



USAID
FROM THE AMERICAN PEOPLE



Partners for Health Reformplus

Jordan National Health Accounts, 2000 and 2001

August 2006

Prepared by:

Fatima Al-Halawani, MD, MSc.PH
Abt Associates Inc.

Dwayne Banks, Ph.D
Abt Associates Inc.

Dr. Taissir Fardous, MD
Ministry of Health

Major Ali Al-Madani
Royal Medical Services

This document was produced by PHRplus with funding from the US Agency for International Development (USAID) under Project No. 936-5974.13, Contract No. HRN-C-00-00-00019-00 and is in the public domain. The ideas and opinions in this document are the authors' and do not necessarily reflect those of USAID or its employees. Interested parties may use the report in part or whole, providing they maintain the integrity of the report and do not misrepresent its findings or present the work as their own. This and other HFS, PHR, and PHRplus documents can be viewed and downloaded on the project website, www.PHRplus.org.



Abt Associates Inc.
4800 Montgomery Lane, Suite 600 ■ Bethesda, Maryland 20814
Tel: 301/913-0500 ■ Fax: 301/652-3916

In collaboration with:

Development Associates, Inc. ■ Emory University Rollins School of Public Health ■ Philoxenia International Travel, Inc. ■ PATH ■ Social Sectors Development Strategies, Inc. ■ Training Resources Group ■ Tulane University School of Public Health and Tropical Medicine ■ University Research Co., LLC.

Order No. WP 014



Mission

Partners for Health Reformplus is USAID's flagship project for health policy and health system strengthening in developing and transitional countries. The five-year project (2000-2005) builds on the predecessor Partnerships for Health Reform Project, continuing PHR's focus on health policy, financing, and organization, with new emphasis on community participation, infectious disease surveillance, and information systems that support the management and delivery of appropriate health services. PHRplus will focus on the following results:

- ▲ *Implementation of appropriate health system reform.*
- ▲ *Generation of new financing for health care, as well as more effective use of existing funds.*
- ▲ *Design and implementation of health information systems for disease surveillance.*
- ▲ *Delivery of quality services by health workers.*
- ▲ *Availability and appropriate use of health commodities.*

August 2006

Recommended Citation

Al-Halawani, Fatima, Dwayne Banks, Taissir Fardous, and Ali Al-Madani. August 2006. *Jordan National Health Accounts, 2000 and 2001*. Bethesda, MD: The Partners for Health Reformplus Project, Abt Associates Inc.

For additional copies of this report, contact the PHRplus Resource Center at PHR-InfoCenter@abtassoc.com or visit our website at www.PHRplus.org.

Contract/Project No.: HRN-C-00-00-00019-00

Submitted to: USAID/Amman

and: Karen Cavanaugh, CTO
Health Systems Division
Office of Health, Infectious Disease and Nutrition
Center for Population, Health and Nutrition
Bureau for Global Programs, Field Support and Research
United States Agency for International Development

Abstract

National Health Accounts (NHA) is a basic tool of health sector management and policy development. It describes how much a country spends on health care services and maps out the flow of health care funding from the financing sources, through the financing agents, to the ultimate consumers of health care services. This report presents the results of the second round of NHA estimates, for 2000 and 2001, for the Hashemite Kingdom of Jordan.

Since issuance of the first NHA report for Jordan, for 1998, several indicators have significantly changed. For example, health care expenditures have increased in nominal and per capita terms, and as a share of gross domestic product (GDP). In particular, expenditures on curative care and pharmaceuticals services have increased significantly. The private sector, principally households through out-of-pocket expenditures but also health insurance premiums and co-payments, continues to represent the largest source of health care funding, followed by the public sector and donor organizations. The main issues emerging from the 2000-01 results are those identified for 1998: the high level of total health care expenditures as a percentage of GDP, and implications of this for future and current service provisions, and overall quality of care. Other issues of paramount importance are: the consistently high level of pharmaceutical expenditures, the continued high level of investment in the private sector, and the paucity of health care regulation (covering capital investment). This last has resulted in a surge of private hospitals, and a consistently high level of spending on curative care as opposed to primary care.

The report discusses the policy implications of NHA results: sustainability of current levels of health care expenditures, pharmaceutical cost containment, reallocation of expenditures from curative to primary care, public and private sector coordination, and equity. It also addresses the institutionalization of the NHA effort in Jordan, making specific recommendations for continued government support, as well as the development of a standardized data reporting system.

Table of Contents

Acronyms	ix
Acknowledgements	xi
Executive Summary	xiii
1. Introduction	1
1.1 Development of Jordan’s National Health Accounts	1
1.2 NHA and Policymaking in Jordan	1
1.3 Second Round of NHA Activities	2
2. Background.....	3
2.1 Socio-Economic Background.....	3
2.2 Demographic and Health Trends.....	3
2.3 The Jordanian Health Sector	4
3. Methodology.....	7
3.1 Data Collection Strategy.....	8
4. Overview of NHA Results.....	11
4.1 Jordanian Health Care Financing: Where it Comes From and Where it Goes	12
4.2 Pharmaceutical Expenditures	15
4.3 Cross-Country Comparative Analysis.....	16
5. Jordan NHA Findings: National Level.....	19
5.1 Structure of National Health Accounts Results.....	19
5.2 Financing Sources	26
5.3 Financing Agents.....	27
5.4 Use of Funds.....	28
6. Jordan NHA Findings: Sub-System Level	33
6.1 Organization and Size of the MOH	33
6.1.1 Sources of MOH Funds	34
6.1.2 Use of MOH Funds.....	35
6.2 Organization and Size of the Royal Medical Services	36
6.2.1 Sources of Funds	39
6.2.2 Uses of Funds	39
6.3 Jordan University Hospital.....	40
6.3.1 Sources of Funds	41
6.3.2 Uses of Funds	41

6.4	Social Security Corporation	43
6.5	Non-governmental Organizations	44
6.5.1	Background.....	44
6.5.2	Analysis of NGO Funds	46
6.6	Insurance Sector	47
6.6.1	Private Health Insurance.....	47
6.6.2	Private Firms and Health Insurance.....	48
6.6.3	Jordan's Universities and Health Insurance.....	48
6.7	Civil Insurance Program.....	49
6.7.1	Organization	49
6.7.2	Revenue and Expenditures	49
6.8	United Nations Relief Works Agency.....	51
6.9	Household Health Care Expenditure Estimates.....	52
6.10	Hospital Sector	55
7.	Policy Implications of NHA	57
7.1	Policy Implications.....	57
7.2	Policy Example.....	58
8.	Future Steps for Jordan's NHA	59
	Annex A. USAID Assistance to Jordan	61
	Annex B. Bibliography.....	63

List of Tables

Table ES-1: Summary NHA Estimates, Jordan, 2000 and 2001	xiii
Table ES-2: Total Health Care Expenditures by MOH, RMS and JUH, 1998-2001	xv
Table ES-3: MOH Expenditures on Functions	xv
Table 1: International Comparison of Fertility and Mortality Rates.....	4
Table 2: Profile of Health Care Sector in Jordan	5
Table 3. Summary NHA Estimates, Jordan, 2000 and 2001	11
Table 4: Expenditures on Pharmaceuticals	15
Table 5: Comparison of Health Expenditures in MENA Countries	16
Table 6: Summary Characteristics of Middle East North Africa (MENA) Health Systems.....	17
Table 7: Health Insurance Coverage, (MENA)	17
Table 8a: Financing Sources to Financing Agents, in 2000 (JD)	20
Table 8b: Sources of Fund to Financing Agents, in 2001 (JD).....	21
Table 9a: Financing Agents to Providers, in 2000 (JD).....	22
Table 9b: Financing Agents to Providers, in 2001 (JD).....	24
Table 10a: Total Amounts Allocated by Original Financing Sources, 2000 (JD)	26
Table 10b: Total Amounts Allocated by Original Financing Sources, 2001 (JD).....	26
Table 11: Sources of Funds for Public Sector Providers of Care, in percent.....	27
Table 12a: Financing Agents to Providers, 2000 (Percentage).....	30
Table 12b: Financing Agents to Providers, 2001 (Percentage).....	31
Table 13: Number of MOH Hospitals Beds, 2001.....	33
Table 14: Sources of Funds for MOH, 2000-01 (JD 000s).....	34
Table 15: MOH Budget as a Percentage of GOJ General Budget, 1997-2001 (JD 000s)	35

Table 16: Expenditures by Function at MOH, (JD 000s)	35
Table 17: Distribution of MOH Expenditures by Type of Expenditure, 1998, 2000 and 2001 (percent) ..	36
Table 18: RMS Hospitals: Utilization Indicators, 2001	37
Table 19: Number of Patients Visiting the Speciality, Emergency, & Dentistry Clinics in All RMS Hospitals, 2001	38
Table 20: Patient Visits to Specialty Clinics in RMS Hospitals According to Type of Beneficiaries, 2001	38
Table 21: Sources of Funds for RMS, 2001 (JD 000s).....	39
Table 22: Expenditure by Function, 1998-2001 (JD 000s).....	39
Table 23: Distribution of RMS Expenditures by Type of Expenditure (JD 000s).....	40
Table 24: Number of Health Personnel at JUH, 2000-01	41
Table 25: Sources of Jordan University Operating Budget, 2001	41
Table 26: Distribution of JUH Expenditure by Type of Expenditure, 1998, 2000, and 2001 (JD 000s)....	42
Table 27: Expenditure by Function 1998-2001, in JD 000s and in percentages.....	42
Table 28: Distribution of JUH Expenditure by Type of Expenditure (percent).....	43
Table 29: Social Security Corporation NHA Expenditures, 2000 and 2001	44
Table 30: Work Injury Statistics, 2000-01	44
Table 31: GUVS Health Care Facilities, by Governorate.....	45
Table 32: Sources of Funds for NGO Health Facilities, 1998, 2000, and 2001, in JD 000s and in %	45
Table 33a: Sources of Fund for NGOs Hospitals & Clinics, 2000, in JD.....	46
Table 33b: Sources of Fund for NGOs Hospitals & Clinics, 2001 (JD).....	46
Table 34: Breakdown of Insurance Market (JD 000s).....	48
Table 35: Health Expenditures of Some Private Firms (JD 000) (no similar info for 1998).....	48
Table 36a: Sources of Health Funds for Public Universities	49
Table 36b: Sources of Health Funds for Private Universities.....	49
Table 37: Breakdown of CIP Revenues and Expenditures (JD 000s) and in percentages.....	50
Table 38: CIP Beneficiaries, 2000 and 2001	51
Table 39: Breakdown of UNRWA/Jordan Health Expenditures (JD).....	52
Table 40: Households' Direct Payments for Health Care	52
Table 41a: Choice of Providers for Outpatient Visits, 2000: Percentage Distribution	54
Table 41b: Percentage Distribution of Outpatient Out-of-pocket Expenditures, by Insurance Status.....	55
Table 42: Hospital Utilization Indicators, 2001	55
Table 43: Hospital Sector Development Trend, 2000-01	56
Table 44: Cost per Admission Incurred by Household, by Hospital Sector	56
Table A-1. Breakdown of USAID Assistance to Jordan (000\$), 2000-01	61

List of Figures

Figure 1a: Sources of Health Funds, 2000	13
Figure 1b: Sources of Health Funds, 2001	13
Figure 2a: Funds to Providers, 2000	14
Figure 2b: Funds to Providers, 2001	14
Figure 3a: Health Funds to Providers, 2000	29
Figure 3b: Health Funds to Providers, 2001	29
Figure 4a: Distribution of Out-of-Pocket Expenditures to Health Providers, 2000.....	53
Figure 4b: Distribution of Out-of-Pocket Expenditures to Health Providers, 2001.....	53

Acronyms

CHCC	Comprehensive Health Care Centers
CIP	Civil Insurance Program
GDP	Gross Domestic Product
GOJ	Government of Jordan
HH	Households
HIPS	Health Insurance in the Private Sector Survey
ICHA	International Classification of Health Accounts
JD	Jordanian Dinar
JHUES	Jordan Health Utilization and Expenditures Survey
JUH	Jordan University Hospital
MENA	Middle East and North Africa
MOF	Ministry of Finance
MOH	Ministry of Health
MOP	Ministry of Planning
MOSD	Ministry of Social Development
NGO	Nongovernmental Organization
NHA	National Health Accounts
PHR	Partnerships for Health Reform
PHR<i>plus</i>	Partners for Health Reform <i>plus</i>
RMS	Royal Medical Services
SSC	Social Security Corporation
TFR	Total Fertility Rate
UNRWA	United Nations Relief Works Agency
USAID	United States Agency for International Development
VHC	Village Health Center
WHO	World Health Organization

Acknowledgements

The United States Agency for International Development (USAID) has made this study possible. We express our appreciation to USAID's Dr. Salwa Al Bitar and Mr. David Piet for their continuous support in implementing optimal health sector reform in Jordan, such that the overall health status of all Jordanians is enhanced. Moreover, we express our sincerest gratitude to the Minister of Health, His Excellency Engr. Said Darwazah, and his predecessors, for their level of commitment and unwavering dedication to improving the health status and lifestyles of the Jordanian population.

Finally, we would like to thank our colleagues in the *PHRplus* Jordan office for their significant contributions to this report, and our U.S.-based colleagues, Manjiri Bhawalkar and Rudolph Chandler for their technical contributions, John Holtzman, and Pia Schneider for their technical review, Kathleen Poer for providing management support, and Linda Moll, for her editorial contributions to this report.

Executive Summary

This report presents the results of the 2000 and 2001 National Health Accounts (NHA) in Jordan, and when appropriate compares these results to the findings of the 1998 NHA report (Al-Madani et al., 2000). The 2000-01 findings show that health care expenditures in Jordan continue to rise at an increasing rate. In 1998, Jordanians spent approximately JD454 million on the health care services, with per capita expenditure amounted to JD95. For 2000 and 2001 respectively, total health care expenditure increased to JD551 million, a 21.4 percent increase over 1998 levels, and JD598 million, an 8.5 increase over 2000 levels. Also for 2000 and 2001 respectively, per capita health expenditures increased to JD109, a 13.2 percent increase from 1998, and to JD115, a 5.8 percent increase from 2000 levels. NHA results illustrate that the proportion of gross domestic product (GDP) spent on health care services is steadily increasing, from 9.12 percent in 1998, to 9.2 percent in 2000 and to 9.6 percent in 2001. Table ES-1 highlights the key findings from this report:

Table ES-1: Summary NHA Estimates, Jordan, 2000 and 2001

Indicator	2000	2001
Total Population	5,039,000	5,182,000
Total Health Care Expenditures	JD550,954,140	JD597,834,320
Per Capita Health Care Expenditures	JD109.4	JD115.4
Gross Domestic Product (GDP)	JD5,992,100,000	JD6,258,800,000
Gross National Product (GNP)	JD6,087,600,000	JD6,391,500,000
Per Capita GDP	JD1175	JD1221
Health Care Expenditures as Percent of GDP	9.2%	9.6%
Health Care Expenditure as Percent of GNP	9.1%	9.4%
Percent of Govt of Jordan Budget Allocated to Health	9.0%	9.6%
Sources of Health Care Financing (percent distribution)		
Public	36.5%	37.0%
Private	58.9%	58.1%
Donors	4.7%	4.9%
Distribution of Health Expenditure		
Public	43.7%	45.0%
Private	49.4%	48.7%
UNRWA	1.4%	1.3%
NGOs	5.0%	5.1%
Public Health Expenditure as Percent of GDP	3.4%	3.5%
Private Health Expenditure as Percent of GDP	5.4%	5.6%
International Health Expenditure as Percent of GDP	0.4%	0.5%
Total Expenditure on Pharmaceuticals	JD160,175,934	JD184,630,938
Per Capita Pharmaceutical Expenditure	JD31.8	JD35.6
Pharmaceuticals as percent GDP	2.7%	3.0%
Pharmaceuticals as percent of Total Health Expenditure	29.1%	30.9%
Distribution of Pharmaceutical Expenditure		
Public	19.8%	18.5%
Private	80.2%	81.5%

Source: NHA Team.

Note: Numbers may not add to 100 percent due to rounding.

When one considers the 2000-01 NHA results relative to the 1998 NHA estimates, the following becomes apparent:

The private sector share, as a source of funding, has increased significantly. Private sector funds amounted to JD214.3 million (47 percent of total funds) in 1998 and increased to JD 324.4 million (59 percent) in 2000 and JD 347.1 million (58 percent) in 2001. Private sector sources consist of premiums paid by people for commercial health insurance, expenditures incurred by self-insured companies that directly pay for health care services on behalf of their employees, and out-of-pocket payments for health care services and pharmaceuticals.

The public sector share decreased from 45 percent of the total health expenditures in 1998, to 36 percent and 37 percent in 2000 and 2001, respectively.¹ Public sources consist of general tax revenues allocated by the Ministry of Finance (MOF) primarily to the Ministry of Health (MOH), Royal Medical Services (RMS), and Jordan University Hospital (JUH).

The remaining 5 percent of funds for health care, in both 2000 and 2001, came from international donors and UNRWA.

In nominal terms, expenditures on pharmaceuticals increased; however, they remained constant as a share of total health care expenditures. In 1998, one-third of health expenditure (JD159 million) was on drugs, accounting for 3.2 percent of GDP. In 2000 and 2001, pharmaceutical expenditures accounted for 29 percent (JD160.1 million) and 31 percent (JD184.6 million) of total health care expenditures, respectively, approximately 3 percent of GDP. Such levels are considerably high for a country with the economic and social profile of Jordan.

The MOH continues to represent the largest public sector financing agency. As illustrated in Table ES-2, of the more than JD269 million spent by the public sector on health care in 2001, roughly 64 percent was spent by the MOH. In fact, in 2000, the MOH managed 37 percent of total hospital beds, 49 percent of outpatient services, and 56 percent of inpatient services. In addition, the MOH administers the Civil Insurance Program that covers approximately 20 percent of the Jordanian population. The second major publicly funded health care program is the RMS, representing roughly 32 percent of public sector health care expenditures. The RMS provides services primarily to military and public security personnel, as well as to their dependents. The RMS covered 25.5 percent of the population in 2000-01, making it the single largest health care insurer. The JUH is a smaller public sector program that finances and provides health care services to approximately 2 percent of the Jordanian population. In addition, several nongovernmental organizations and donor owned and operated facilities exist, the largest being the United Nations Relief Works Agency, which provides care to 1.7 million Palestinian refugees. Finally, there exists a thriving private hospital sector. This sector has twice the number of hospitals that are found in the MOH, with an equivalent hospital bed capacity (3,357 beds). Moreover, the private sector includes more than 1,500 free-standing pharmacies, several self-insured companies, and 19 commercial health insurance providers.

