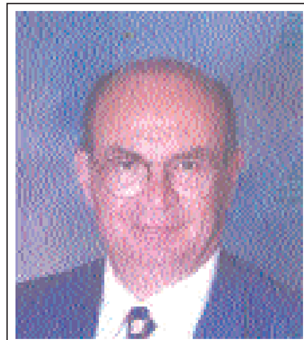
The Health Care System of Iraq[1]



Nabil M Kronfol

MD, DrPH

Until two decades ago, the main indicators of the health status of Iraqi people were improving substantially and health care services were achieving high standards. However, the sad events that befell on this country affected the health system in a significant way and health indicators fell to levels comparable to some of the least developed countries. The decline was exacerbated by major wars, disastrous military adventures, and political and economic sanctions.

The country currently faces enormous health challenges.

Demographic Indicators

Indicator	2004	2008
Area Km2	271000	435052
Population (000)		31895
Urban %	67	67
Crude birth rate*		36
Crude death rate		5.0
Pop Growth rate %	3.0	3.0
Pop < 15 yrs %		43.0
Pop > 65 yrs %	2.8	2.8
Dependency ratio		76.0
Total fertility rate		5.0
Average household size	7.8	
Life expectancy at birth Yrs	59.0	60.6

* Per 1,000 Population

More than 24% of the population lives in Baghdad, 9.5% in Mosul, 6.6% in Basra, 5.2% in Arbil, and 6.3% in Sulaimaniya.

Iraq has experienced population movements due to political considerations.

Life expectancy at birth is estimated, according to the UNDP Human Development Report 2001 to be 59.2 years for males and 62.3 years for females. However, the only set of figures available at the Ministry of Planning and Development Cooperation of Iraq (MOPDC) are for the year 1997 and they are 58 years for males and 59 for females.

Economic indicators

The Iraqi economy was previously dominated by the State. Iraq's economic situation is currently difficult after two decades of wars, more than 13 years of severe sanctions and three decades of inappropriate policies. However, the macroeconomic outlook will be positive when the security situation improves.

Poverty rates vary according to the definition of the poverty line and reliable data is very scarce. The World Bank estimates that 27.2% of the population was living on less than US $ 2.00 per day in 2001 [2]. Household poverty has prompted children to leave schools and seek jobs to support their families. Regional sample surveys indicate rising numbers of working children and those who live or work on the streets[3].

According to the 2003 Needs Assessment Report of the United Nations Development Group (UNDG) and the World Bank, the unemployment rate rose to around 50% with the collapse of government-based employment, state-owned industries, the dismissal of civil servants and the demobilisation of the army [4].

[1] Information on the health care system of Iraq has been adapted from Dr Ala' Alwan (former Minister of Health) publications

[2] World Bank. World Development Report 2001.

[3] Alwan, Ala,"The health system of Iraq, 2004

[4] World Bank and the United Nations Development Group. United Nations and World bank Iraq's Needs Assessment Report. October 2003.

Education

The education system in Iraq was highly-regarded and high-performing until the early 1980s. The politicization of the education system influenced the curriculum, the teaching staff and admission policies and led to a marked deterioration.

In 2004, out of nearly 15,000 existing school buildings, 80% now require significant reconstruction. More than 1,000 schools need to be demolished and completely rebuilt. Another 4,600 require major repair[5].

A new educational philosophy and a set of 6 major policy directions introduced in 2004 will guide the rebuilding of the Iraqi education system.

Indicator	2008
Adult Literacy rate %	65
School enrolment Primary Males %	112
School enrolment Primary Females %	95
School enrolment Primary Total %	103
School enrolment secondary Males %	52
School enrolment secondary Females %	38
School enrolment secondary Total %	45
Unemployment %	12

Health status indicators

Prior to 1990, Iraq was advancing through the epidemiological transition from infectious diseases to chronic and degenerative disorders. The country currently suffers from a double burden. While the magnitude of non-communicable diseases continues to increase, the incidence of common communicable diseases has also increased during the last 20 years.

Reliable and high-quality epidemiological data is generally scarce. The health information system is weak. The factors contributing to the deteriorating health status include poor investment in health development, poorly maintained health infrastructure, inappropriate management of the health sector, very low purchasing power, poor sanitation and water supply, unsafe food storage, smoking, unhealthy dietary patterns, and lack of exercise.

Epidemiologic indicators

Indicator	1998	2008
Newborns with low BW %		14.8
Children underweight %		9.7
Neonatal Mortality Rate		23.0
Infant Mortality Rate	103.0	29.0
Under 5 Mortality Rate	125.0	34.0
Maternal Mortality Rate**		84

* Per 1,000 Live births

** Per 100,000 Live births

Geographical distribution shows differences in rates. Childhood mortality is reported to be lower in the north compared to the centre and south [6].

