



**Jordan**



## Jordan Country Profile

Jordan is a Southwest Asian country, bordered by Syria to the north, Iraq to the northeast, Saudi Arabia to the east and south and Palestine to the west. All these border lines add up to 1,619 km (1,006 mi).

Major cities include the capital Amman in the northwest, Irbid and Az Zarqa, both in the north, and Madaba, Karak and Aqaba in the south.

The climate in Jordan is semidry in summer with average temperature in the mid-30°C (mid-90°F) and relatively cold in winter averaging around -1.3 °C (30 °F).

The official language is Arabic, but English is used widely in commerce and government and among the educated classes. Arabic and English languages are a part of the obligatory curriculum at public and private schools. French is taught at some private schools but is not obligatory.

Approximately 92 percent of Jordanians are Muslims, 6 percent Christian and 2 percent of other religions.

Capital	Amman
Area in square kilometers	88,778
Total population in thousands	5,600
% Urban population out of total population	83
Crude birth rate per 1000 population	29.0
Crude death rate per 1000 population	7.0
% Population growth rate	2.3
% Population below 15 years	37.3
% Population 65 years and over	3.2
% Dependency ratio	68.2
Total fertility rate (R) per woman	3.6



## History

With the break-up of the Ottoman Empire at the end of World War I, the League of Nations and the occupying powers redrew the borders of the Middle East. The ensuing decisions, most notably the Sykes-Picot Agreement gave birth to the French Mandate of Syria and British Mandate of Palestine. More than 76% of the British Mandate of Palestine was east of the Jordan River and was known as "Transjordan".

The country was called "Transjordan", under British supervision until after World War II. In 1946, the British Mandate ended and King Abdullah was proclaimed as the first ruler of the Hashemite Kingdom of Transjordan. He officially changed the country's name to the Hashemite Kingdom of Jordan in April 1949.

## Economy

Jordan is a small country with limited natural resources. It is among the four most water-poor countries in the world. Jordan also depends on external sources for the majority of its energy requirements. Jordan developed a new energy strategy in 2007 that aims to develop more indigenous and renewable energy sources, including oil shale, nuclear energy, wind, and solar power. Jordan is classified by the World Bank as a "lower middle income country". According to Jordan's Department of Statistics, 13% of the economically active Jordanian population residing in the country was unemployed in 2008. Jordanian exports mainly include clothing, fertilizers, phosphates and potash. The country depends heavily on imports.

## National Health Profile

Main Causes of Morbidity
Ischemic Heart Disease
Road traffic accidents
Congenital anomalies
Cerebrovascular Diseases
Lower respiratory Infections
Self-inflicted injuries
Diarrheal diseases
Perinatal conditions
Breast Cancer
Nephritis and Nephrosis

The health care services are highly concentrated in the capital Amman. The country's health care system is divided between public and private institutions. In the public sector, the Ministry of Health operates 1,245 primary health-care centers and 27 hospitals, accounting for 37 percent of all hospital beds in the country; the military's Royal Medical Services runs 11 hospitals, providing 24 percent of all beds; and the Jordan University Hospital accounts for 3 percent of total beds in the country. The private sector provides 36 percent of all hospital beds, distributed among 56 hospitals.

According to 2003 estimates, the rate of prevalence of human immunodeficiency virus/acquired immune deficiency syndrome (HIV/AIDS) was less than 0.1 percent. According to a United

Nations Development Program report, Jordan has been considered malaria-free since 2001; cases of tuberculosis declined by half during the 1990s, but tuberculosis remains an issue and an area needing improvement. Noncommunicable diseases such as cancer also are a major health issue in Jordan. Childhood immunization rates have increased steadily over the past 15 years; by 2002 immunizations and vaccines reached more than 95 percent of children under five.

## National Health Care Structure

Health Expenditure Indicators (2007)	
GDP per capita	2,293
Total expenditure on health (per capita)	241
General government expenditure on health (per capita)	109
Total expenditure on health of % of GDP	10.5
General government expenditure on health as % of total health expenditure	45.3
Out-of-pocket expenditure as % of total health expenditure	41.6
General government expenditure on health as % of total general government expenditure	5.6
Ministry of health budget as % of government budget	9.5

About 70% of Jordanians had medical insurance in

2007, the Jordanian government plans to reach 100% in 2011.

The King Hussein Cancer Center is the only specialized cancer treatment facility in the Middle East. It is one of the top cancer treatment facilities in the world. Jordan was ranked by the World Bank to be the number one healthcare services provider in the

region and among the top 5 in the world. In 2008, 250,000 patients sought treatment in the Kingdom including Iraqis, Palestinians, Sudanese, Syrians, Americans, Canadians, and Egyptians. Jordan earned almost \$1 billion dollars in medical tourism revenues according to the World Bank.