¹ Amounts were JD204.7 million in 1998, JD198.2 million in 2000, and JD221.2 million in 2001.

Table ES-2: Total Health Care Expenditures by MOH, RMS and JUH, 1998-2001

Organization	1998 Expenditures (JD 000)	2000 Expenditures (JD 000)	2001 Expenditures (JD 000)
MOH	146,685	159,843	174,112
RMS	73,987	73,183	87,041
JUH	23,376	20,187	25,310

As illustrated in Figure ES-3, the provision of curative care services consumes an ever-increasing share of MOH resources. In 1998, 51 percent of MOH expenditures went to the provision of curative care services, 34 percent to primary care services, and the remaining to administrative, training, and miscellaneous activities. For both 2000 and 2001, curative care increased to roughly 65 percent of total MOH health care expenditures, while expenditures on primary health care services amounted to roughly 29 percent. The cost for administering the MOH health care system has displayed little change throughout the 1998-2001 period. Expenditures on training activities were roughly 2 percent of the total, while “other” categories of expenditures were roughly 1 percent during this period.

Table ES-3: MOH Expenditures on Functions

	1998 (JD 000)		2000 (JD 000)		Percent Change	2001 (JD 000)		Percent Change
	Amount	Percent	Amount	Percent		Amount	Percent	
Curative Care	74,336	51%	103,196	65%	39%	113,718	65%	10%
Primary Care	50,331	34%	46,983	29%	-7%	50,187	29%	7%
Administrative	3,148	2%	4,751	3%	51%	5,695	3%	20%
Training	3,515	2%	3,513	2%	0%	3,157	2%	-10%
Other	15,355	10%	1,400	1%	-91%	1,355	1%	-3%
Total	146,685	100%	159,843	100%	9%	174,112	100%	9%

Conclusion

Given the anticipated population growth in Jordan over the next decade², its changing epidemiological profile, and modest economic growth rates, sustaining the level of health care expenditures presented in this document will represent a significant challenge to policymakers. The implementation of an effective cost containment strategy will be necessary to curb the rising cost of health care services in the country. Moreover, anecdotal evidence suggests that a significant amount of inefficiencies in the provision and financing of health care services exists; hence, strategies such as engaging in contracts with private sector providers, for resources such as hospital beds, should be seriously considered – particularly in light of the significant levels of excess capacity that exist within such institutions. In addition, despite the heavily subsidized services offered by the public sector, a significant share of the population remains uninsured. According to estimates in the Jordan Health Care Utilization and Expenditure Survey, 2000 (PHR*plus* 2000), nearly 40 percent of the population

² The country's total fertility rate is 3.6.

is uninsured. To effect change in the number of uninsured persons, the government in 2003 enacted legislation that extended Civil Insurance Program benefits to all resident Jordanian children under the age of 6 years. The effect that this has had on reducing the numbers of uninsured persons is unknown; however, recent estimates suggest that the uninsured figure as a result of this policy change is somewhere in the range of 32 to 34 percent of the population.

Jordan has made significant gains in the institutionalization of NHA. The government has a NHA Department, located in the MOH and headed by the Chief of NHA. There has been greater cooperation among public and private sector agencies with respect to the sharing of essential data, and the NHA information in finding a broader audience outside of the public sector. However, many obstacles remain: the data must have greater auditing controls and the methodology employed by various sectors to pool data needs to be more uniform, thereby, leading to enhanced comparability across agencies.

1. Introduction

1.1 Development of Jordan's National Health Accounts

In May 1998, the Hashemite Kingdom of Jordan, with the technical assistance of the Partnerships for Health Reform (PHR) project (later the Partners for Health Reform*plus*, or PHR*plus*), joined a regional National Health Accounts (NHA) initiative that involved seven countries in the Middle East and North Africa (MENA) region: Egypt, Lebanon, Yemen, Tunisia, Morocco, Iran, and Djibouti. The initiative was supported by the United States Agency for International Development (USAID), World Bank, and World Health Organization (WHO).

The NHA initiative in Jordan was implemented in response to a desire by the government of Jordan (GOJ) to create a systematic, comprehensive, and sustainable method of compiling health care expenditure data on a regular basis. The activity began with the formation of a multidisciplinary NHA team representing various entities of the health care sector in Jordan, including the Ministry of Health (MOH), Royal Medical Services (RMS), Jordan University Hospital (JUH), and private sector participants. Team members received extensive training in the areas of NHA methodology, finance, accounting, English language, and computer software applications.

The first NHA report, based upon 1998 data, was published in May 2000 (Al-Madani et al., 2000). The report illustrated that total health care expenditures in Jordan amounted to Jordanian dinar (JD) 454 million, approximately 9.1 percent of the country's gross domestic product (GDP). Public and private sector expenditures amounted to 58 percent and 38 percent, respectively. The United Nations Relief Works Agency (UNRWA) and other nongovernmental organizations (NGOs) each accounted for 4 percent of total health care expenditures. Expenditures on pharmaceuticals were particularly high, accounting for 35 percent of total health care expenditure, roughly 3.2 percent of GDP. These amounts were considered high for a country at Jordan's stage of economic development. In addition, given the anticipated growth in the country's population over the next 15 years, it becomes apparent that sustaining such expenditures levels would be extremely difficult.

1.2 NHA and Policymaking in Jordan

The results of the NHA 2000, while widely circulated in Jordan, were not incorporated into the health policy debate at levels that one would have hoped for. This was the case for at least two reasons:

- ▲ First, the concept of NHA was newly introduced in this period; hence, its use as a policy and planning tool was not clearly understood by policymakers in either public or private sectors;
- ▲ Second, frequent changes in the MOH senior management, coupled with changes in health policy priorities, reduced the effectiveness of the various NHA national dissemination workshops, which were convoked to disseminate NHA findings to decision makers for use in designing and evaluating effective health care policy.

1.3 Second Round of NHA Activities

This technical report is characterized as a working paper: It does not include a detailed analysis of donor contributions; its estimates of donor contributions in the 2000-01 rounds of NHA are conservative. In addition, NHA 2000-01 was undertaken prior to the publication of the *Guide to producing national health accounts* (WHO, World Bank, USAID 2003) and therefore the analysis is carried out along the same lines as the 1998 NHA. A major limitation of this approach is that it lacks detailed estimates of the functional distribution of health care expenditures; instead, a simplified approach was used to measure expenditures associated with health care functions, broadly categorized as curative care, primary care, training, and administration. Since the publication of the *Producer's guide*, this approach has been standardized and links each health care function to type of provider.

The second round of NHA began in June 2001, with the main objective of institutionalizing the activity to ensure its sustainability. Below is a listing of the key accomplishments:

- ▲ Expansion of the original NHA team to include representatives from the Ministry of Planning (MOP), Ministry of Finance (MOF), the MOH Health Insurance Directorate, the Information Center of the MOH, the Department of Statistics, and the Higher Health Council. Expanding the team in this way ensured greater access to a wider variety of data sources;
- ▲ Reconstitution of the NHA Steering Committee, chaired by the Undersecretary of Health, with representatives from private sector organizations, to include the Jordan Medical Association. The Steering Committee was tasked with facilitating the institutionalization processes, as well as identifying areas where NHA data could assist in policy design, implementation, and evaluation;
- ▲ Revision of health care expenditures by line item and function, and the adoption of the International Classification of NHA, within a Jordanian context;
- ▲ Establishment of the NHA Department, along with its newly created Chief of NHA, selected from the NHA team. This department is located within the newly established MOH Health Economics Directorate of the Directorate of Planning and Projects.

This report presents the results of the Jordan NHA for fiscal years 2000 and 2001; when appropriate, it compares these results with data from the 1998 report. Section 2 provides background on the economic conditions, demographic trends, and the structure of the health care sector in Jordan. Section 3 provides a short summary of the methodology used, and the limitations of data comparability with the 1998 results. Section 4 presents a brief overview of the NHA results within an international context. Section 5 presents key findings of the NHA at the national level, including total health care expenditures, sources, uses, and the flow of funds throughout the health care sector. Section 6 is a detailed discussion of the NHA results at the subsystem level. Section 7 discusses the policy implications of the NHA findings in terms of equity, sustainability, and efficiency. Finally, the future of Jordan's NHA and the prerequisites for strengthening its institutionalization efforts are discussed in Section 8.

2. Background

2.1 Socio-Economic Background

Jordan is a relatively small country, with a population of roughly 5.2 million (Department of Statistics, 2001) and a landmass of roughly 89,000 square kilometers, 90 percent of which is desert. It is a middle-income country, with a GDP of JD6,259 billion (\$8,840 billion) (Central Bank of Jordan, 2001).

Jordan has one of the most modern health care infrastructures in the Middle East. Compared to other developing countries, the improvements that Jordan has achieved in health indicators – for example, under-five and maternal mortality rates are impressive. The gains are due largely to improvements in nutrition, expanded immunization programs, improved access to safe water and sanitation, and increased capacity in physical infrastructure and medical staffing, along with improved access to health care services. As a result, overall mortality rates have decreased significantly for all age cohorts.

2.2 Demographic and Health Trends

As Table 1 shows, the GOJ's commitment to enhanced quality of life and improved social and economic conditions has paid off with impressive health indicators. Among MENA countries, Jordan has the lowest under-five mortality rate, and second lowest (after Iran) maternal mortality rate. Approximately 40 percent of the population is under 15 years of age, and its total fertility rate (TFR), despite a substantial decline from 4.4 per woman in 1996 to 3.7 in 2001 (JPFHS 1997 and 2002 respectively) is one of the highest in the region, significantly higher than neighboring countries such as Egypt (3.4), Morocco (3.1), and Lebanon (2.7) (WHO, 2001). This, coupled with continued reductions in infant and child mortality rates, as well as greater life expectancy at birth, represents significant social and economic challenges to the government. In fact, unless significant gains are made in the areas of poverty reduction and unemployment, the high population growth rates in Jordan will likely exert significant pressures on the financing and equitably distribution public sector resources.

Moreover, over the past 30 years, Jordan has been made a significant transition away from infection diseases to chronic ailments. This transition, coupled with declining death rates and high birth rates, represents significant challenges to the health care sector, in terms of both expenditure levels and cost containment objectives.

Table 1: International Comparison of Fertility and Mortality Rates

Country	Total Fertility Rate	Mortality Rate		
		Under Five Years		Maternal (per 100,000)
		Male	Female	
Yemen	7.6	109	101	350
Egypt	3.0	46	44	170
Morocco	3.1	58	55	230
Jordan	3.5 (4.4)*	27*	24*	40
Iran	2.9	45	39	37
Tunisia	2.2	33	27	70
Lebanon	2.2	34	28	100

Sources: WHO 2002 and 2001; MOH 2001 for Jordan estimations

* WHO figure for Jordan

2.3 The Jordanian Health Sector

Roughly 60 percent of the Jordanian population has some form of health insurance coverage; the largest providers of this coverage – in terms of financing and provision – are the RMS and MOH. As illustrated in Table 2, the health care sector in Jordan is a mix of public and private sector providers, and insurers. It is composed of five interrelated systems; four are the MOH, RMS, JUH, and an ever-expanding private sector. In addition, several private NGOs and international donors, such as UNRWA, are key financiers and providers of health care services in the country. UNRWA is by far the largest of this group; it operates a network of 23 clinics that provide primary health care services to over 500,000 registered Palestinian refugees.

The public sector consists primarily of the MOH, RMS and JUH.³ The MOH and the RMS each finance and provide clinic and hospital-based services. The MOH operates 26 general hospitals (3,357 hospital beds, approximately a third of all hospital beds) and 1,266 health centers and clinics, and administers the Civil Insurance Program (CIP). The CIP finances health care services for all Jordanian Civil Servants, their dependants, and other categorical groups.⁴ The RMS finances and provides comprehensive health care services to active duty military personnel, their dependents, public security personnel, and categorical groups of retirees. It operates 10 hospitals and 86 health centers and clinics. The JUH is a small but significant source of public sector provision, covering roughly 1 percent of the population. It provides highly subsidized services to patients that are covered by both the public and private sectors. In fact, it serves as a referral center for both the MOH and RMS.

The private sector in Jordan consists of 54 privately owned and operated hospitals, several self-insured firms, 19 commercial health insurance companies, and roughly 1,564 free-standing pharmacies. In terms of hospital bed capacity, the private sector operates the same number of hospitals beds as the MOH (3,357), with significantly fewer admissions than the MOH.

³ As of 2006, the newly established King Abdullah II University Hospital, in the northern Governorate of Irbid, has been taking on an ever-expanding role in the public sector.

⁴ The groups consist of the poor, handicapped and indigent, and cancer patients.

Table 2: Profile of Health Care Sector in Jordan

Benefits	Coverage/Special Categories	Principal Financing Sources	Provider–Payer Relationship	Percentage of Population Covered or Eligible	Size of Operation
Describes types of services and benefits available.	Describes coverage and eligibility criteria, special programs for specific population groups.	Describes main sources of financing.	Describes relationship between financing and service delivery functions.	Number of people covered or eligible by health system nationwide.	As indicated by staff, beds, or number of facilities.
Government Services/ Ministry of Health					
<p>a) Provides comprehensive public health services – primary, preventive, and curative – in its facilities.</p> <p>b) Performs the following financing functions:</p> <ul style="list-style-type: none"> ▲ *Administers Civil Insurance Program. ▲ *Insurer of last resort for the poor 	<ul style="list-style-type: none"> ▲ *Civil servants and dependents; and individuals certified as poor, the disabled, and blood donors. ▲ *Highly subsidized primary and curative care for the entire population. 	<ul style="list-style-type: none"> ▲ *Ministry of Finance (general tax revenues) ▲ *Ministry of Social Affairs ▲ *Service fees collected at health facilities ▲ *Co-payments for services and pharmaceuticals ▲ *Payroll deductions ▲ *Donor assistance ▲ *World Bank loan 	MOH integrated delivery system – services provided by GOJ facilities financed through budget and salaried civil service staff	<p>19.5% (persons enrolled in CIP).</p> <p>Under public law, MOH is required to provide subsidized care to all Jordanian citizens.</p>	<p>Operates</p> <ul style="list-style-type: none"> ▲ *47 comprehensive health centers ▲ *338 primary health centers ▲ *285 village health centers ▲ *345 maternity and child health care centers ▲ *240 dental clinics ▲ *11 chest diseases centers ▲ *26 hospitals ▲ *3,357 hospital beds (37.4% of total hospital beds)
Royal Medical Services					
Provides primary and curative care services	<ul style="list-style-type: none"> ▲ Military personnel and their dependents. ▲ *Other referrals from MOH and JUH, and contractual agreements with public firms. 	<ul style="list-style-type: none"> ▲ Government budget ▲ *User fees ▲ *Co-payments (based on army rank and status) ▲ *Minor cost sharing for pharmaceuticals 	Integrated delivery system comprising RMS outpatient clinics and hospitals. Referrals to MOH facilities	25.5%	<p>Operates:</p> <ul style="list-style-type: none"> ▲ *81 ambulatory care centers ▲ *5 clinics ▲ *10 hospitals ▲ *1760 hospital beds (19.6%)
Jordan University Hospital					
a) Serves as a fee-for-service referral center	▲ Covers its employees and dependents	<ul style="list-style-type: none"> ▲ *MOF ▲ *MOH 	Serves as fee-for-service referral center for other public programs and private	1.33%	<ul style="list-style-type: none"> ▲ *1 hospital ▲ *517 hospital beds

Benefits	Coverage/Special Categories	Principal Financing Sources	Provider–Payer Relationship	Percentage of Population Covered or Eligible	Size of Operation
for other public programs and private payers b) Owns and operates outpatient clinics and inpatient facilities for primary and curative care		▲ *User fees	payers		(5.8%)
United Nations Relief Works Agency					
a) Owns and runs primary health care centers b) Refers hospital care to MOH or private facilities	▲ Provides care to 1.7 million Palestinian refugees	▲ Financed through outside donor contributions	Operates and owns primary health care clinics managed by its own staff	11%	▲ *23 clinics
Private Health					
a) Owns and operates private clinics and hospitals for primary and curative care b) Owns and operates pharmacies	▲ *Beneficiaries of any private health plan self-insured ▲ *Company employees and their dependents ▲ *All citizens with willingness to pay	▲ *Direct out-of-pocket payments ▲ *Payments from insurance plans ▲ *Payments from employees and employers	Private hospitals and clinics, by contract. Fee-for-service, or through a third-party payer (insurance company or employer)	All citizens with a willingness to pay are eligible	▲ *Number of clinics was not available ▲ *54 hospitals ▲ *3,348 hospital beds (37.3%) ▲ *1,564 pharmacies

3. Methodology

The process of data collection for this report began during the fall of 2001. The Partners for Health Reform *plus* reassembled a team of National Health Accounts experts in Jordan from the Ministry of Health, Royal Medical Services, Jordan University Hospital, Ministry of Finance, Ministry of Planning, Central Bank of Jordan, and Department of Taxation; the majority of team members had worked on the production of the 1998 NHA report. As was done with the earlier report, the team members spent roughly six months defining and agreeing upon data definitions, rules of classification, and uniform data auditing requirements. Relying heavily upon the experience of the 1998 data gathering efforts, the team members sought to include in the current report more comprehensive data, in particular from the private sector. Moreover, the 2001 data collection efforts were enhanced significantly, due to the following changes:

- ▲ *Expansion of the NHA Team:* membership was expanded to include representatives from the MOH Information Center, the MOH Health Insurance Directorate, the Central Bank of Jordan, and the Department of Taxation;
- ▲ *Expansion of Steering Committee:* membership on the NHA Steering Committee was expanded to include representatives from the Jordan Medical Association, Private Hospital Association, and the Pharmaceutical Manufacturers Association. Having such members present allowed for team greater access to private sector expenditure data, although significant work remains for obtaining more robust private sector data;
- ▲ *Establishment of a Centralized Data Collection Unit:* unlike the 1998 period, an active NHA Unit had been established in the MOH Directorate of Planning and Projects, during the period of this report. Having such a location allowed for easier exchange of information, and provided team members a centralized place for data auditing work;
- ▲ *Official MOH Executive-level Participation:* to encourage the participation of all relevant agencies from which data were to be obtained, the Minister of Health issued a request to more than 50 public and private sector agencies, requesting their participation in the 2000-01 data gathering efforts. As an official GOJ request, the letter legitimized the NHA data collection efforts; hence, team members were faced with fewer obstacles during the data gathering period.