Although the disease profile in Iraq is changing, infectious diseases remain on the list of major causes of morbidity and mortality. Diarrhoeal diseases, acute respiratory infections (ARI), leishmaniasis, measles, mumps, and typhoid are still leading conditions reported from health facilities. One major exception is poliomyelitis; the last case was reported in Iraq in 2000.

Indicator	2008
Immunization BCG %	83
Immunization DPT3	80
Immunization OPV %	80
Immunization Measles %	91
Immunization HPV3 %	79
Tetanus for pregnant women %	86

Immunization rates of one -year old children

Immunisation coverage rates declined considerably in 2003. Public health programs have been reactivated during the second half of 2003.

Acute lower respiratory infections and diarrhoea account for an estimated 70% of deaths in children. Acute respiratory infections are still one of the leading causes of morbidity among children under 5.

Leishmaniais (cutaneous and visceral) is increasing.

MOH and WHO estimate an incidence of 130 cases of Tuberculosis per 100,000.

Iraq is still among the low prevalence countries for HIV/AIDS. However as a result of changes in risk factors, the presence of military troops, the influx of large numbers of foreigners and the increase in drug abuse, the magnitude of the problem needs to be carefully examined. Precise information on other sexually transmitted diseases is not available. There are indications suggesting an increase in the magnitude of STDs.

Statistics indicate that cardiovascular diseases are the leading cause of death and there are indications that cancer and diabetes are increasingly seen as major health problems. Breast, Lung, Bladder, Larynx and Non Hodgkin lymphoma top the list of cancer in

[5] Alwan A. Education in Iraq. Ministry of Education 2004.

[6] Ali MM & Iqbal HS. Sanctions and Childhood Mortality. Lancet. Vol. 355. 2000.

Iraq.
The major modifiable cardiovascular risk factors are smoking, hypertension, and diabetes.
Overweight among adults is one of the features of malnutrition seen today in the country.

Smoking Prevalence Men %	41.5
Smoking Prevalence Women %	6.9
Smoking Prevalence Total %	24
Prevalence of obesity BMI>25 % Men	63.6
Prevalence of obesity BMI>25 % Women	69.6

Data 2008

Health System

The major provider of health care is the Ministry of Health. Until 2003, the military health services provided health care to military personnel and their families. The military medical facilities have now been absorbed by the MOH and most health professionals integrated into the MOH institutions. The private sector is composed of small private hospitals and a network of clinics.
There is a health directorate in each of the 18 governorates. The system is too centralised with authority and decision making largely restricted to the central Ministry of Health and little authority given to governorates.
The system is also basically hospital-oriented with inadequate emphasis on sustainable health development. There is no effective health information system.

The levels and distribution of available human resources for health is inadequate.

Indicator	2008
Physicians	6.1
Nursing Midwifery	12.3
Dentists	1.4
Pharmacists	1.5
Hospital beds	12.6
PHC	0.6

Rates are per 10,000 population

The physical infrastructure has deteriorated as a result of over 20 years of under-investment, poor management and conflict. The functional capacity of health care services was further weakened by widespread looting.
Although there have been scattered attempts at rehabilitating some health facilities, most of the health infrastructure continues to be in poor condition.
There were 1,285 primary health care (PHCs) centres in Iraq in 2004. On average, each centre is responsible for providing primary care to a population of about 35,000. There is currently 0.6 PHC centre per 10,000 population. 62% of the pregnant women and 73% of the infants were registered by the PHCs, more in urban and sub-urban areas than in rural areas.
The centres are used in the afternoons as public or health insurance clinics for a regulated fee. The revenue of these clinics partly goes to the government and partly to the staff.
There is a severe shortage in pharmacists and nurses (particularly females) in almost all governorates. Among different groups of health professionals, physicians are generally well represented, though the physician to population ratio in Iraq is below the regional average. In addition to the variable geographic distribution of physicians, there is an overall excess of specialists and insufficient physicians focusing on primary health care. The speciality of primary care or family medicine is almost non-existent. This speciality should be developed, with general practitioners having an equivalent status to hospital specialists. There are too many people working in administration.
There are 172 governmental hospitals in all 18 governorates, providing about 30,000 hospital beds [7]. About 23% of hospitals are in Baghdad. Average bed occupancy rate was 52.9%. Average in-hospital stay is 2.9 days.
The number of private hospitals is 65 of which about two thirds are in Baghdad [8]. Private health are has developed remarkably over the past few years.
Quality of care has progressively deteriorated over the last two decades due to the lack of maintenance, shortages of supplies, drugs and equipment, inadequate training of staff and a continuing depletion of experienced professionals at all levels. A large number of highly trained physicians, technicians and nurses have left the country to work abroad. Hospitals have to operate with severely limited budget in an environment of extreme bureaucracy and centralisation.
Many health centres were built in the 1970s and 1980s and most hospitals were built earlier.
The post-war looting and instability severely impacted upon the health sector. There have been persistent disruptions of electric power, water supply and sewage, widespread insecurity and a partial paralysis of financial, managerial, logistic and administrative systems.

