both government & private under the umbrella of school health program.

Immunization Coverage Percentage *Table 12*

Immunization Against	2004	2003	2002	2001	2000
DPT	97.7	97.3	98	99	97
Mumps, Measles, Rubella (MMR1)	99.0	100	99.9	97	98
Mumps, Measles, Rubella (MMR2)	100	99.5	97	99	92
Poliomyelitis	97.7	97.3	98	99	97

Communicable Diseases

No cases were reported of the Diphtheria, Whooping Cough, Neonatal Tetanus and Poliomyelitis since 1990. Nevertheless, table 13 below shows that there were some variations in the rates trend of communicable diseases for the past five years. Although there was a marked rise in Gonococcal Infection (34.0/100,000 in 2000 to 70.8/100,000 in 2003), Syphilis incidence showed that there was a continuous rise to reach 242 cases (35.1/100,000) in 2003 from 105 cases (31.8/100,000) in 2000. However, the sudden drops in the numbers of reported cases in 2004 for both Syphilis and Gonococcal Infection was due to patients visited private clinics and cured without taking any laboratory sample for further conformation of the disease. These patients were reported under "Other Sexual Transmitted Diseases – STD" with total of 458 cases

Furthermore, there was also a substantial decrease in the number of Malaria (P.vivax) cases from 81 cases (11.5/100,000) in 2004 as compared to 53 cases (7.7/100,000) in 2000. There was an increase of the Viral Hepatitis totals to reach 64.1/100,000 in 2004 from 2000 which was 23.3/100,000. Most of the sexual transmission diseases cases were increased lately due to unsafe relations.

Communicable Diseases Rates (Reported New Cases) *Table 13*

Disease (rates per 100,000 Population)	2004	2003	2002	2001	2000
Pulmonary TB	17.8	19.1	18.7	17.0	23.2
Gonococcal Infection	32.9	70.8	62.0	36.4	34.0
Syphilis	32.9	35.1	36.9	22.8	31.8
Other Sexual Transmitted Diseases	64.8	NA	NA	NA	NA
Viral Hepatitis (Total)	46.1	42.5	36.3	35.1	23.3
Malaria (P. vivax)	11.5	8.0	7.0	7.0	7.7

New Millennium Development Goals (MDGs)[7]

At the United Nation Millennium Summit in 2000, world leaders from around the world (189 countries) endorsed a set of goals and targets for the year 2015. The eight goals, known as the Millennium Development Goals (MDGs) cover a range of development issues, such as reducing poverty, fighting various infectious diseases, and promoting gender equity.

The eight Millennium Development Goals comprise 18 targets and 48 indicators. The targets set quantitative targets for poverty reduction and improvements in health, education, gender equality, the environmental and other aspects of human welfare. These goals are:

Goal 1: Eradicate extreme poverty and hunger
Goal 2: Achieve universal primary education
Goal 3: Promote gender equality and empower women
Goal 4: Reduce child mortality
Goal 5: Improve maternal health
Goal 6: Combat HIV/AIDS, malaria, and other diseases
Goal 7: Ensure environmental sustainability
Goal 8: Develop a global partnership for development.

Three goals, Eleven targets and seventeen indicators were directly related to health which WHO is responsible in terms of reporting at global level.

The MDGs are being used to focus and reorient the work of individuals and programs, and as a benchmark against which to assess overall county and organizational performance.

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