Building upon the data provided by past PHR and PHR *plus* survey reports and expert interviews, the NHA team was able to gather significant data from public, donor, and NGO entities, in addition to universities. In contrast, data collection from the private sector posed a challenge. Team members were able to obtain utilization information, and some incomplete expenditure data from various sources such as the Ministry of Industry and Trade; however, detailed cost or expenditure information from private hospitals in particular was often lacking. For each estimate placed in the NHA matrices, every effort was made to validate each number, especially through triangulation when possible. The data collection efforts ended in the spring of 2003, with members then engaging in report writing and the interpretation of findings for policy purposes. Hence, this report represents the results of more than three years of dedicated effort by the NHA team.

Moreover, by 2000, International Classification for Health Accounts (ICHA) had been developed by the Organization for Economic Cooperation and Development. The ICHA provides a comprehensive structure for classifying NHA information. This ICHA has made data compilation between agencies, within country, and among countries more comparable. Two major contributions of the ICHA were the definitions utilized for organizing and categorizing recurrent and capital expenditures. Organizing expenditures into these categories, and reaching agreement from various agencies on what constituted each of them, represented a significant point of contention among 1998 NHA team members. In any event, the ICHA classifies each as follows:

- ▲ *Recurrent expenditures*: Recurrent expenditures consist of items such as salaries (including fringe benefits), drugs, supplies, treatment, training cost, and equipment maintenance;
- ▲ *Capital expenditures*: Capital expenditures are those on medical and non-medical equipment, as well as construction. They include expenditures that record the value of non-financial assets that have been purchased, disposed of, or have changed in value during the period under study, such as land holdings and structure.

3.1 Data Collection Strategy

As was illustrated above in Table 2, the Jordanian health care sector is an amalgam of public and private sector providers and financing agents. The predominate source of public sector financing emanates from the general revenues of the (MOF, earmarked for the MOH, RMS, and JUH. The MOH and RMS serve as both financers and providers of health care services in the Kingdom. The predominate form of private sector financing of health care services emanates from private households. Therefore, the data required for completion of this report were obtained from a complex array of public and private sector agencies, including households. Below is a summary of data sources, both secondary and primary; all data sources mentioned were reviewed and audited according to NHA team member rules and definitions:

- ▲ *Ministry of Finance (MOF)*: Information on MOF funds earmarked for various public agencies was obtained from the MOH Annual Statistical Reports, Central Bank of Jordan (annual and monthly reports) and MOF budget department reports. The latter information may also be obtained from the MOF public-use website (<http://www.mof.gov.jo>).
- ▲ *Ministry of Social Affairs (MOSA)*: Information on the MOSA health care expenditures was obtained from the MOH Health Insurance Directorate accounts, as well as the MOH Budget Department (monthly and annual statement of accounts).
- ▲ *Ministry of Health (MOH)*: Information on MOH expenditures was obtained from the MOH annual reports, the MOH Budget Department (monthly statement of accounts, and annual statement of accounts).
- ▲ *Royal Medical Services (RMS)*: Information on RMS expenditures were obtained from the RMS Finance and Accounting Department and MOF budget department reports.
- ▲ *Jordan University Hospital (JUH)*: Information obtained on JUH expenditures were obtained from the JUH Finance and Accounting Department, as well as the MOH Health Insurance Directorate accounts.

- ▲ *Royal Court*: Information obtained on Royal Court expenditures were obtained from the Royal Court, the Jordan University Hospital, the RMS, and MOH Health Insurance Directorate accounts.
- ▲ *Household-level Expenditure Estimates*: Information obtained on Jordanian Households was obtained from the Jordan Health Care Utilization and Expenditure Survey 2000 (PHR*plus*, 2000). (Henceforth, this report will be referred to as the JHUES 2000.) This nationally representative survey of 8,306 households (49,534 individuals), with a response rate of 94 percent was designed and implemented by PHR*plus* and the Department of Statistics in December 2000.⁵ The JHUES provided detailed estimations on various categories of household expenditures, including expenditures on private hospital, physician, out-of-pocket, and pharmaceutical expenditures. Moreover, expenditure information for the latter was supplemented by information that was obtained on households by the IMS.
- ▲ *Private Sector Organizations*: To obtain information on private sector organizations, including universities, self-insured firms, Third Party Administrators, Jordanian Health Insurance Purchasing Cooperative, NGOs, and non-profit organizations (including hospitals), the NHA team conducted site interviews with more than 55 organizations, based upon a predefined set of data collection techniques. Moreover, additional information was obtained from the Ministry of Industry and Trade, the Department of Statistics, the General Union of Voluntary Society, and the Insurance Regulatory Commission.
- ▲ *Donors*: Information obtained on international donor contributions were obtained from the MOH Finance and Accounting Department, MOH Directorate of Planning and Projects, MOP, and the USAID Jordan Office.

Major shortcomings of the data collection efforts were as follows: 1) the lack of primary or secondary information on private sector provider (i.e., hospital, physicians, and pharmacies) expenditures or revenue estimates. The information on these organizations had to be extrapolated from the expenditures that were reported by households. Our ability to audit such information (i.e., restriction on our ability to triangulate the results) was greatly limited, given that that such information was obtained exclusively from the demand side of the equation; 2) obtaining information on private employers' expenditures required extrapolation from existing survey data. To achieve this, we utilized health insurance expenditure information from the PHR Survey of Shareholding Companies, 1999 and the PHR*plus* Health Insurance in the Private Sector Survey (HIPS survey), 2001. The former consisted of a survey of the population of shareholding companies in Jordan (192 private firms) and their provision of health insurance to workers (Banks, Sabri, Darwazeh, 1999). The latter consisted of a nationally representative survey of 700 private sector firms, with a response rate of 71.4 percent (500 observations). This survey included detailed information on the scope and breadth of health insurance that was provided to employees across industries (Banks, Sabri, Darwazeh, Toukan, Shaahroui, 2001).⁶ Moreover, additional information on private sector providers and financiers was obtained from the PHR Survey of Third Party Payers in Jordan, 1998 (Hollander and Rauch, 1998). This survey, of the population of commercial health insurance providers, provides the most comprehensive survey to date on health insurance premiums, co-payments, and deductibles that are imposed on private sector beneficiaries.

⁵ The JHUES 2000 summary report, data and sampling methodologies employed are available from the PHR*plus* website (<http://www.phrplus.org>).

⁶ The reader can obtain detailed information on the survey methodology, sample size selection, and survey instruments, for each survey mentioned, by consulting the cited documents.

4. Overview of NHA Results

This chapter discusses estimates made by the NHA study. As Table 3 shows, Jordan's total health care expenditure were approximately JD 551 million (\$777 million) in 2000 and JD598 million (\$845 million) in 2001. In 2000, this amounted to 9.2 percent of GDP, in 2001 to 9.6 percent. Health care expenditures per capita were JD109 (\$154) and JD115 (\$163) in the respective years. Total health care expenditures increased by 21 percent between 1998 and 2000, and per capita health expenditures by 15 percent over the same period.

Table 3. Summary NHA Estimates, Jordan, 2000 and 2001

Indicator	2000	2001
Total Population	5,039,000	5,182,000
Total Health Care Expenditures	JD550,954,140	JD597,834,320
Per Capita Health Care Expenditures	JD109.4	JD115.4
Gross Domestic Product (GDP)	JD5,992,100,000	JD6,258,800,000
Gross National Product (GNP)	JD6,087,600,000	JD6,391,500,000
Per Capita GDP	JD1175	JD1221
Health Care Expenditures as Percent of GDP	9.2%	9.6%
Health Care Expenditure as Percent of GNP	9.1%	9.4%
Percent of Govt of Jordan Budget Allocated to Health	9.0%	9.6%
Sources of Health Care Financing (percent distribution)		
Public	36.5%	37.0%
Private	58.9%	58.1%
Donors	4.7%	4.9%
Distribution of Health Expenditure		
Public	43.7%	45.0%
Private	49.4%	48.7%
UNRWA	1.4%	1.3%
NGOs	5.0%	5.1%
Public Health Expenditure as Percent of GDP	3.4%	3.5%
Private Health Expenditure as Percent of GDP	5.4%	5.6%
International Health Expenditure as Percent of GDP	0.4%	0.5%
Total Expenditure on Pharmaceuticals	JD160,175,934	JD184,630,938
Per Capita Pharmaceutical Expenditure	JD31.8	JD35.6
Pharmaceuticals as percent GDP	2.7%	3.0%
Pharmaceuticals as percent of Total Health Expenditure	29.1%	30.9%
Distribution of Pharmaceutical Expenditure		
Public	19.8%	18.5%
Private	80.2%	81.5%

Source: NHA team.

Note: Numbers may not add up due to rounding.

Approximately 59 percent (2000) and 58 percent (2001) of the total funds circulating within the system originated from private sources. The public sector's share amounted to 36.5 percent and 37 percent, respectively. (In 1998, NHA results showed that 47 percent of spending was by the private sector and 45 percent by the public sector. International donors and UNRWA provided the remaining 5 percent of total funds, a decrease from the 8 percent share from 1998 results.

Private sources of financing consist of the following:

- ▲ Premiums paid by households for public and private health insurance;
- ▲ Health care expenditures incurred by self-insured firms, on behalf of their employees;
- ▲ Private companies' expenditures for commercial health insurance;
- ▲ Households' out-of-pocket expenditure for health care services and pharmaceuticals.

Public sources consisted of general tax revenues allocated by Ministry of Finance to:

- ▲ The Ministry of Health;
- ▲ The Royal Medical Services;
- ▲ The Jordanian University Hospital;
- ▲ Other public sector entities such as the Royal Court.

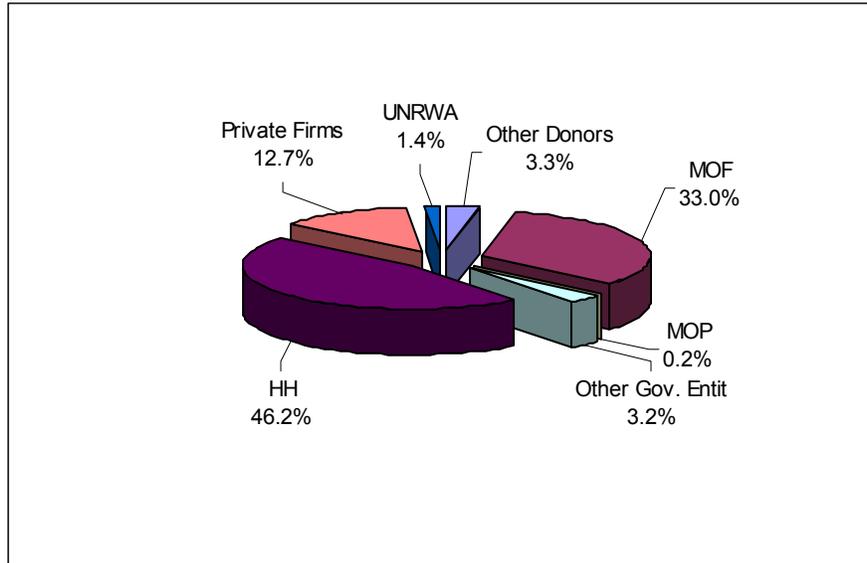
A breakdown of public health expenditures by function for both 2000 and 2001 revealed that a significant amount of public sector resources, roughly 66 percent (compared to 58 percent in 1998), are earmarked for the provision of curative care services. Only 24 percent of these resources were for the provision primary care services, representing a small decrease from the 27 percent share in 1998. Other expenditure items were 7 percent for administering the system, 2 percent for training personnel, and 1 percent for miscellaneous expenditure items, compared to 5, 3, and 7 percent in 1998.

4.1 Jordanian Health Care Financing: Where it Comes From and Where it Goes

NHA tracks the flow of health funds in a two-step process. First, funds are assumed to flow from financing sources (FS) to financing agents (FA); and secondly, from FA to providers (P). Figures 1a, 1b, 2a, and 2b identify the main sources of health care funds in 2000 and 2001.

As indicated in Figure 1a, the two major sources of health care funds in 2000 were households (46 percent) and the MOF (33 percent), compared to 43 percent and 39 percent respectively in 1998. The largest change comes from the next largest source, private firms, whose share increased from 4 percent in 1998 to 13 percent in 2000. UNRWA and international donors together accounted for nearly 5 percent. In aggregate, the private sector accounted for 59 percent of total funds, the government for 36 percent. In 1998, these shares were respectively 47 percent and 46 percent.

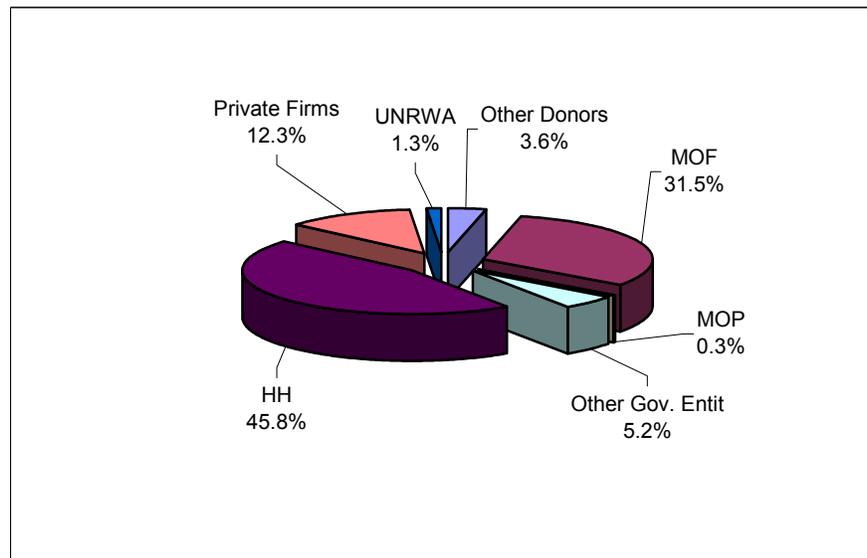
Figure 1a: Sources of Health Funds, 2000



Source: NHA spreadsheets

Funding sources in 2001 were quite similar to those in 2000 (Figure 1b). Households and the MOF were the major sources, followed by private firms, other GOJ entities, donors, and UNRWA. Private sources (households and private firms) financed 58 percent, while government financed 37 percent.

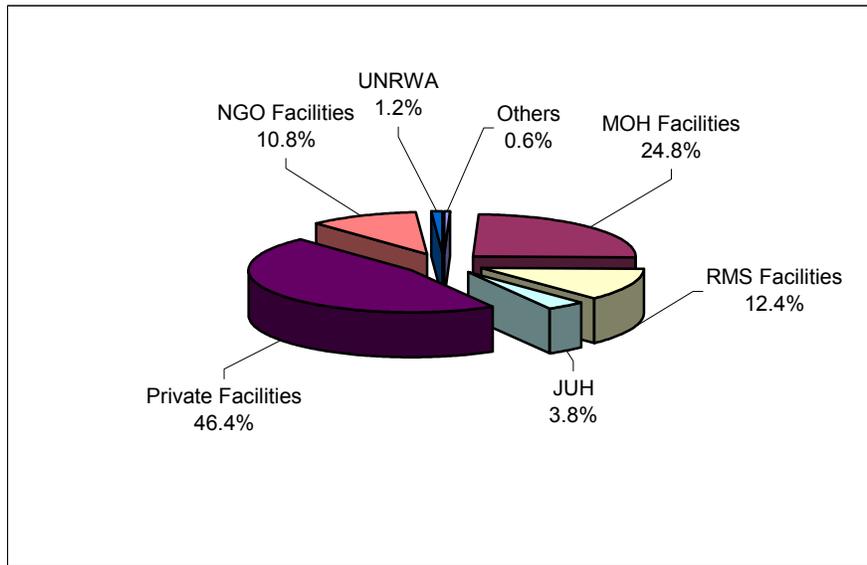
Figure 1b: Sources of Health Funds, 2001



Source: NHA spreadsheets

As shown in Figure 2a, in 2000, public facilities received 41.6 percent of health care funds, while private facilities received roughly 46.4 percent. UNRWA received 1.2 percent, and 10.8 percent were earmarked for NGO facilities. Among public facilities, MOH funded the largest share, 24.8 percent, followed by the RMS with 12.4 percent, and the JUH with 3.8 percent.

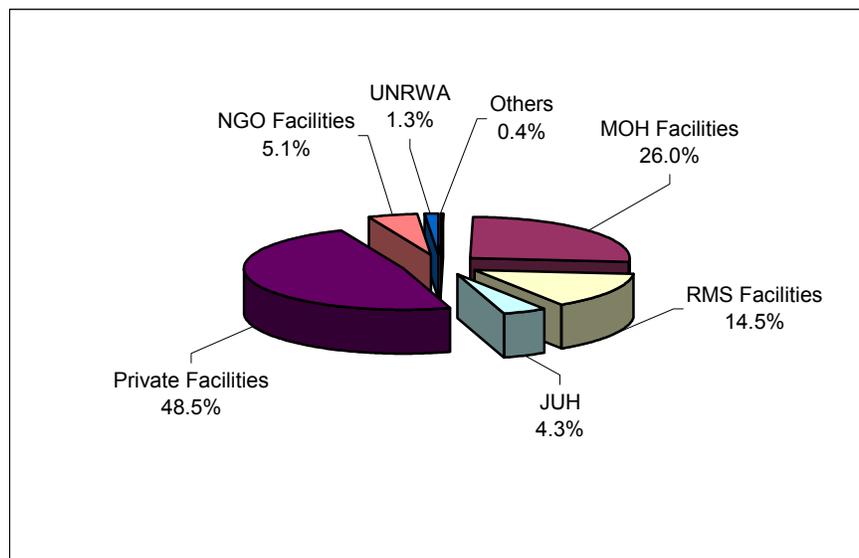
Figure 2a: Funds to Providers, 2000



Source: NHA Spreadsheets

Figure 2b shows that in 2001, public facilities received 44.8 percent of total health care funds, of which 26 percent were earmarked for the MOH facilities, 14.5 percent for RMS facilities, and 4.3 percent for the JUH. Private sector facilities received nearly 48.5 percent of all health care funds. The remainder was received by NGOs, UNRWA, and others.