Health Professions Education

There are 17 medical schools, seven colleges for Pharmacy, six for Dentistry and three Nursing colleges. In addition, there are three

[7] Ministry of Health. Department of Health & Vital Statistics. Health Compass 2004.

[8] Ministry of Health. Department of Health & Vital Statistics. 2004.

colleges that offer a 4-years training program in health technology, and there are seven high institutes for laboratory practice.

Medical education faces considerable challenges. Most schools lack basic requirements in trained staff and material resources. Postgraduate medical education has also expanded to respond to the increasing need created by the departure of large number of highly experienced specialists and consultants but the quality of training has deteriorated.

The quality of training for medical and other health science students needs to be reviewed. There is a need for major changes in curriculum and teaching methods that address the common health challenges in Iraq and take advantage of new technologies for distance learning and self-directed learning. Post-graduate education, study tours, and training for Iraqis in other countries should be encouraged. A National School of Public Health should be established. Professional associations of health workers should be strengthened.

The relationship between the teaching hospitals, which is owned and managed by the MOH and the medical schools needs to be strengthened.

There are three levels of nursing education (skilled which is three years of training following 9 years of general schooling, technical which requires two and a half years of training after 12 years of general schooling, and the college level which requires 4 years of university education). The nursing colleges graduate about 250 annually, and the 30 nursing technical institutes graduate about 900 nurses every year. In addition there are 24 female and 43 nursing secondary schools graduating about 640 nurses. Midwifery schools are 9. There is no licensure procedure. Post-basic programmes in nursing specialisation are not available.

Health Care Utilisation

The consultation time is unacceptably short in primary care. Because services are over utilised, doctors are forced to see a large number of patients per hour [9]. At health centres, most doctors work for 3 hours (9.00 -12.00) during which they could see between 30-100 patients. As a result, the consultation time is 2-6 minutes. Among an average of 120 outpatients per day per PHC, up to 27% were seeking drugs only.

People with access to HS %	93
People with access to HS % Urban	96
People with access to HS % Rural	87
Prevalence of contraceptive %	50
Antenatal coverage %	54
Births attended by personnel %	80

Health Care Quality

The lack of accreditation and licensing systems constitutes a major constraint. There is no continuing education programme and no significant attempts to upgrade the knowledge and skills of health workers. Irrational drug use is common. The referral system is either rudimentary or practically non-existent. There is no system of general or family practice. Patients can visit any health centre or hospital without referrals. They may receive different prescriptions from several doctors. Medical records do not exist in health centres or hospital outpatients; they are inadequate and poorly maintained in hospital in-patient departments. Sanitation is poorly maintained almost every where.

Uncollected garbage, unclean and dysfunctional toilets, lack of functional sewage system is common. There is no treatment of medical waste. There are generally no guidelines or standards for the management of common conditions. If they exist, they are usually not adequately disseminated nor followed. Quality assurance programmes in hospitals and health centres are non-existent.

A plan for quality improvement in a proportion of hospitals and health centres has been prepared.

People's Views on Health

Sixty percent of people interviewed believed that clinics cannot provide basic health care as well as a hospital can. Public sector must improve its services since over 70% thought that private health care is better than public health care. Because trained general practitioners are scarce, more than 60% felt it was better to see a specialist when they were sick. More than 50% of respondents believed that the government should pay for the services delivered by private doctors and hospitals.

A poll suggested that Iraqis may not regard health care as their top priority. The percent of the population that regards health as a priority rate did not exceed 5% [10].

Pharmaceuticals

Iraq had a highly organised drug regulatory system in the 1980s. The National Board for the Selection of Drugs (NBSD), which was established in the early 1980s, reviewed all pharmaceutical products marketed in Iraq and produced the national list of drugs in 1986 based on the principles of efficacy, safety,

[9] Liu et al. Concept Paper for the National Health Care Quality Improvement Programme in Iraq. MOH & Abt Associates 2004.