According to the CIA World Factbook, the life expectancy

in Jordan is 78.55 years. Ninety nine percent of Jordan's population has access to clean water and sanitation despite being one of the world's poorest countries in water resources.

Population with access to local health services, total (%)	99
Contraceptive prevalence rate (%)	57
Antenatal care coverage (%)	99
Births attended by skilled health personnel	99

## **Availability of Radiology Resources**

The major shortage of radiologists and equipment is mainly in the public hospitals, especially in areas away from the capital Amman. For example, in the northern part of Jordan, which consists of 3 major cities, there are only two MRI machines. None of these machines is at a public hospital. Shortage is further more striking in the southern part of Jordan, where advanced radiological studies are scarce.

### **1. Public Hospitals**

The public hospitals, ran by the Ministry of Health, suffer from severe shortage of imaging machines and staff. There is only one MRI machine to cover 27 hospitals. An MRI appointment may take up to 8 months and patients have to travel to the capital Amman where the machine is located. CT scan is available at the major public hospitals. Ultrasound and X-ray are available in most of the public hospitals.

### **2. Private Hospitals**

Advanced imaging is mainly concentrated in the capital Amman where CT, MRI and interventional services are available. The number of private offices is declining as the main private hospitals are expanding their radiology departments. There are currently 9 private radiology offices.

### **3. University Hospitals**

There are two university hospitals in Jordan. Both provide adequate diagnostic and interventional services, in addition to nuclear medicine studies. However, the lack of academic radiologists is the major issue. Only seven academic radiologists currently appointed in the three medical schools. PACS have not been implemented yet and traditional films are still widely used, even in university hospital.

Number of physicians	10233
Diagnostic Radiologists	230
Interventional radiologists	26
Nuclear medicine physicians	15

	Physicians	Radiologists
Public Hospitals & Health care centers	4489	12
Private sector	4939	160
Royal Military Services	792	42
University Hospitals	701	9
King Hussein cancer Center	54	7

## **Jordan Nuclear Regulatory Commission (JNRC)**

JNRC was established in 2007 as a successor to the former Jordan Nuclear Energy Commission, established in 2001. JNRC is an independent institution; it directly reports to the Prime Minister, and

enjoys administrative and financial independence. The main goal of the JNRC is to work, in coordination with relevant bodies, on achieving the following:

- Regulating and monitoring the use of nuclear energy and ionized radiation.
- Protecting environment and human health and property from the hazards of radiation and related pollution.
- Ensuring the availability of conditions and requirements of general safety, radiation protection, and nuclear safety and security.

#### JNRC Tasks and Responsibilities:

1. Provision of authorization for institutions and workers in the nuclear and radiation field, ensuring compliance with the pertinent rules and regulations.
2. Controlling and monitoring the implementation of pertinent rules through inspection.
3. Communication with regional and international regulatory bodies in the field for exchange of expertise and scientific research.
4. Participating in relevant Arab, regional, and international projects.
5. Regulating relationships of national institutions in the field among each other, as well as with relevant Arab, regional and international institutions.
6. Application of comprehensive safeguards and creating a system for accounting and control of nuclear materials subjected to the said safeguards.

### **Jordan Association of Radiologists**

As a branch of Jordan Medical Association (JMA), its only tasks so far have been registering radiologists and arranging radiological conventions.

### **International Aid**

USAID is primarily directing its efforts toward family planning, reproductive health and maternal and child health services. In tandem with activities that strengthen the delivery of maternal and child health services, USAID is working to improve important health indicators such as life expectancy, infant mortality, and morbidity. These efforts occur at all levels of the health system, but especially at the local level where health care workers interact the most with citizens. To improve important health management systems, USAID is assisting the Ministry of Health to adopt a more competitive legal and regulatory framework for the health sector. This includes health insurance reforms, decentralization of hospitals, development of systems for continuous medical education, and adoption of relevant health provider incentives.

The budget of the health section in 2007/2008 was 8-9% of the total USAID's budget. USAID's only program regarding radiology was training technologists and radiologists on mammogram in collaboration with King Hussein Cancer Center (KHCC).

## Bibliography

*CIA World Factbook*. (n.d.). Retrieved August 2009, from <https://www.cia.gov/library/publications/the-world-factbook/geos/jo.html>

*Jordan Medical School*. (n.d.). Retrieved August 2009, from <http://www.jma.org.jo>

*Jordan Nuclear Regulatory Commission (JNRC)*. (n.d.). Retrieved August 2009, from <http://www.jnrc.gov.jo>

*The U.S. Agency for International Development (USAID)*. (n.d.). Retrieved August 2009, from <http://www.usaid.gov>

*World Health Organization*. (n.d.). Retrieved August 2009, from <http://www.who.int/countries/jor/en>