Figure 2b: Funds to Providers, 2001



Source: NHA Spreadsheets

4.2 Pharmaceutical Expenditures

In 2000, pharmaceutical expenditures amounted to JD 160.1 million, which represents 29 percent of total health care expenditure and roughly 3 percent of GDP (Table 4). They increased to JD 184.6 million in 2001, roughly a 15 percent increase. In any event, as illustrated in the table, pharmaceutical expenditures in Jordan have amounted to approximately 3.0 percent of GDP since the 1998. This level is considerably high for a country with the economic and demographic profile of Jordan.

Table 4: Expenditures on Pharmaceuticals

	1998*	2000	2001
Total expenditures on drugs	JD 158,000,000	JD 160,175,934	JD 184,630,938
Per capita drug expenditure		JD 32.0	JD 35.6
Drug expenditures as percent of THE	JD 35.0	29.0%	30.88%
Drug expenditures as percent of GDP	3.2	3.0%	2.95%
Percentage of local production from total consumption	unavailable	37.71%	36.34%
Distribution of drug expenditures:			
Public	24.0 %	19.79%	18.45%
Private	76.0%	80.21%	81.46%

Source: Jordan NHA, MOH Drug Directorate and Jordanian Pharmaceutical Manufacturers Association

* 1998 figures from Al-Madani et al. (2000).

As Table 4 also shows, locally produced drugs accounted for roughly 38 percent of the total drugs that were purchased in Jordan in 2000-01. This, coupled with the fact that pharmaceutical purchases accounted for roughly 75 percent of households' total outpatient expenditures (Al-Madani et al. 2000), illustrates the need for implementing a comprehensive prescription drug policy, and pharmaceutical cost containment policy.

The high level of expenditures on pharmaceuticals is primarily the result of private sector behavior. This includes, but is not limited to the following:

Provider's prescribing behavior: the prescribing behavior of physicians and pharmacists is the primary reason for the high level of drug consumption in Jordan. This is due partly to the lack of sufficient pharmaceutical regulatory policies. In addition, providers in Jordan have vastly different medical training backgrounds, and thus different prescribing behaviors. Hence, changing the prescribing behaviors of providers is a necessary condition for achieving overall cost containment objectives:

Consumer behavior: the health seeking behavior of consumers (patients), particularly with respect to the practice self-medication, is a major reason for inefficient consumption of pharmaceuticals. Pharmacists tend to dispense the most expensive drugs to consumers who do not have prescriptions. Hence, the behavior and expectations of consumers must be changed significantly in order to achieve overall reductions in pharmaceutical expenditures in Jordan;

Pharmaceutical promotion efforts: the relative influence of pharmaceutical companies in promoting their products is extensive and uncontrolled in Jordan. Most Continuous Medical Education within the private sector is sponsored and/or organized by the pharmaceutical industry. In fact, the overall effects of the industry and the incentive structures it creates for providers vis-à-vis

their prescribing behaviors are of great concern to policymakers in Jordan (Policy Studies for the Pharmaceutical Sector, July 2004).

4.3 Cross-Country Comparative Analysis

In terms of GDP and per capita GDP, Jordan is classified as a middle-income country. As illustrated in Table 5, its GDP is in the middle range of the Middle East/North Africa countries that participate in the regional NHA network. In 1998, Jordan's health care expenditures amounted to 9.2 percent of GDP. This percentage is much higher than those of other MENA countries at similar stages of economic development (i.e., excepting Lebanon). While it is difficult to make international comparisons of health care expenditures due to variations in national accounting practices as well as in the structure of delivering and financing health care services, this finding for Jordan has been somewhat startling to policymakers. Jordan, with its limited resources, is consuming health care services at levels found typically among developed countries, and when this is considered in terms of population growth rates and the aging population it becomes apparent that such high level of expenditures are not sustainable.

Table 5: Comparison of Health Expenditures in MENA Countries

Country	GDP per Capita (US\$)	Health Expenditure per Capita (US\$)	Health Expenditures as Percentage of GDP (mid-late 1990s)		
			Total	Public	Private
Yemen	449	19	5.0	1.5	3.5
Egypt	1,016	38	3.7	1.6	2.1
Morocco	1,209	53	4.5	1.3	2.7
Jordan (1998)	1,475	136	9.1	5.2	3.8
Jordan (2000)*	1,660	154	9.2	3.3	5.4
Jordan (2001)*	1,724	163	9.6	3.5	5.6
Iran	1,776	101	5.7	2.4	3.3
Tunisia	2,001	105	5.9	3.0	2.9
Lebanon	4,050	499	12.3	2.2	7.6

Sources: Official country NHA estimates for 1998. Jordan estimates are for 2000.

Table 6 is from earlier work that was conducted by De and Shehata (2001). As illustrated, relative to other MENA countries, Jordan exhibits a roughly 50 percent greater proportion of physicians per 100,000 persons than the average of the countries listed. Egypt exhibits a rate (202 per 100,000) that is nearly twice the average. This is likely due to the differences in the numbers of medical schools in Egypt relative to the other countries listed, as well as entrance requirements for admissions into its universities. In terms of nursing and midwives per 100,000 persons, Egypt, Jordan, Iran, and Tunisia exhibit similar rates, while Lebanon's rate is less than the average rate. Yemen represents a significant outlier, in terms of health care personnel and overall health care infrastructure. Unlike other countries listed, Yemen is a low-income country with a relatively poor health care infrastructure and educational system.

Table 6: Summary Characteristics of Middle East North Africa (MENA) Health Systems

Country	% Population with access to health care (WHO,2000)	Doctors (per 100,000)	Nurses/Midwives per 100,000	Hospital Beds Percent Distribution	
				Private Sector	Public Sector
Yemen	Fewer than 50	26	51	N/A	N/A
Egypt	100	202	222	12%	88%
Morocco	69	34	94	19%	81%
Jordan	92	158	224	38%	62%
Iran	73	80	230	10%	90%
Tunisia	80	67	283	12%	88%
Lebanon	95	191	122	90%	10%

Source: De and Shehata (2001)

In addition to MENA countries varying in terms of overall health care expenditures, political systems, economic conditions, regulations, infrastructures, and cultures, they also differ significantly in terms of the public and private hospital mix. For example, hospital care in Lebanon is dominated by private sector providers, 90 percent, while Egypt exhibits a relatively small proportion (12 percent) of private sector hospitals. Jordan's mix is 38 percent (public) and 62 percent (private). As will be discussed later, the mix of providers in Jordan has implications for household health care expenditures and utilization.

Table 7 shows the variation in health insurance coverage among MENA countries. The variations reflect the differences in political and social institutions of the countries, in the particular role of government as a provider of social services. The issues involved are too complex for discussion within this NHA report; however, in Jordan, health insurance coverage is primarily a function of one's employment status. Civil Service and military personnel are insured through one of two government programs (MOH and RMS), while a significant share of private sector employees receive employer sponsored private health insurance. These arrangements are discussed in more detail throughout the remainder of this document.

Table 7: Health Insurance Coverage, (MENA)

Country	% population covered by any form of health insurance
Yemen	N/A
Egypt	31% (approximation)
Morocco	15%
Jordan ¹	60%
Iran	94%
Tunisia	71%
Lebanon	54%

Source: De and Shehata (2001); ¹JHUES 2000.

5. Jordan NHA Findings: National Level

5.1 Structure of National Health Accounts Results

The Jordan NHA team derived expenditure results using the aforementioned two-step method of interlinked NHA matrices to depict the flow of funds throughout the system.

First, we estimated the flow of health care funds from Financing Sources (public and private sector organizations, including households) to Financing Agents (public and private sector organizations, including households). Tables 8a and 8b present this flow in Jordan, in 2000 and 2001. The primary source of health care funds is private households. Their contributions amounted to JD 254 million and JD 273 million in 2000 and 2001, respectively. The second largest source is the public sector, primarily the Ministry of Finance, in the amounts of JD 182.0 million and JD 188.5 million in 2000 and 2001, respectively.

Second, we estimated the transfer of health care funds from Financing Agents to Providers. Financing Agents purchase health care services from providers on behalf of their beneficiaries. As Tables 9a and 9b show, the main providers are the Ministry of Health, Royal Medical Services, Jordan University Hospital, private sector providers, nongovernmental organizations, and the United National Relief Works Agency. A separate line item, Treatment Abroad, measures the amount of expenditures earmarked to overseas providers. The single largest amount of funds transferred from Financing Agent to Providers are those that the MOH pays to operate its hospitals, JD 77.8 million and JD 85.6 million in 2000 and 2001, respectively. The second largest amount is that paid by households to private physicians, JD 69.8 and 73.4 million in 2000 and 200, respectively; and to pharmacies, JD 67.8 million and 69.1 million.

Table 8a: Financing Sources to Financing Agents, in 2000 (JD)

Financing Agents	Primary Sources of Funds							
	MOF FS.1.1.1	MOP FS.1.1.2	Other Gov Entities* FS.1.4	Priv Firm FS.2.1	HH FS.2.2	UNRWA FS.3.1	Other Donors FS.3.2	Total
MOH (within budget) HF.1.1.1.1	126,651,399	714,330	1,000,000		20,119,103		7,154,600	155,639,432
RMS HF.1.1.1.2	55,309,000	558,000	9,665,400	1,964,000	4,718,000			72,214,400
JUH HF.1.1.1.3		85,000	4,911,938	350,000	94,000		198,600	5,639,538
Other Government Entities HF.1.1.1.4							2,315,160	2,315,160
Public Universities HF.1.1.1.5			2,004,900		1,407,100			3,412,000
Social Security HF.1.2				2,140,000				2,140,000
Private Insu Enterp HF.2.2				14,624,616	1,833,615			16,458,231
Household HF.2.3					225,644,731			225,644,731
NGOs HF.2.4							7,811,864	7,811,864
Private Firms HF.2.5				49,720,952			672,600	50,393,552
Private Universities HF.2.5.1				1,005,754	632,246			1,638,000
UNRWA HF.3.1						7,647,232		7,647,232
Total	181,960,399	1,357,330	17,582,238	69,805,322	254,448,795	7,647,232	18,152,824	550,954,140

Source: NHA Spreadsheets

* Other government entities, such as the Ministry of Social Development (MOSD) and Ministry of Education.

Table 8b: Sources of Fund to Financing Agents, in 2001 (JD)

Financing Agents	Primary Sources of Fund							
	MOF FS.1.1.1	MOP FS.1.1.2	Other Gov Entities* FS.1.4	Priv Firm FS.2.1	HH FS.2.2	UNRWA FS.3.1	Other Donors FS.3.2	Total
MOH (within budget) HF.1.1.1.1	134,543,792	1,195,784	1,000,000		21,799,453		8,934,422	167,473,451
RMS HF.1.1.1.2	53,917,300	393,700	23,996,600	1,180,000	5,601,360			85,088,960
JUH HF.1.1.1.3		185,000	3,067,259	350,000	95,000		431,000	4,128,259
Other Government Entities HF.1.1.1.4							2,478,000	2,478,000
Public Universities HF.1.1.1.5			2,852,300		1,429,700			4,282,000
Social Security HF.1.2				1,836,000				1,836,000
Private Insu Enterp HF.2.2				21,688,716	1,934,612			23,623,328
Household HF.2.3					241,940,021			241,940,021
NGOs HF.2.4							8,886,413	8,886,413
Private Firms HF.2.5				47,535,544			991,200	48,526,744
Private Universities HF.2.5.1				1,022,850	712,150			1,735,000
UNRWA HF.3.1						7,836,144		7,836,144
Total	188,461,092	1,774,484	30,916,159	73,613,110	273,512,296	7,836,144	21,721,035	597,834,320

Source: NHA Spreadsheets, 2001

* Other government entities, such as the MOSD and Ministry of Education.

Table 9a: Financing Agents to Providers, in 2000 (JD)

Providers	Financing Agents												
	MOF HF.1.1.1.1	RMS HF.1.1.1.2	JUH HF.1.1.1.3	Other Public Ent HF.1.1.1.4	Public Univ HF.1.1.1.5	SS HF.1.2	Priv Insur HF.2.2	HH HF.2.3	NGOs HF.2.4	Priv Firms HF.2.5	Priv Univ HF.2.5.1	UNRWA FS.3.1	Total
MOH Hospitals HP.1.1.1.1	77,813,899							4,245,302				221,890	82,281,091
MOH Clinics HP.3.4.9.1	46,982,518	3,850,000						2,830,202					53,662,720
MOH Adminis HP.6.1	4,751,258												4,751,258
MOH Training & Research HP.8.2	3,513,117												3,513,117
MOH HP. <i>n.s.k</i>	1,515,210												1,515,210
MOH Facilities													145,723,396
RMS Hospitals HP.1.1.1.2	3,850,000	46,393,800						968,600					51,212,400
RMS Clinics HP.3.4.9.2		10,293,200											10,293,200
RMS Adminis HP.6.1		10,607,400											10,607,400
RMS Training & Research HP.8.2		600,000											600,000
RMS Facilities													72,713,000
JUH HP.1.1.1.3	8,800,000		2,446,638					7,689,962					18,936,600
JUH Primary Care Clinic HP.3.4.9.3			390,000										390,000
JUH Adminis HP.6.1			2,373,300										2,373,300
JUH Training & Research HP.8.2			146,600										146,600
JUH HP. <i>n.s.k</i>			283,000										283,000
JUH Facilities													22,129,500
Universities Facilities					898,038						217,151		1,115,189
Private	5,321,055				1,501,280	1,322,086	4,937,469	52,719,318		14,916,286	426,255		81,143,749

Hospitals HP.1.1.2															
Private Physicians HP.3.1					1,012,682		3,686,644	69,608,563		11,137,493	318,270			85,763,652	
Private Pharmacies HP.4.1	1,502,452					330,522	7,258,080	67,865,361		21,926,940	626,594			99,509,949	
Private Training & Research HP.8.2				2,315,160						672,600				2,987,760	
Private HP.n.s.k						487,392	576,038			1,740,233	49,730			2,853,393	
Private Facilities														272,258,503	
NGOs Hospitals HP.1.1.3								17,641,008						17,641,008	
NGOs Clinics HP.3.4.9.4								2,076,415	7,811,864					9,888,279	
NGOs Facilities														27,529,287	
UNRWA														7,425,342	7,425,342
Treatment Abroad HP.9.2	1,588,923	470,000												2,058,923	
Total	155,638,432	72,214,400	5,639,538	2,315,160	3,412,000	2,140,000	16,458,231	205,927,308	7,811,864	50,393,552	1,638,000	7,647,232		550,953,140	

Source: NHA Spreadsheets, 2000

Table 9b: Financing Agents to Providers, in 2001 (JD)

Providers	Financing Agents												Total
	MOF HF.1.1.1.1	RMS HF.1.1.1.2	JUH HF.1.1.1.3	Other Public Ent HF.1.1.1.4	Public Univ HF.1.1.1.5	SS HF.1.2	Priv Insur HF.2.2	HH HF.2.3	NGOs HF.2.4	Priv Firms HF.2.5	Priv Univ HF.2.5.1	UNRWA FS.3.1	
MOH Hospitals HP.1.1.1.1	85,615,006							4,250,105				303,861	90,168,972
MOH Clinics HP.3.4.9.1	46,847,847	4,804,000						3,339,368					54,991,215
MOH Adminis HP.6.1	5,695,215												5,695,215
MOH Training & Research HP.8.2	3,156,910												3,156,910
MOH HP. <i>n.s.k</i>	1,480,442												1,480,442
MOH Facilities												155,492,754	
RMS Hospitals HP.1.1.1.2	4,804,000	53,994,310						1,952,040					60,750,350
RMS Clinics HP.3.4.9.2		12,083,800											12,083,800
RMS Adminis HP.6.1		12,665,850											12,665,850
RMS Training & Research HP.8.2		1,291,000											1,291,000
RMS Facilities												86,791,000	
JUH HP.1.1.1.3	10,531,384		203,059					11,051,741					21,786,184
JUH Primary Care Clinic HP.3.4.9.3			493,900										493,900
JUH Adminis HP.6.1			2,714,000										2,714,000
JUH Training & Research HP.8.2			101,300										101,300
JUH HP. <i>n.s.k</i>			616,000										616,000
JUH Facilities												25,711,384	
Private Hospitals HP.1.1.2	6,486,500				1,884,080	1,445,918	7,086,998	57,379,586		14,260,663	445,444		88,989,189
Private					1,270,898		5,291,625	73,442,682		10,647,962	332,598		90,985,765

Physicians HP.3.1														
Private Pharmacies HP.4.1	2,385,834					361,479	10,417,888	69,114,084		20,963,175	654,803			103,897,263
Private Training & Research HP.8.2				2,478,000						991,200				3,469,200
Private HP. <i>n.s.k</i>						28,603	826,817			1,663,744	51,969			2,571,133
Private Facilities														289,912,550
NGOs Hospitals HP.1.1.3								19,361,931						19,361,931
NGOs Clinics HP.3.4.9.4								2,048,484	8,886,413					10,934,897
NGOs Facilities														30,296,828
Universities Facilities					1,127,022						250,186			1,377,208
UNRWA HP.3.2													7,532,283	7,532,283
Treatment Abroad HP.9.2	470,313	250,000												720,313
Total	167,473,451	85,088,960	4,128,259	2,478,000	4,282,000	1,836,000	23,623,328	241,940,021	8,886,413	48,526,744	1,735,000	7,836,144		897,834,320

Source: NHA Spreadsheets, 2001

5.2 Financing Sources

In Jordan, health care is funded by the following sources: the Government of Jordan (primarily from the Ministries of Finance and Planning, and other governmental entities such as the Royal Court), households, international donors, and UNRWA. Household contributions are made primarily through premiums paid to health insurance plans and more importantly by out-of-pocket expenditures.