[10] International Republican Institute (IRI). Public Opinion Report. June 2004.

quality and need. The list contained about 1500 drug products and dosage forms. A primary health care list was also produced. Following the sanctions and the 1991 Gulf war, the NSBD authority and technical work became progressively weaker.
Pharmaceuticals constitute a large proportion of the government health budget. In 1989, the Ministry of Health spent an estimated US$ 500 million in foreign exchange for imports18. Funding for drugs was drastically reduced after 1990. A rationing system was initiated covering medicines for patients with chronic diseases. WHO estimates that from 1990-1997 approximately US$ 40 million per annum was spent on the procurement of medicines, covering about 15% of needs.
The State Company for the Marketing of Drugs (KIMADIA) is responsible for procurement, storage and distribution of medicines. Recent analyses by the Ministry of Health indicate that the KIMADIA medicine supply system was not designed for optimal performance. Specifically, procurement, inventory management and distribution systems were ineffective and inefficient. During the sanctions years, there was no adequate focus on quality in drug procurement.
Prior to 1990 the local industry produced about 30% of medicines consumed. Most local pharmaceutical production facilities like Samara Drugs Industries (SDI) reduced production for lack of investment or raw materials. The Arab Company for Antibiotics Industries (ACAI) based in Baghdad produced part of the antibiotics needs.
Shortages of essential and sometimes life-saving medicines have been a regular feature in Iraqi hospitals. A special card system was introduced for patients with chronic diseases but the rations were frequently inadequate. Despite the scarcity of drugs irrational prescribing is common.
Efforts are now being made to improve the quality and distribution of pharmaceuticals, medical supplies and equipment. Physicians need to be re-trained in rational prescribing to reduce misuse and wastage of medicines.

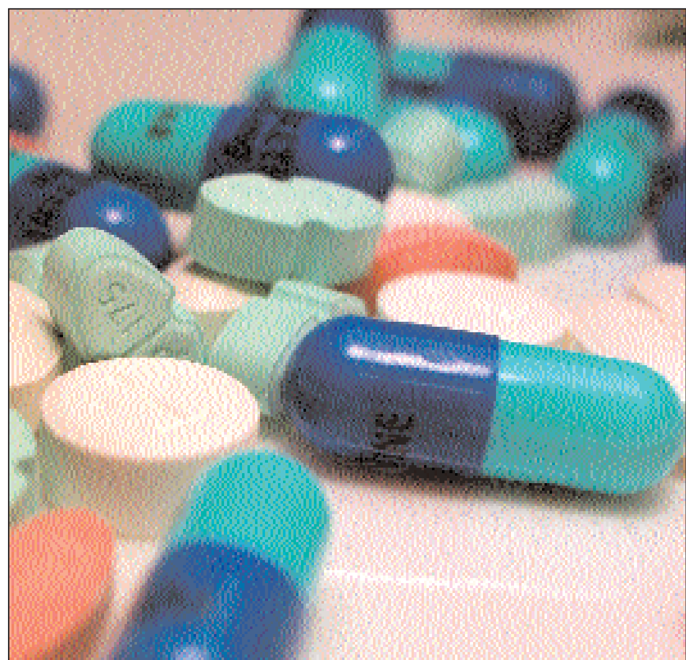
Health Care Financing

The MOH provides services through its network of facilities. Traditionally, almost all services provided by PHCs and hospitals are free except for consultations at “public” clinics or “insurance” clinics which operate in the afternoons at low cost to patients.
During the 1990s, a self-financing “auto-financing” system was introduced and implemented until 2003 when it was discontinued. The self-financing system meant that the funds obtained came from household out-of-pocket expenditures. Most of the revenue was retained at the facility level and used to pay salary incentives for staff. While the strength of the auto-financing system is that facilities managed themselves as autonomous entities providing staff incentives, the system resulted in a large burden on the patients since most of the revenue came from out-of-pockets funds.
Overall spending on health has increased considerably since 2004. Salaries for health professionals and civil servants have increased and spending on pharmaceuticals and operating expenditure has risen dramatically.

Indicator	**2008**
GDP per capita $	2580
Exp on health/capita $	77
Gvt Exp on health/capita $	60
Total exp on health % GDP	3.0
Gvt exp on health as % THE	77.8
OOP exp on health % THE	22.2
Gvt exp on health % budget	3.4
MOH budget % Gvt budget	4.4

Conclusion

Currently the health care delivery system is undergoing several changes addressing its scope its organization and its quality. While reconstructing the health infrastructure and investing in manpower, the MOH has developed policies to prioritize the development of a public health and a decentralized primary care system countrywide.



Our research benefits your health. That's why we're investigating disease.

Combating serious diseases
such as cancer is our speciality.

Our innovations
help millions of people by
alleviating their suffering and
improving their quality of life.
We give them hope.

We Innovate Healthcare

Hoffmann La Roche Ltd.
14th Floor, Block B
Sodeco Square
Beirut - Lebanon