As indicated above in Tables 8a and 8b, and highlighted here in Tables 10a and 10b, households were the major source of health care funds, accounting for 46 percent in both 2000 and 2001. The MOF was the second largest source, accounting for 33 percent in 2000 and 32 percent in 2001. Private firms provided 13 percent and 12 percent in the respective years, by funding for their employees' health insurance plans through self-insurance or commercial insurers. Self-insured firms are different from commercial insurers, in that they provide direct reimbursement for employees' consumption of health care services from a health insurance fund that is managed by the company and often administered by a Third Party Administrator. Alternatively, companies can also enroll their employees in plans managed by commercial insurers. Donor contributions without the UNRWA contributions were modest in 2000 and 2001, 3 and 4 percent, respectively. UNRWA's share amounted to 1 percent in both years. Other governmental entities supplied 3 percent and 5 percent of health care funds in the respective years.

Table 10a: Total Amounts Allocated by Original Financing Sources, 2000 (JD)

	MOF	MOP	Private Firms	Households	Donors	UNRWA	Other Govt. Entities	Total
Amount	181,960,399	1,357,330	69,805,322	254,448,795	18,152,824	7,647,232	17,582,238	550,954,140
Percent	33%	0%	13%	46%	3%	1%	3%	100%

Source: NHA Team

Note: Numbers may not add up to 100% due to rounding

Table 10b: Total Amounts Allocated by Original Financing Sources, 2001 (JD)

	MOF	MOP	Private Firms	Households	Donors	UNRWA	Other Govt. Entities	Total
Amount	188,461,092,	1,774,484	73,613,110	273,512,296	21,721,035	7,836,144	30,916,159	597,834,320
Percent	32%	0%	12%	46%	4%	1%	5%	100%

Source: NHA Team

Notes: Numbers may not add up to 100% due to rounding

As shown in Table 11, the MOH received 78 percent and 77 percent of its total funds in 2000 and 2001, respectively, from the MOF, 17 percent from households (both years), and 4 percent and 5 percent from international donors. The remainder of its funds was from other government entities, such as MOP and MOSD.⁷ The RMS received 75 percent/62 percent of its total funds from MOF, 9 percent/8 percent from households, 13 percent/28 percent from other governmental entities, and 3 percent/1 percent from private firms. The JUH received 18 percent/16 percent of its total funds

⁷ Public organizations such as the MOH, RMS, and JUH are financed from the general budget, contributions from the MOP in the form of loans and grants, Civil Insurance Program premium contributions, and health insurance premium contributions from military personnel and their dependents.

through direct transfer from the MOF. While the MOH is not considered a primary financing source, the JUH received 22 percent/25 percent of its fund from the MOH, as reimbursement for the treatment of MOH beneficiaries. Finally, 22 percent/12 percent of funds came from other governmental entities, mainly the Royal Court, and 35 percent/43 percent came from households. Donors accounted for roughly 1 percent in both years.

Table 11: Sources of Funds for Public Sector Providers of Care, in percent

Year	Public Sector Providers	Financing Sources							Total
		MOH	MOF	MOP	Households	Donors	Private Firms	Other Govt. Entities	
2000	MOH	0%	78%	0%	17%	4%	0%	1%	100%
	RMS	0%	75%	0%	9%	0%	3%	13%	100%
	JUH	22%	18%	0%	35%	1%	2%	22%	100%
2001	MOH	0%	77%	1%	17%	5%	0%	1%	100%
	RMS	0%	62%	0%	8%	0%	1%	28%	100%
	JUH	25%	16%	1%	43%	1%	1%	12%	100%

Source: NHA team

Notes: Numbers may not add up to 100% due to rounding

5.3 Financing Agents

Financing agents are institutions or entities that receive and channel the funds provided by financing sources and use those funds to pay for or purchase the activities inside the health accounts boundaries (WHO et al. 2003). They consolidate and distribute funds on behalf of their clients. The main Financing Agents in Jordan are:

- ▲ *MOH*: for CIP beneficiaries and other categorical groups;
- ▲ *RMS*: for active and retired military personnel and public security personnel, and their dependents;
- ▲ *JUH*: for its employees and their dependents, as well as students;
- ▲ *Other public entities*, such as the Department of Statistics and the National Population Council: primarily for research and training in the area of health services research;
- ▲ *Public universities*: such as Jordan University of Science and Technology for employees and their dependents, as well as students;
- ▲ *Social Security Corporation (SSC)*: for work-related injuries;
- ▲ *Insurance firms* (commercial insurers): for the purchase of services on behalf of their beneficiaries;
- ▲ *Households*: through out-of-pocket expenditures and various user fees at points of service;

- ▲ *NGOs*: for categorical groups of patients, such as the Jordan Association of Family Planning and Protection;
- ▲ *Private firms and universities*: for employees;
- ▲ *UNRWA*: for Palestinian refugees.

5.4 Use of Funds

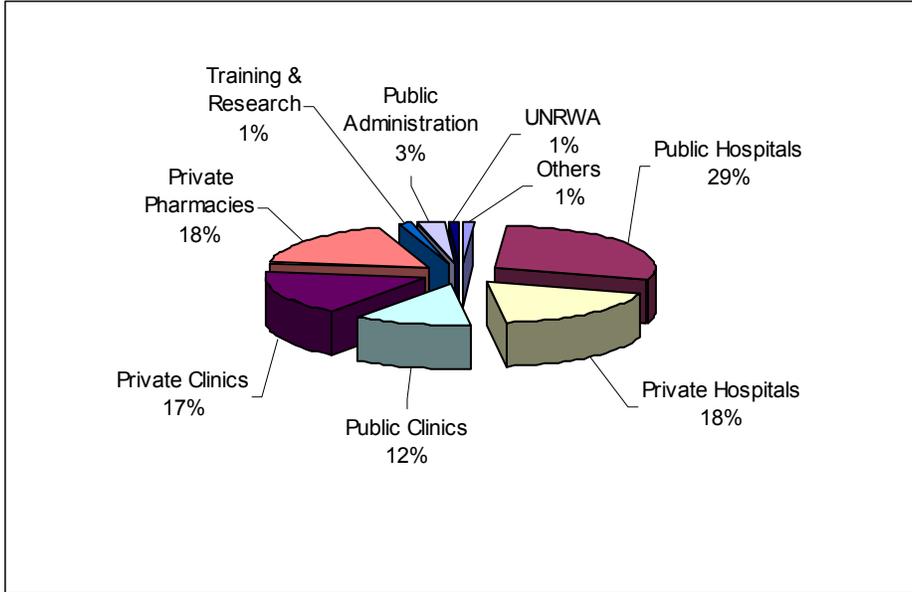
Financing Agents use the funds they receive from Financing Sources to purchase health care from the following public and private sector providers. The following list considers the major Financing Agents and Providers:

- ▲ *MOH to MOH facilities*: The MOH is both a purchaser and provider of health care services. While the MOH does not allocate individual operating budgets to the hospitals and clinics that it owns, it uses the financing it receives from various sources to centrally budget and manage the delivery of services from its facilities;
- ▲ *RMS to RMS facilities*: Much like the MOH, the RMS is both a purchaser and provider of services, for RMS beneficiaries and other groups. Also like the MOH, the RMS does so through a centralized budgetary and managerial process;
- ▲ *JHU*;
- ▲ *SSC*;
- ▲ *Private sector purchasers to providers*: Private sector purchasers include households, firms, universities, and commercial insurers, which purchase services on behalf of their beneficiaries from both public and private sector providers.

As Figures 3a and 3b illustrate, public hospitals received 29 percent (2000)/30 percent (2001) of total health care expenditure, private hospitals received 18 percent (both years), private physicians received 17 percent, and private pharmacies received 18 percent/17 percent. Less than 6 percent of total health expenditure went to public sector training and administration.

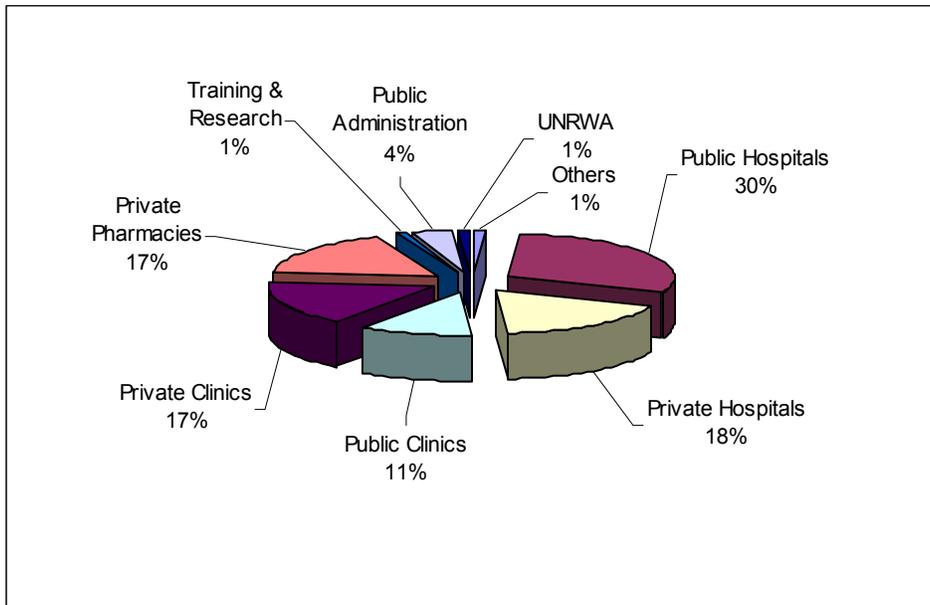
As Tables 12a and 12b show, the largest proportion of funds flows from Financing Agents such as the MOH and RMS, for the operation of their own facilities. Hence, the purchaser-provider function of the MOH and RMS is significant indeed. For example, the MOH earmarked 86 percent (2000)/85 percent (2001) of its budget for MOH facilities; the remaining 14 percent/15 percent was transferred to non-MOH facilities. The RMS allocated 94 percent of its budget to RMS facilities, and 6 percent to MOH primary health care clinics.

Figure 3a: Health Funds to Providers, 2000



Source: NHA Spreadsheets

Figure 3b: Health Funds to Providers, 2001



Source: NHA Spreadsheets

6. Jordan NHA Findings: Sub-System Level

6.1 Organization and Size of the MOH

The Ministry of Health is the single largest institutional financier and provider of health care services in Jordan, in both the scale of its operation and the utilization of its services. In 2000 and 2001, the MOH's operating budget accounted for approximately 6 percent of the general budget. This proportion has varied only slightly since 1997, ranging between 5 to 6 percent.

Table 13 shows the distribution of MOH hospitals throughout the country. The highest concentration of hospital beds is found in governorates that are near the capital city of Amman. Beds per 10,000 persons, exhibits little variation across governorates, with the exception of Ma'an, a sparsely populated, rural governorate. These MOH statistics contradict the 2000 NHA report, which depicted significant difference in bed/population ratios between rural and urban areas. That distortion was due primarily to the inclusion of the large, specialized National Center of Psychiatry in the bed/population ratio that was calculated.⁸

Table 13: Number of MOH Hospitals Beds, 2001

Governorates	Number of Beds	Population	Beds per 10,000
Amman	928	1,971,750	5
Irbid	590	924,470	6
Zarqa	424	815,130	5
Balqa	209	339,940	6
Mafraq	187	238,890	8
Karak	160	208,315	8
Jarash	135	152,350	9
Madaba	86	132,104	7
Ajloun	96	115,040	8
Ma'an	122	101,050	12
Total	2,937	4,999,039	6

Source: MOH 2001

The health governorates of Karak and Irbid have the highest number of primary care facilities, followed by Amman and East Amman. The number of primary health care centers and maternal and child health centers are comparable, each accounting for nearly 27 percent and 28 percent of total clinics, respectively. Peripheral clinics represent 21 percent, dental clinics 20 percent. It appears that the number of health centers in a governorate does not necessarily correlate with the size of its population. For example, a densely populated governorate, such as Zarqa, has fewer health care

⁸ An additional specialized center, which is excluded from this report in terms of bed/population ratio calculations, is the National Center for Drug Addiction.

centers than the less densely populated governorate of Karak. This highlights the need for better health facility planning within the MOH.

Comprehensive Health Care Centers (CHCCs) provide an array of services such as family medicine, pediatrics, gynecology, dental, acute emergency services, school health, health education, environmental, food and drug inspection, and epidemiological investigations. They also provide many types of ancillary services, including laboratory, pharmaceutical, and radiological services. Maternal and Child Health Care Centers provide services such as antenatal and postnatal care, family planning, child growth and development, and immunization services. Primary Health Centers (PHCs) provide services that are similar to those found in CHCCs, with the exception of various categories of specialty services such as gynecology and epidemiological investigations. Village Health Centers (VHCs) are small clinics that are typically managed by a registered nurse and a single physician, both of whom are primarily employed at a nearby CHCC or PHC. As part of their work responsibilities, they tend to make weekly or twice weekly visits to the VHC.

6.1.1 Sources of MOH Funds

Table 14 illustrates the primary sources of funding for the MOH. Funding for the MOH funds has increased by roughly 7.6 percent between 2000 and 2001 period. The MOF provides roughly 77 percent of the MOH's annual operating budget. Households provide approximately 17 percent, in the form of health insurance premium contributions and revenues collected through various cost-sharing arrangements. International donors contributed approximately 5 percent to the budget. Other sources of funds include small contributions from other government agencies, such as the MOSD.

Table 14: Sources of Funds for MOH, 2000-01 (JD 000s)

		MOF*	MOP	Gov Entities	Households	Donors	Total
2000	Amount	126,651	714	1,000	27,417	7,155	162,937
	Percent	77.7	0.44	0.61	16.8	4.4	100
2001	Amount	134,544	1,196	1,000	29,693	8,934	175,367
	Percent	76.7	0.68	0.57	16.9	5.1	100

Source: MOH 2000 and 2001.

Note: Numbers may not add up to 100% because of rounding.

* This amount include the JD 4 million the MOF pays to the JUH on behalf of the MOH for treating referred patients; it is outside the MOH budget.

As illustrated in Table 15, the MOH received a total of JD131 million (\$93 million) in 2000 and JD137 million (\$97 million) in 2001 from the GOJ's general budget. This amounted to roughly 6 percent of the total government budget, something that has exhibited little variation for the past five years. In nominal terms, however, the general budget funds received by the MOH have increased by roughly 29 percent between 1997 and 2001.⁹

⁹ It is important to note that the difference between the MOH budget in Tables 14 and 15 is due to the difference in revenues that were earmarked for the MOH and what the MOH actually received. Typically, the MOH receives roughly JD 4-5 million less than the amount that it expects, given that MOF often makes direct transfer to JUH on behalf of the MOH. Hence, during some budgetary periods, funds that are earmarked for the MOH are instead paid directly to the JUH.

Table 15: MOH Budget as a Percentage of GOJ General Budget, 1997-2001 (JD 000s)

Item	1997	1998	1999	2000	2001
General Budget	1,916,000	1,987,000	2,160,000	2,210,000	2,300,000
MOH Budget	106,819	116,837	120,774	131,000	137,270
Percentage	5.6	5.9	5.6	5.9	6.0
Health Insurance Budget	22,070	24,057	27,000	26,575	31,301

Source: MOH Annual Report

6.1.2 Use of MOH Funds

The use of MOH funds was analyzed in two ways. First, they were analyzed by function, for example, primary care, curative care, administrative services, training of personnel, and other (see Table 16). Second, they were analyzed by type of expense, i.e., recurrent (operating), capital, and other (see Table 17). (“Other” consists of expenditures on inputs such as building rentals, auto insurance, advertising, and customs fees.

As Table 16 shows, the MOH received total funding in the amount of JD160 million (\$230 million) in 2000 and JD174 million (\$247 million) in 2001. The proportion of their expenditure on curative care increased from 51 percent of total in 1998 to 65 percent in 2000, an increase of 39 percent, then remained unchanged between 2000 and 2001.

The proportion of primary health care expenditures exhibited no significant change during the 2000 to 2001 period. The actual allocation increased by roughly 7 percent, to JD50 million (\$35 million) in 2001. However, when these periods are compared in relationship to 1998 levels, the data indicate that there has been a reduction in the relative expenditures on primary health care services. As illustrated in Table 16, expenditures decreased by approximately 5 percentage points over the 1998 to 2001 period. This is troubling, given that the government of Jordan’s Social Transformation Plan has sought to increase the proportion of MOH primary health care expenditures. The proportion of administrative, training, and other expenses remained constant throughout the 2000 and 2001.

Table 16: Expenditures by Function at MOH, (JD 000s)

	1998		2000		Percent Change	2001		Percent Change
	Amount	Percent	Amount	Percent		Amount	Percent	
Curative Care	74,336	51%	103,196	65%	39%	113,718	65%	10%
Primary Care	50,331	34%	46,983	29%	-7%	50,187	29%	7%
Administrative	3,148	2%	4,751	3%	51%	5,695	3%	20%
Training	3,515	2%	3,513	2%	0%	3,157	2%	-10%
Other	15,355	10%	1,400	1%	-91%	1,355	1%	-3%
Total	146,685	100%	159,843	100%	9%	174,112	100%	9%

Source: MOH, 2000&2001

Note: Numbers may not add up to 100% because of rounding

Table 17 looks at MOH expenditures in terms of recurrent, capital, and other expenditures. From 1998 to 2001, total health care expenditures increased by 18 percent. Overall expenditures on recurrent inputs increased by 12 percent; however, expenditures on several types of recurrent expenses fell; for example, expenditures on supplies decreased by 25 percent, drugs by 11 percent,

and maintenance by 2 percent. Significant nominal changes in capital expenditures occurred with medical equipment increasing by 54 percent and with non-medical equipment decreasing by 33 percent in nominal terms.

The share of recurrent expenditures by the MOH decreased, in nominal terms, by 4 percentage points between the 1998 and 2000. Overall capital investments exhibited no significant change as a share of total expenditures; however they increased by 17 percent in nominal terms. Other expenses increased in nominal terms from JD2.2 million to JD9.3 million, as well as in proportion to total health care expenditures, by 4 percentage points.

Table 17: Distribution of MOH Expenditures by Type of Expenditure, 1998, 2000 and 2001 (percent)

Type of Expenses	1998	2000	2001
Recurrent Expenditures			
Salaries	47%	48%	46%
Drugs	16%	12%	12%
Supplies	8%	5%	5%
Maintenance	7%	6%	5%
Food & Cleaning	5%	5%	5%
Treatment	7%	10%	10%
Training	1%	1%	1%
Sub-total	90%	86%	85%
Capital Investment			
Medical Equipment	1%	2%	2%
Non-medical Equipment	1%	0%	0%
Construction	6%	6%	7%
Sub-total	8%	8%	9%
Other Expenses			
Other	2%	6%	6%
Sub-total	2%	6%	6%
Grand Total	100%	100%	100%

Source: NHA Team

6.2 Organization and Size of the Royal Medical Services

The RMS is the second largest supplier of publicly funded health care services in Jordan. It provides inpatient and outpatient services through its network of five outpatient centers and 10 hospitals, located throughout the country. RMS beneficiaries are primarily military, public security, and civil defense personnel, and their dependents. The RMS serves as a major referral center that provides general and specialized treatment to Jordanian and non-Jordanian patients – both insured and uninsured. Moreover, the RMS serves an active role in providing emergency relief during disaster conditions, including emergency air evacuations for domestic and international patients.

RMS facilities are concentrated in the capital city of Amman. Given its small number of hospital and clinics relative to the MOH, the RMS relies heavily upon MOH facilities for providing outpatient

and inpatient services to beneficiaries who reside in governorates outside of Amman. As previously discussed, the RMS has 64 percent fewer hospital beds than the MOH; however, its patient load is roughly 43 percent less than the MOH. In fact, the average occupancy rate among RMS hospitals is 78 percent; this has increased only slightly during the past eight years. The total numbers of its staff, by category, are physicians, 842; dentists, 165; pharmacists, 89; nurses, 870; and midwives, 51.

Table 18 provides a snapshot of key RMS hospital utilization indicators. The 10 RMS hospitals had more than 100,000 admissions in 2000-01. The average length of stay remained relatively constant, roughly four days, while the occupancy rate increased only slightly. Table 19 provides a summary listing of the number of patients' visits among the 10 RMS hospital facilities. As illustrated, the specialty clinics within RMS hospitals are by far centers of greatest patient volume, in terms of relative numbers. Table 20 presents those centers of greatest activity, by RMS hospital.

Table 18: RMS Hospitals: Utilization Indicators, 2001

Sector	No. of Beds	Admissions	Discharged		Death Rate	Avg. Length of Stay	Occupancy Rate	Outpatient Visits	Surgical Operations	Deliveries
			Alive	Dead						
2000	1,755	106,558	104,980	2,551	1.85%	4.47	73.17	2,272,380	41,238	23,907
2001	1,807	114,406	112,822	2,519	2.23%	4.43	77.77	3,275,503	37,800	23,728

Source: RMS (2001 & 2002)

Table 19: Number of Patients Visiting the Speciality, Emergency, & Dentistry Clinics in All RMS Hospitals, 2001

Hospital	Al- Hussein	Heart Center	Rehabilitation Center	Queen Alia	Prince Rashed	Prince Hashem	Prince Ali	Princess Haya	Prince Zied	Total	Percent
Specialty Clinics	559,237	19,512	40,551	108,548	383,817	303,529	163,483	119,178	74,441	1,772,296	60.33%
Emergency	74,710	0	0	48,949	181,213	258,792	46,727	57,577	68,238	736,206	25.06%
Dentistry	108,069	0	14,392	41,313	95,694	89,456	43,857	12,281	24,072	429,134	14.61%
Total	742,016	19,512	54,943	198,810	660,724	651,777	254,067	189,036	166,751	2,937,636	100%
Percent	25.26%	0.66%	1.87%	6.77%	22.49%	22.19%	8.65%	6.43%	5.68%	100%	100%

Source: RMS (2001)

Table 20: Patient Visits to Specialty Clinics in RMS Hospitals According to Type of Beneficiaries, 2001

Hospital	Al- Hussein	Heart Center	Rehabilitation Center	Queen Alia	Prince Rashed	Prince Hashem	Prince Ali	Princess Haya	Prince Zied	Total
Army	36,664	443	8,813	9,195	31,415	27,609	16,917	8,091	3,050	153,569
Beneficiary/Army	118,392	7,174	12,186	16,379	125,436	168,930	42,776	16,180	25,284	567,228
Public Security	12,634	42	2,341	5,597	7,811	2,480	7,888	3,705	978	50,866
Beneficiary/P.S	36,990	139	2,004	11,206	26,417	19,239	15,266	5,336	3,499	136,224
Intelligence	8,253	33	614	3,660	3,589	360	3,094	731	242	23,726
Beneficiary/Int.	21,928	56	720	6,926	13,614	2,732	4,432	1,036	1,220	60,197
Civil Defense	6,177	6	341	4,551	3,387	428	5,975	1,395	576	26,152
Beneficiary/C.D	16,250	9	442	6,774	15,150	2,991	12,421	1,737	2,165	65,119
Retired	26,267	2,232	1,954	7,792	37,749	17,946	14,601	3,180	4,200	130,151
Beneficiary/Retired	71,525	304	5,479	13,822	114,012	53,914	24,630	3,826	10,516	322,734
Royal Jordanian	9,720	65	438	4,106	286	341	92	155	9	18,204
Beneficiary/RJ	17,039	81	575	7,978	632	2,248	72	898	6	33,849
Other Subscribers	5,682	78	95	3,073	1,192	621	5,150	18,507	4,381	39,083
Beneficiary/OS	10,858	8	116	6,029	3,105	3,505	10,067	31,052	14,586	79,623
Civil/Jordanian	15,407	8,804	3,885	1,456	18	185	102	23,171	3,449	59,200
Civil/Non-Jordanian	5,261	38	548	4	4	0	0	178	280	6,371
Total	419,047	19,512	40,551	108,548	383,817	303,529	163,483	119,178	74,441	1,772,296
Percent	23.6%	1.1%	3%	6.1%	21.7%	17.1%	9.2%	6.7%	4.2%	100%

Source: RMS (2001)

6.2.1 Sources of Funds

The RMS, like other public sector entities, receives most of its annual operating budget from the MOF, nearly 74 percent in 2000 and 61 percent in 2001 (Table 21). The second most significant source of funds are the contributions made to the RMS operating budget from other government agencies, which include the Civil Defense, Civil Aviation Authority, Royal Court, and Jordanian Intelligence Service. The largest of these contributors is the Royal Court, which reimburses categorical groups of RMS patients who are deemed eligible for such support.

Table 21: Sources of Funds for RMS, 2001 (JD 000s)

		MOF	MOP	Govt. Entities	Households	Donors	Private Firms	Total
2000	Amount	54,000	558	9,665	5,687	1,309	1,964	73,183
	Percent	73.8%	0.8%	13%	7.8%	1.8%	2.7%	100%
2001	Amount	53,000	394	23,997	7,553	917	1,180	87,041
	Percent	60.9%	0.5%	27.6%	8.7%	1.1%	1.4%	100%

Source: NHA team

Note: Numbers may not add up to 100% because of rounding

6.2.2 Uses of Funds

Roughly 65 percent of RMS expenditures are for the provision of curative care services (Table 22). This is not surprising given that RMS services are primarily hospital-based. The RMS relies heavily upon the MOH for the provision of outpatient clinic services. Between 2000 and 2001, curative care expenditures increased by roughly 17 percent, in nominal terms, while expenditures on primary care and administrative services each increased by 19 percent. The most dramatic change in the use of RMS funds was in training of personnel, which increased by 115 percent.

Table 22: Expenditure by Function, 1998-2001 (JD 000s)

	1998	percent	2000	Percent	Percent Change	2001	Percent	Percent Change
Curative Care	44,092	63%	47,832	65%	8%	56,196	65%	17%
Primary Care	14,797	21%	14,143	19%	-4%	16,888	19%	19%
Administrative	7,399	11%	10,607	14%	43%	12,666	15%	19%
Training	3,699	5%	600	1%	-84%	1,291	1%	115%
Total	69,987	100%	73,183	100%	5%	87,041	100%	19%

Source: NHA team, numbers may not add to 100 exactly due to rounding

As indicated in Table 23, expenditures on recurrent inputs increased significantly – roughly 29 percent, between 2000 and 2001. Total capital investment decreased by 28 percent, due mainly to a 42 percent decrease in construction activity and a 65 percent decrease in expenditures on non-medical equipment.

Table 23: Distribution of RMS Expenditures by Type of Expenditure (JD 000s)

	1998	2000	2001	Percent Change 2000/2001
Recurrent Expenditures				
Salaries	26,946	32,540	34,916	7%
Drugs	12,228	9,893	9,881	0%
Supplies	13,197	7,805	14,087	80%
Maintenance	3,815	370	6,314	1600%
Food & Cleaning	4,170	4,117	4,544	10%
Treatment	4,420	4,050	5,815	43%
Training	1,300	600	1,291	115%
Sub-total	66,076	5,9375	76,848	29%
Capital Investment				
Medical Equipment	2311	3,467	4,098	18%
Non-medical Equipment	881	1,027	355	-65%
Construction	3300	8,469	4,837	-42%
Sub-total	6,492	12,963	9,290	-28%
Others				
Other	1419	845	903	6%
Sub-total	1419	845	903	6%
Grand Total	73,987	73,183	87,041	19%

Source: NHA Team

Note: Numbers may not add up 100% due to rounding

6.3 Jordan University Hospital

JHU was established in 1971 under the name of Amman Grand Hospital. It was renamed Jordan University Hospital in 1975 after it was formally affiliated with Jordan University Medical School. According to recent estimates, JHU provides hospital-based services to roughly 1 percent of the population (JHUES 2000). In fact, among public sector facilities, JUH represents only 5.8 percent (509) of the total number of public sector beds, and it accounts for only 3.8 percent (21,351) of the total admissions. JUH averages roughly 22,000 admissions per year, and approximately 2,500 deliveries per year. Its occupancy rate varies between 56 and 67 percent. Its number of outpatient visits is roughly 220,000 per annum.

Despite the number of patients treated by the hospital being relatively small, JUH plays a prominent role in the Jordanian health care sector. This is due primarily to its evolution as the first major teaching hospital in the country, as well as its role in both the adoption and diffusion of medical technology and innovative hospital-based procedures. It is one of the most specialized and innovative medical centers in the country. As a teaching facility, it offers the full array of inpatient, outpatient, pharmaceutical, and ancillary services. Moreover, JUH is a major referral center that treats public and private sector patients, both insured and uninsured. Currently, the proportion of private patients is

relatively low; as a result, the JUH management has recently embarked upon policies aimed at marketing its services to private patients. For example, management recently renovated an entire floor for providing inpatient care exclusively to private patients. Table 24 provides a summary list of JUH hospital-based personnel.

Table 24: Number of Health Personnel at JUH, 2000-01

Type of Personnel	2000	2001
Physicians	283	275
Dentists	23	22
Pharmacists	18	17
Staff Nurses	384	358
Assistant Nurses	247	189
Practical Nurses	0	0
Midwives	0	0
Total	955	861

Source: MOH (2000 & 2001)

6.3.1 Sources of Funds

Table 26 lists the financing sources of the JUH operating budget. Private households are the single largest source; they provided 35 percent of funding in 2000 and 43 percent in 2001. The MOH is the second largest financing source, providing 22 and 25 percent of total funds. The MOF provided JD 4 million (\$6 million) in each year, roughly 18 percent (2000) and 16 percent (2001) of JUH's total operating budget. The MOF transfers this amount to the MOH annually for the treatment of Civil Insurance Program beneficiaries treated at the JUH.

Table 25: Sources of Jordan University Operating Budget, 2001

2001	MOF	MOH	MOP	Other Govt. Entities	Households	Private Firms	Donors	Total
Amount	4,000	6,531	185	3,067	11,147	350	431	25,711
Percent	16%	25%	1%	12%	43%	2%	1%	100%

Source: JUH NHA team

Note: Numbers may not round up to 100% because of rounding

6.3.2 Uses of Funds

JUH revenue exceeded expenditures in 2000 and 2001. As Tables 26 and 27 show, overall expenditures dropped by 14 percent from 1998 to 2000. This is clearly related to the dramatic decrease of 78 percent in capital expenditures. From 2000 to 2001, overall expenditures increased by 25 percent.

Table 26: Distribution of JUH Expenditure by Type of Expenditure, 1998, 2000, and 2001 (JD 000s)

	1998	2000	2001
Recurrent Expenditure			
Salaries	9,924	11,123	13,013
Drugs	4,662	3,000	2,934
Supplies	4,261	1,710	2,564
Maintenance	511	1,178	1,216
Food & Cleaning	534	456	571
Treatment	801	20	12
Training	-	147	101
Sub-total	20,693	17,633	20,410
Capital Investment			
Medical Equipment	371	2	49
Non-medical Equipment	275	81	105
Construction	1,022	284	271
Sub-total	1,668	366	425
Other Expenditure			
Other	1,015	2,189	4,475
Sub-total	1,015	2,189	4,475
Grand Total	23,376	20,187	25,310

Source: JUH NHA team

Table 27 summarizes the distribution of JUH expenditures by function category. Most expenditure is on inpatient (curative) care. Relatively few patients are treated on an outpatient basis. In fact, expenditures on outpatient (primary health care) services amounted to only 2 percent of the hospital's expenditures in 2000 and 2001.

Table 27: Expenditure by Function 1998-2001, in JD 000s and in percentages

Type of Expense	1998	2000	2001	Percent Change 1998 - 2000	Percent Change 2000 - 2001
Curative Care	21,212 (91%)	16,994 (84%)	21,385 (85%)	- 20%	84%
Primary Care	-	390 (2%)	494 (2%)	N/a	2%
Administrative	2,164 (9%)	2,373 (12%)	2,715 (11%)	10%	12%
Training	-	147 (1%)	101 (0%)	N/a	1%
Others	-	284 (1%)	616 (2%)	N/a	1%
Total	23,376 (100%)	20,187 (100%)	25,310 (100%)	- 14%	100

Table 28 presents in percentages of total JUH expenditure the recurrent, capital, and other expenditures, as well as various line items. The proportion of recurrent expenditures declined from 89 percent in 1998, to 87 percent in 2000 and 81 percent in 2001. The proportion of expenditures made on capital expenditures also declined, from 7 percent in 1998 to 2 percent in 2000 and 2002.

Table 28: Distribution of JUH Expenditure by Type of Expenditure (percent)

	1998	2000	2001
Recurrent Expenditures			
Salaries	42%	55%	51%
Drugs	20%	15%	12%
Supplies	18%	8%	10%
Maintenance	2%	6%	5%
Food & Cleaning	2%	2%	2%
Treatment	3%	0%	0%
Training	0%	1%	0%
Sub-total	89%	87%	81%
Capital Investment			
Medical Equipment	2%	0%	0%
Non-medical Equipment	1%	0%	0%
Construction	4%	1%	1%
Sub-total	7%	2%	2%
Others			
Others	4%	11%	18%
Sub-total	4%	11%	18%
Grand Total	100%	100%	100%

Source: NHA team
Numbers may not add to 100% due to rounding

6.4 Social Security Corporation

The Social Security Corporation is a public sector institution, founded in 1978, in compliance with the 1978 Social Security Act Number 30. As an autonomous public corporation, it enjoys financial and administrative autonomy, and it has the right to enforce acts, execute contracts, invest, accept donations, issue loans, and draft wills. Employers' participation in the social security system is mandatory and costs roughly 2 percent of employees' wages.

The Social Security Act encompasses six types of social insurance. SSC's role in the health care sector is limited to that of providing coverage to employees for work-related injuries and occupational diseases, primarily through its worker's compensation provision, and it is this aspect that is relevant to NHA estimations. This part of the SSC covers the following services:

- ▲ Medical care as determined by the Social Security Administration Board and awarded on a case-by-case basis;
- ▲ Daily disability allowances, due to disease or on-the-job injury;
- ▲ Monthly wages and lump sum compensations;
- ▲ Funeral costs.

Table 29 shows how funds are allocated among various covered services.

Table 29: Social Security Corporation NHA Expenditures, 2000 and 2001

Type of allowance	Allocated Fund 2000	Expenditures 2000	Allocated Fund 2001	Expenditures 2001
Medical care allowance	JD1,331,000	JD1,157,828	JD1,265,000	JD1,169,789
Transportation allowance	16,000	10,784	13,000	13,901
Partial disability compensation	743,000	474,225	493,000	613,158
Miscellaneous health related expenditures*	50,000	497,162	65,000	39,151
TOTAL	2,140,000	2,140,00	1,836,000	1,836,000

Source: SSC Annual Reports 2000 and 2001

* These amounts include health promotion awards for work environments, lab expenditures and other health -related expenditures.

Note: Only funds and expenditures that conform to the NHA purpose are included here; total funds for this type of insurance amounted to JD 16,323,814. Funds represent the amount allocated for each service. Only actual expenditures are utilized as amounts for SSC Funding Agent amounts.

As illustrated in Table 30, the number of participating workers who received compensation for work related injuries dropped from 10,765 in 2000 to 9,103 in 2001, a 15.4 percent reduction, similar to the decreasing amounts of allocated funding and expenditures for work injury compensation . This was attributed to the safety education efforts the corporation is pursuing – illustrated by the newly created Distinction Awards. Most startling, however, is the 72 percent increase in the total number of work-related injuries that occurred between 2000 and 2001.

Table 30: Work Injury Statistics, 2000-01

	2000	2001
Firms covered by SS	12,656	13,450
Workers covered by SS	366,330	381,896
Work injury/disease cases reported	16643	17,398
Injuries classified as work-related	9416	16,200
Workers who received work injury compensation	10,765	9,103

Source: SSC Annual Reports 2000 and 2001

Note: discrepancies in figures are due to cases still under study or cases from previous years.

6.5 Non-governmental Organizations

6.5.1 Background

The Ministry of Social Development is responsible for regulating the affairs of the non-governmental, voluntary sector. According to the MOSD, there exist 717 domestic NGOs and 26 foreign NGOs legally operating in Jordan. Other international and regional organizations operate under special agreements.

The General Union of Voluntary Societies in Jordan (GUVS)

GUVS is the single largest organization, representing 750 charitable societies in 12 governorates. The GUVS field of social work is diverse, including child care services, poverty alleviation, care for the disabled, and community outreach programs. Approximately 51 GUVS facilities offer health care services in Jordan. Table 31 presents the number of facilities, by type, for each governorate.

Table 31: GUVS Health Care Facilities, by Governorate

Governorate	No. Society	GP clinics	GYN clinic	Pediatric clinic	Dental clinic	Lab	Pharmacies	No of beneficiaries
Amman	25	49	6	5	18	9	2	263,579
Irbid	4	1	3	0	0	1	0	76,344
Al-Karak	3	0	1	1	1	0	0	3,267
Maan	2	0	0	1	1	0	0	2,901
Zerqa	4	4	2	0	5	3	0	133,312
Balqa	1	0	1	0	0	0	0	17,850
Mafraq	1	0	1	0	0	0	0	13,700
Tafeleh	1	0	1	0	0	0	0	9,040
Aqaba	3	1	1	0	0	2	0	15,437
Madaba	2	0	1	0	1	1	0	22,577
Ajloun	3	1	1	0	1	0	0	21,539
Jerash	2	0	1	0	1	1	0	27,580
Total	51	56	19	7	28	17	2	607,126

Source: GUVS Executive Board Administrative & Financial report, 2001

Health Care Services of the NGOs

The NGO sector provides primary, curative, and public health services. One of the most remarkable achievements of GUVS is the establishment of the Al-Hussein Cancer Center, previously known as Al-Amal Cancer Center, the only comprehensive center specializing in cancer treatment in Jordan. The Center is working to establish itself as a regional cancer center for Arab countries. Eight private sector hospitals are known or licensed as NGO facilities. As Table 31 showed, GUVS represents 110 clinics of different specialties, 17 labs, and two pharmacies. Table 32 shows their sources of funds.

Table 32: Sources of Funds for NGO Health Facilities, 1998, 2000, and 2001, in JD 000s and in %

		Donors	HH	Others	Total
1998*	Amount	N/a	6,449	6449**	12,898
	Percent	N/a	50%	50%	100%
2000	Amount	7,599	19,717	4,531	31,848
	Percent	24%	62%	14%	100%
2001	Amount	8,426	19,717	8,818	34,654
	Percent	22%	55%	23%	100%

Source: NHA team

* Al-Madani et al. (2000)

** For 1998, there are only two sources of funds listed: households and "others"; the amount for the MOF has been entered as "Others".

6.5.2 Analysis of NGO Funds

As illustrated in Tables 33a and 33b, NGO facilities receive from households the majority of their operating funds: 62 percent in 2000 and 55 percent in 2001. Donors are the second largest source of funds, 22 and 23 percent in 2000 and 2001, respectively; “other categories” increased their share in 2001 from 14 percent to 23 percent from 2000 to 2001. This was due to a 153 percent increase in the funds received from Palestine remittances, and an increase of 95 percent in funds to Al Hussein hospital. Household funds tend to concentrate on one NGO hospital, Islamic Hospital. Islamic Hospital received close to 80 percent of all household funding to NGO hospitals in 2000 and 2001.

Table 33a: Sources of Fund for NGOs Hospitals & Clinics, 2000, in JD

Hospital	Donors	Households	Others	Total
Palestine	0	984,516	37,849	1,022,365
Al-Hilal	0	1,233,365	-	1,233,365
Al-Nour	124,625	13,714	-	138,339
Al-Room	55,000	71,500	-	126,500
Islamic	0	13,895,597	39,284	13,934,881
Italian	0	758,663	-	758,663
Rosary Irbid	29,994	629,728	30,772	690,494
Al-Hussein	667,585	53,925	4,423,062	5,144,572
Total for hospitals	877,204	17,641,008	4,530,967	23,049,179
GUVS clinics	6,342,330	1,788,862	-	8,131,192
JFPP	379,930	287,553	-	667,483
Grand Total	7,599,464	19,717,423	4,530,967	31,847,854

Source: NHA team, as reported by GUVS & NGO Hospitals

Table 33b: Sources of Fund for NGOs Hospitals & Clinics, 2001 (JD)

Hospital	Donors	Households	Others	Total
Palestine	58,300	1,157,534	95,867	1,311,701
Al-Helal	0	1,175,190	-	1,175,190
Al-Nour	212,450	15,379	8344	236,173
Al-Room	45,000	90,000	-	135,000
Islamic	26,128	15,283,304	61,399	15,370,831
Italian	-	788,498	-	788,498
Rosary Irbid	23,747	789,389	18,555	831,691
Al-Hussein	690,615	62,637	8,633,501	9,386,753
Total hospitals	1,056,240	19,361,931	8,817,666	29,235,837
GUVS clinics	6,769,827	1,909,438		8,679,265
JFPP	600,146	139,046		739,192
Grand Total	8,426,213	21,410,415	8,817,666	38,654,294

Source: GUVS & NGO Hospitals

Others sources in Al-Hussein Center include mainly fees from Arab patients.

6.6 Insurance Sector

Approximately 3 million Jordanians (roughly 60 percent of the population) have some form of health insurance. The largest insurer is the RMS, covering over 25 percent of the insured, followed by the MOH covering 20 percent, UNRWA covering 11 percent, private insurance covering 9 percent, and JUH covering 1 percent. The remaining 2 million people (roughly 40 percent of the population) are without any form of health insurance (JHUES 2000). This section provides an overview of the provision of private health insurance through commercial insurers, self-insured firms, and universities.

6.6.1 Private Health Insurance

Nine percent of insured Jordanians are covered by health insurance plans of private (commercial) companies or by self-insured firms. Commercial insurers may function in two ways: as insurers, or as third-party administrators for self-insured firms. Self-insured firms pay directly for health care services on behalf of their employees and their dependents. They also assume full financial risk for their health insurance plans. These firms typically utilize third-party administrators to administer their health plans; thereby, reducing the administrative costs that are associated with managing a health insurance program.

Insurance Legislation

The first authority to act as a regulatory body for insurance affairs in Jordan was the Jordan Association for Insurance Companies, circa 1956. In 1987, the Jordan Insurance Federation was established by a Royal Decree to assume the responsibility of regulating and managing the insurance sector. In 1999, the Insurance Regulatory Commission was established in accordance with the Insurance Regulatory Act No. 33. Since then, both the Jordan Insurance Federation and the Insurance Regulatory Commission have assumed responsibility for managing and regulating the insurance sector.

Health Insurance Companies: Size and Contribution to Private Insurance Market

Twenty-six companies are licensed to sell insurance of various types in Jordan. Nineteen of them provide health insurance coverage. It is difficult to know the exact number of total persons covered by the private health insurance market; however a 1997 study estimated the number at around 138,815 (Hollander and Rauch, 1998).

There are five third-party administrators in Jordan: Medexa, Mednet, Care Now, Med-Service, and NatHealth. Each provides a similar array of services to their clients, including claims processing, utilization review, health education, and plan administration.

The total amount paid in insurance premiums (of all types) increased 16 percent between 2000 and 2001¹⁰ (Table 34), due mainly to the significant increase in the health insurance premiums (44 percent).

¹⁰ No similar information for 1998.

Table 34: Breakdown of Insurance Market (JD 000s)

Type of Premium	2000	2001	Percent Change
Total Insurance	104,179	120,437	15.6%
General Insurance	71,437	79,414	11.2%
Life Insurance	16,284	17,400	6.9%
Health Insurance	16,458	23,623	43.5%
Percent of Insurance Premiums for Health	16%	20%	

Source: Jordan Insurance Federation & Insurance Regulatory Commission

6.6.2 Private Firms and Health Insurance

More than 5,000 private companies are legally operating in Jordan (Central Bank of Jordan, 2001). According to the recent Health Insurance in the Private Sector Survey (HIPS, 2001), approximately 14 percent of these companies offer health insurance to their employees and their dependents. Overall they cover approximately 47 percent of the private sector workforce. Information from the HIPS and Department of Statistics allowed for estimation of total health care expenditures for private sector firms in 2000 and 2001 (Table 35).

Table 35: Health Expenditures of Some Private Firms (JD 000) (no similar info for 1998)

Firms	2000	2001
Jordan Telecom	2,500	2,500
Potash	2,500	2,500
Phosphate	3,500	3,000
Cement	1,920	1,600
Royal Jordanian	300	1,400
Central Bank	1,000	1,250
Refinery & Petroleum	2,200	2,335
Total	13,920	14,460

Source: NHA team, HIPS 2001

6.6.3 Jordan's Universities and Health Insurance

Jordan has one of the most well-established and modern higher education sectors in the MENA region. There are 22 public and private universities, located in most major cities in the country. However, most universities are within the capital city of Amman. According to the Ministry of Higher Education, the total number of registered university students was 185,079 in the 2000-2001 academic years. The vast majority of students are Jordanian, although significant numbers are from nearby Arab countries. All universities offer health insurance to their students and employees. Private universities typically offer coverage through their university-owned and -operated clinics.

The public sector is the largest contributor to public universities' health insurance plans, 59 percent in 2000 and 67 percent in 2001 (Table 36a). Households are the second largest contributors, supplying 41 percent of total operating revenue in 2000 and 33 percent in 2001.

Households' contributions to student health insurance plans at private universities represented roughly 39 percent (2000) and 41 percent (2001) of the total health insurance budgets. The remainder came from the universities' general budgets. The private universities themselves spent JD1.6 million (2000) and JD1.7 million (2001) on health care services (Table 36b).

Table 36a: Sources of Health Funds for Public Universities

	Households	Other Government Entities	Total
2000	1,407,100	2,004,900	3,412,000
	41%	59%	100%
2001	1,429,700	2,852,300	4,282,000
	33%	67%	100%

Source: NHA team, these figures are for six public universities: Jordan University of Science and Technology, Al-Yarmouk, Balqa, Mou'ta, Aal-EI-Beit, and Al-Hashemiah University.

Table 36b: Sources of Health Funds for Private Universities

	Households	University Budgets	Total
2000	JD 632,246	1,005,754	JD 1,638,000
	38.59%	61.40%	100%
2001	JD 712,150	1,022,850	JD 1,735,000
	41.04%	58.96%	100%

Source: NHA Team, Reports of 9 private universities; Amman Private University, Applied Science, Al-Essra, Al-Zaitoona, Philadelphia, Jarash, Petra, Irbid Private University, and Zarqa Private University.

6.7 Civil Insurance Program

6.7.1 Organization

The CIP was established in 1965 under Public Law No. 104, with the aim of improving the quality of health services, increasing insurance coverage, and enhancing equity in the distribution of health care services in Jordan. The law stipulated the mandatory participation of government employees in the program and allowed the voluntary participation of eligible categorical groups. The CIP finances and administers the treatment of public insurance beneficiaries (including those covered by the MOH and RMS) and other categorical groups (such as residents with end-stage renal disease and cancer), for services rendered outside of the MOH health care delivery system. For example, the CIP is responsible for financing and administering the treatment that MOH and RMS patients receive abroad, as well as the treatment of MOH beneficiaries in private sector hospitals in Jordan. It also engages in contracts with private hospitals and the JUH to provide an array of services to its beneficiaries.

6.7.2 Revenue and Expenditures

Ninety-seven percent (2000) and 96 percent (2001) of CIP total operating revenue comes from private households through mandatory health insurance premiums, user-fees, and drug co-payments. Table 37 lists the major sources of CIP revenue and their major expenditure categories.

Table 37: Breakdown of CIP Revenues and Expenditures (JD 000s) and in percentages

	1998	2000	2001	% change
Revenues				
Insurance premiums	14,600	15,507 (55%)	16,871 (55%)	9%
Co-payments	6,000	7,076 (25)	7,589 (25%)	7%
Drugs (250 files as co-payments)	4,000	4,720 (17%)	5,060 (16%)	7%
Ministry of Social Affairs	500	1,000 (4%)	1,000 (3%)	0%
Other	140	113 (0%)	173 (1%)	53%
Total revenues	25,200	28,416	30,693	8%
Expenditures				
Treatment abroad	1,400	1,589 (6%)	470 (2%)	- 70%
Treatment in private sector	2,900	5,321 (21%)	6,487 (22%)	22%
Drug purchase from private sector	1,800	1,502 (6%)	2,386 (8%)	59%
Drug purchases & medical supplies from MOH	9,300	7,105 (28%)	7,055 (24%)	- 1%
Treatment at JUH ¹	5,300	4,513 (18%)	7,000 (24%)	55%
Student/Children eye-glasses	160	117 (0%)	125 (0%)	7%
Maintenance & office supplies	-	179 (1%)	169 (1%)	- 6%
Physician incentives	1,800	3,578 (14%)	4,381 (15%)	22%
Transportation	-	0.17 (0%)	11 (0%)	6135%
Social Security debt repayment	1,000	550 (2%)	0 (0%)	- 100%
Contributions	N/a	850 (3%)	1,350 (5%)	59%
Others	N/a	6.8 (0%)	5.1 (0%)	- 25%
Vehicles	N/a	12 (0%)	0 (0%)	-100%
Total Expenditures	23,660	25,323	29,438	16%

Source: CIP Directorate, NHA Spreadsheets (1998, 2000, 2001)

Two broad categories of persons are eligible for CIP benefits: Civil Service employees and their dependents, and poor persons (Green Card holders) and special groups (Table 38). The categorical groups of persons with special status receive CIP benefits due to the onset of a chronic illness, such as cancer, or to their special status as blood donors. The broadly defined groups of persons that are eligible for CIP benefits are listed below:

- ▲ *Group 1:* Government employees and their dependents;
- ▲ *Group 2:* Certified poor – with a green card (income < JD 600 per year);
- ▲ *Group 3:* Handicapped persons (irrespective of income);
- ▲ *Group 4:* Blood donors;
- ▲ *Group 5:* Poor not covered in any of the above four categories;
- ▲ *Group 6:* People covered under RMS insurance;
- ▲ *Group 7:* Those who are able to pay.

Table 38: CIP Beneficiaries, 2000 and 2001

Category of People Covered	Year 2000		Year 2001	
	Insured	Dependents	Insured	Dependents
Government employees	185,000	740,000	200,000	800,000
Part-time workers	25,000	11,000	25,000	11,000
Green Card holders	51,000	83,838	51,000	85,000
Total	261,000	834,838	276,000	896,000
Grand Total	1,095,838		1,172,000	

Source: CIP Directorate

6.8 United Nations Relief Works Agency

UNRWA provides assistance to Palestinian refugees in Jordan. Its services are comprehensive and include health, education, and social welfare assistance. According to UNRWA, approximately 1.7 million registered refugees are entitled to receive aid in Jordan. They are located throughout the country. UNRWA's health care programs are implemented in collaboration with the MOH. UNRWA provides comprehensive preventative, curative, family planning, and health education services to the refugee population through its network of 23 health centers, 17 non-communicable disease clinics, 23 family health clinics, 13 specialist clinics, 21 laboratories, and 21 dental clinics.

The United Nations is the sole source of UNRWA operating revenue in Jordan. UNRWA health expenditures amounted to nearly JD8 million in 2000 and 2001, representing roughly 1 percent of total health expenditures in the country. The distribution of these funds is illustrated in Table 39.

Table 39: Breakdown of UNRWA/Jordan Health Expenditures (JD)

Health Program	2000	2001
Outpatient care	4,617,998	4,664,175
Inpatient care	221,890	303,861
Environmental health	1,383,432	1,383,432 (same as 00?)
Supplementary feeding	1,091,736	1,091,736 (same as 00?)
Health program management	334,176	339,132
Total	7,647,232	7,836,144

Source: NHA Team, Jordan National Health Accounts

6.9 Household Health Care Expenditure Estimates

As illustrated in Table 40, total household health care expenditures amounted to JD255 million (\$360 million) and JD274 million (\$386 million) in 2000 and 2001, respectively. This increase is due to the increase in all the categories of expenditures considered. The public sector received roughly 16 percent and 19 percent of the total in 2000 and 2001, the private sector 83 percent and 82 percent.

Table 40: Households' Direct Payments for Health Care

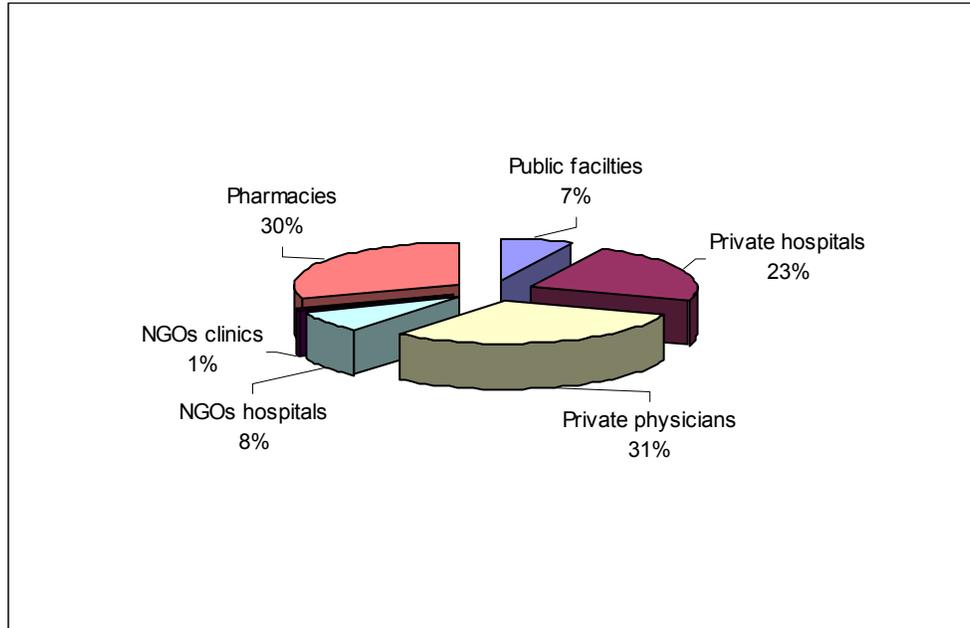
	2000		2001	
	JD	Percent	JD	Percent
Insurance premiums (public)	26,338,203	10%	28,925,513	11%
Insurance premiums (private)	2,465,861	1%	2,646,762	1%
Out-of-pocket at public facilities	15,734,066	6%	20,593,254	8%
Out-of-pocket at private facilities	209,910,665	82%	221,346,767	81%
Total household expenditures	254,448,795	100%	273,512,296	100%

Source: NHA Spreadsheets

As Table 40 also shows, total out-of-pocket expenditures on health services by Jordanian households amounted to JD 226 million (\$319 million) in 2000 and JD242 million (\$341 million) in 2001. This represented roughly 89 percent of total health care expenditures that were paid for directly by Jordanian households. The remaining 11 percent was spent on premium contributions. Households' out-of-pocket expenditures as a percentage of total health care expenditure remained roughly the same during the 2000 to 2001 period, 40 percent and 41 percent, respectively.

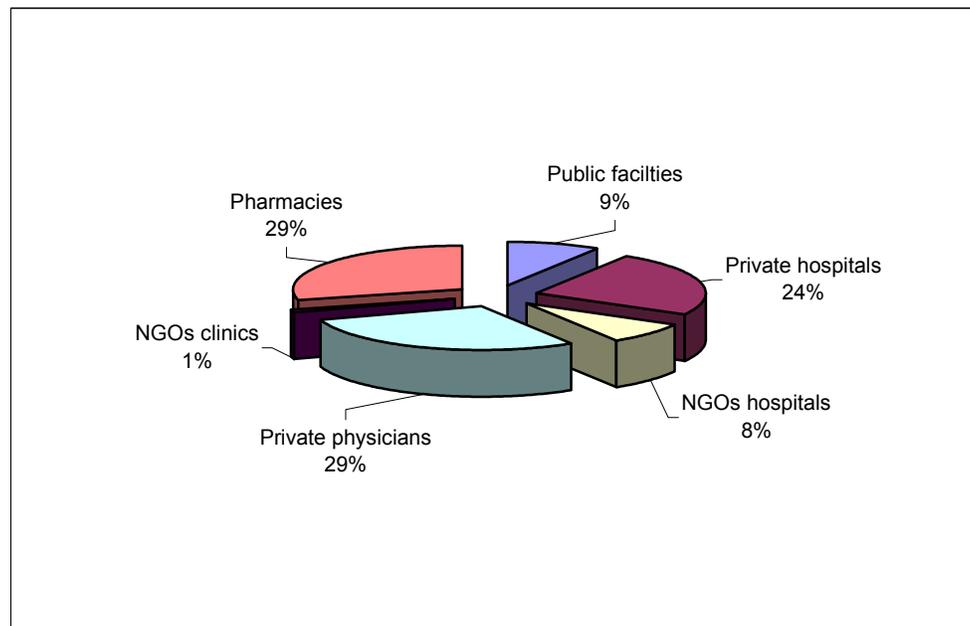
Figures 4a and 4b provide a breakdown of the distribution of out-of-pocket expenditures. Out-of-pocket expenditures on private physician services represented 31 percent and 29 percent of total out-of-pocket expenditures on health services, in 2000 and 2001. Out-of-pocket expenditures on pharmaceuticals amounted to roughly 30 percent and on private hospital services roughly 24 percent in both years.

Figure 4a: Distribution of Out-of-Pocket Expenditures to Health Providers, 2000



Source: NHA Spreadsheets

Figure 4b: Distribution of Out-of-Pocket Expenditures to Health Providers, 2001



Source: NHA Spreadsheets

The JHUES 2000 provides the most comprehensive information to date on the utilization behavior of households and individuals. The results from this survey were widely circulated through several national and local conferences that were held throughout the country in 2000 and 2001. Below we highlight a few of the findings concerning individuals' utilization behaviors:

As illustrated in Table 41a, the vast majority of MOH and RMS beneficiaries receive their outpatient care through MOH clinics and hospitals. This is not surprising, given that the MOH operates such a large network of clinics throughout the country, of which it provides outpatient treatment to RMS personnel on a contractual basis. Moreover, as one would expect, a majority of individuals with commercial health insurance, 71.2 percent, obtain their outpatient treatment at private clinics, compared to 15.1 percent, 19.7 percent, and 23.1 percent for CIP, RMS, and JUH personnel, respectively. Of particular concern, however, is the significant proportion of the uninsured who receive outpatient treatment at private clinics and hospitals, 42.6 percent, because nearly 60 percent of the uninsured fall within the third quintile of households' income distribution (HUES, 2000). Moreover, roughly 17.4 percent of the uninsured receive their outpatient treatment from private sector pharmacies, compared to 15.4 percent, 5.8 percent and 3.5 percent for JUH, MOH and RMS beneficiaries, respectively. Hence, the JHUES shows that the uninsured are more likely to obtain their outpatient treatment from private entities (e.g., clinics, hospitals, and pharmacies) as opposed to MOH facilities.

Table 41a: Choice of Providers for Outpatient Visits, 2000: Percentage Distribution

Insurance Status	MOH Clinics	MOH Hospitals	RMS Clinics	RMS Hospitals	Private Clinics	Private Hospitals	JUH Hospital
Uninsured	28.8%	9.1%	0.6%	.8%	38.9%	3.7%	.3%
CIP (MOH)	61.0%	13.7%	.3%	2.1%	15.1%	.7%	1.0%
RMS	47.9%	10.1%	2.4%	15.7%	19.7%	.3%	----
JUH	38.5%	7.7%	----	----	23.1%	----	7.7%
Private	9.0%	2.7%	----	----	71.2%	8.1%	----

As illustrated in Table 41b, the largest outpatient out-of-pocket expenditure item is pharmaceuticals: on average, 73.3 percent of all out-of-pocket expenditures that are incurred by individuals in their consumption of outpatient services. In this respect, there exists little variation among insured and uninsured persons, the exception being that of individuals with private health insurance coverage. The privately insured appear to incur a higher proportion of out-of-pocket expenditures for physician services, and significantly less for pharmaceuticals. This is likely due to the co-payment rates that are imposed on the privately insured and the prospectively utilization mechanisms that are imposed on pharmaceutical consumption by these groups. Other insurers, such as the MOH, RMS, and JUH impose less stringent pre-approval requirements on drug consumption. As previously stated, 17.4 percent of the uninsured receive their outpatient treatment from private sector pharmacies. This likely accounts for the relatively high levels of out-of-pocket expenditures on pharmaceuticals that are incurred by this category of individuals. Unlike MOH, RMS and JUH personnel, the uninsured must purchase their pharmaceuticals at market prices from commercial pharmacist. Hence, evidence suggests that the distributional affects of the current structure of services delivery may have a disproportionate impact on uninsured households – particularly given that they are more likely to be represented in the lower quintiles of the income distribution.

Table 41b: Percentage Distribution of Outpatient Out-of-pocket Expenditures, by Insurance Status

Insurance Status	Physician Fees	Lab/X-ray Expenditures	Drug Expenditures	Transportation Expenditures
Uninsured	14.1%	6.5%	76.0%	2.7%
CIP (MOH)	13.8%	4.1%	76.5%	5.5%
RMS	14.3%	4.4%	72.8%	8.3%
JUH	17.9%	----	78.6%	3.4%
Private	20.3%	11.2%	62.5%	5.7%

6.10 Hospital Sector

As presented in Table 42, the total number of hospital beds in Jordan is 8,982, or 17 beds per 10,000 persons (MOH, 2001). Annual admissions in 2001 amounted to 587,345 and the total number of outpatient visits, across sectors, was more than 5 million during the same period. Table 42 also provides several key measures of inpatient services. (Additional information, on the production of other inpatient services, can be obtained from MOH Annual Statistical Reports.) It is of import to note that Jordan hosts one of the highest bed-to-population ratios in the Middle East. The public sector has nearly twice the number of the beds as the private sector, 5,634 versus 3,002. The occupancy rate varies by sector, as well as by rural and urban location, ranging from an average of 43 percent in private sector facilities to more than 75 percent in MOH and RMS facilities.

Table 42: Hospital Utilization Indicators, 2001

Sector	Number of beds	Admissions	Discharged		Death rate %	Average length of stay	Occupancy rate	Outpatient visits	Surgery	Deliveries
			Alive	Dead						
MOH	3,357	263,981	260,213	3,041	1.2	3.2	76.4	2,162,454	76,671	68,749
RMS	1,760	114,406	112,822	2519	2.2	4.3	77.8	2,259,878	37,800	23,728
JUH	517	21,601	20,976	490	2.4	4.9	56.2	216,302	12,024	2492
Private	3,002	187,357	183,750	1377	0.7	2.6	43.1	391,578	79,748	38,737
Total	8,636	587,345	577,761	7427	1.3	3.3	62.6	5,030,212	206,243	133,706

Source: MOH 2001

Note: Total number of beds may differ because data are lacking for some private hospitals.

MOH and private sector hospitals are the major suppliers of hospital-based services in Jordan. This has been the case for nearly 10 years. Table 43 presents the percentage distribution of hospital beds in 2000 and 2001. While the MOH and private sector hospitals have a nearly identical share of beds, 37 percent, the MOH admits a greater number of patients. The RMS and JUH together represent roughly 26 percent of all beds and admissions in Jordan.

Table 43: Hospital Sector Development Trend, 2000-01

Sector	2000			2001		
	No. of Hospitals	Number of Beds	% of Beds	No. of Hospitals	No. of Beds	% of Beds
MOH	23	3,229	37.1	26	3,357	37.4
RMS	10	1,755	20.2	10	1,760	19.6
JUH	1	509	5.8	1	517	5.8
Private	52	3,212	36.9	54	3,348	37.3
Total	86	8,705	100	91	8,982	100

Source: MOH Statistical Report, 2001

There is little information on the cost of producing hospital-based services in Jordan. Two reliable studies of hospital costs that do exist are on the cost of producing services at MOH-owned and -operated Al Karak and Princess Raya hospitals (As-Sayaideh et al., 2002 and Banks et al., 2002). Self-reported information on household expenditures per admission were estimated from the JHUES. This information is contained in Table 44. Households spent JD25 (\$35) per admission at MOH hospitals, JD9 (\$13) at RMS hospitals, JD33 (\$47) at JUH hospitals, and JD402 (\$567) per admission at private sector hospitals. That is, as one would expect the private sector exhibits the most expensive admission in Jordan, more than ten times the costs of admission to MOH, RMS or JUH facilities. This information should not be interpreted as the differences in the cost of producing services at each institution, and the cost per admission has no relationship to the relative efficiency of service production at the different types of facilities. In order to make such inferences, detailed economic and accounting data are needed at the facility level. Once such information is obtained, case-mix adjustments must be conducted in order to make cross-sectional comparisons of the various hospital categories.

Table 44: Cost per Admission Incurred by Household, by Hospital Sector

Sector	Cost per Admission (incurred by households)
MOH	JD 24.95
RMS	9.19
JUH	32.69
Private	402.20

Source: JHUES, 2000

7. Policy Implications of NHA

This section discusses several of the policy implications of the Jordan National Health Accounts findings that have been presented in this document. While the findings are from 2000-01, the policy implications remain relevant. In fact, the passage of time makes it possible to provide a recent example of NHA's influence on policy discussions.

7.1 Policy Implications

Sustainability of Current Levels of Health Care Expenditures

Jordan spent 9.2 percent of its GDP on health care services in 2000 and 9.6 percent in 2001. Given that the country's overall economic growth is expected to remain at low levels into the near future, such high levels of health expenditures may prove to be unsustainable in the near term. Moreover, with ever-declining real wages of the population, changing demographics, population aging, and shift from infectious to chronic ailments, it becomes apparent that current expenditure levels will not be sustainable. Hence, an effective strategy of cost containment, to include greater use of utilization review mechanisms and the implementation of an effective prescription drug policy, should be of highest priority to stakeholders. Furthermore, the public sector is the major supplier of health care services in the country, and its services are provided to Ministry of Health and Royal Medical Service beneficiaries with little or no cost-sharing. This has implications for both cost-containment objectives, as well as the distribution of the financial burden among consumers of these services. It indicates that the government should consider developing a system of means-testing among beneficiaries. Such a system could shift the financial burden of the system in such a way that those with greater means are responsible for paying a greater share of their service provisions.

Public and Private Health Sector Coordination

The private sector dominates health care financing and delivery in Jordan. In 2000 and 2001, private sources financed approximately 59 percent of all health care expenditures, while the public sector financed roughly 26 percent in 2000 and 37 percent in 2001. Greater public and private sector coordination is needed if optimal health care policy is to be designed and implemented for the country. This becomes more evident when one considers the low levels of occupancy that prevails at private sector hospitals. Given the amount of excess capacity in the private sector, the government should accelerate its plans to engage in greater private sector contracting for health care services on behalf its beneficiaries. Contracting can increase utilization in the currently underutilized private sector and reduce the need for greater capital investment by the MOH, as it seeks to expand its capacity to meet anticipated demands. Currently, PHR*plus* is engaged in a private sector contracting pilot project between the MOH and private hospitals.

Equity

One major finding from this study is the significant amount of household out-of-pocket expenditures – roughly 40 percent of total health care expenditures – that occurs within the Jordanian

health care sector. Another troubling finding is that the uninsured are able to consume MOH services, with little to no means-testing. In other words, they are provided services without determining their ability to pay. The government provides for highly subsidized services to all persons, irrespective of a person's income or asset holding; hence, low-income persons are responsible for the same cost-sharing arrangements as higher-income households. Hence, while the publicly provide health care services are quite generous, the 40 percent of the Jordanian population that is uninsured seems to be facing significant financial risk under the current system. The recent passage by the Parliament of a law to insure all children under the age of 6 years is an attempt to mitigate this financial burden on families. However, significant changes are needed for male and female employees of small- and medium-sized business, as well as others who must supplement their current health insurance offerings by paying out-of-pocket for needed services.

Reallocating Expenditures from Curative to Primary Health Care

Jordan, like other middle-income countries, allocates a disproportionately large share of its health care expenditures to curative care services. Policymakers have expressed concern about this, and the current study reinforces the need for concern. Hence, it is imperative that the government engage in a significant preventive health strategy that earmarks expenditures towards more primary and preventive treatment. A well-designed information, education and communication (IEC) strategy should part of such a campaign. For example, it is common knowledge that the lifestyles of many Jordanians contribute to the high rates of obesity, diabetes mellitus, and lung and heart diseases. An anti-smoking campaign, aimed at providing information to consumers about the health risk of tobacco smoking, would be a cost-effective strategy. Other steps, such as the promotion of daily exercise and reductions in the amounts of daily sugar intake, will also lead to overall healthier lifestyles, and lower health care costs.

7.2 Policy Example

Three rounds of NHA estimates (1998, 2000, and 2001) showed that Jordan is spending between 30 and 35 percent of its total health care expenditures on pharmaceuticals. By all international measures, this figure is considered too high for a country like Jordan, given the fact that this level of expenditure is difficult to sustain into the future in light of the political unrest in the region and the low economic growth rate expected for Jordan in the coming decade. In addition, Jordan still has a high total fertility rate (3.7). Coupled with the facts that life expectancy has increased for both males and females, and child and infant mortality have decreased to be one of the lowest in the region, this will exert more pressure and demand for health care services on the system, reinforcing the concept of cost-containment. One specific area of cost-containment that was highlighted as a priority was the pharmaceuticals.

The Jordanian government has recently designed a rational drug use policy to streamline and optimize expenditures on pharmaceuticals. The major steps to be accomplished over the five-year period (2004-2009) are to have a National Essential Drug List and a National Formulary for Essential Drug List developed, distributed, and used in all public sector facilities at all levels (primary health care and hospitals), fully supported and adopted by GOJ. Moreover, the newly established Joint Procurement Directorate is expected to utilize the Jordan National Drug Formulary as its reference in all procurement procedures. Ultimately, Rational Drug Use is expected to be promoted and implemented, thus contributing to the government's cost containment efforts.

8. Future Steps for Jordan's NHA

As a result of a six-year effort by PHR, *PHRplus*, the Ministry of Health, the Royal Medical Services, and Jordan University Hospital, the Jordan NHA activity has become formally institutionalized within the government of Jordan. The MOH has a newly established NHA Department permanently staffed by the Chief of NHA. Job descriptions have been developed for support personnel who will be assigned to this unit, and a formal agreement has been reached between the NHA Unit and the MOH Information Directorate for annual reporting and dissemination of the NHA results. This is a remarkable achievement that should not go unnoticed by policymakers and others; however, a number of challenges remain for the newly appointed NHA chief and the staff. The following paragraphs highlight a few of the concerns that emerge from this study.

Ongoing Government Supportive

Without ongoing government support, the Jordan NHA Department may continue to be underfunded and understaffed. It is imperative that the GOJ reevaluate its current appropriations for this department, in light of the anticipated reductions in USAID support for the department as of September 2004. *PHRplus* has recommended the department's long-term staffing requirements, and is able to assist the government in estimating the optimal appropriations that are needed to make this a viable and sustainable policy unit.

Development of a Standardized Data Reporting System

Significant work remains to be accomplished in the area of uniform data reporting for various actors within the health care sector. For example, little information exists regarding private sector hospitals' expenditures and revenues. The information that is available, through existing government and private agencies, is inaccurate and of poor quality. Moreover, there is little coordination among government sectors with respect to their accounting practices. The NHA team members expended a disproportionate amount of effort organizing various public sector agencies data, so that their accounting definitions would be comparable.

Adoption and Diffusion of NHA Results for Public Policy

Determining the appropriate policy designs, implementation, and methods of evaluation requires the availability of reliable data and sound methodologies for collecting and analyzing such data. The NHA results presented in this document are a step toward achieving this for Jordan's health care policy and planning. It is therefore imperative for policymakers to assist the NHA department in the process of employing these results in national health policy debates and within the policy formulation and implementation processes. As previously discussed, the NHA team has highlighted significant areas of policy intervention, based upon the results of this report. Addressing many of these issues cannot be made by the NHA department alone; it requires the active participation of policymakers at the highest levels of the public and private sectors. Without their active participation in the discussion, use, and distribution of the results of this report, it is likely that their usefulness for drafting optimal health care policy will not be realized.

Annex A. USAID Assistance to Jordan

Table A-1. Breakdown of USAID Assistance to Jordan (000\$), 2000-01

Project	2000	2001
Primary Health Care Initiatives (PHCI)	4,239,491	6,849,183
Partnerships for Health Reform (PHR)	1,400,000	
Partnerships for Health Reform <i>plus</i> (PHR <i>plus</i>)		1,870,000
JAFPP Phase I	200,000	600,000
JAFPP Phase II		1,000,000
Center for Disease Control	800,000	800,000
Measure (BUCEN)	1,220,000	500,000
Measure (DHS)		500,000
Information, Education and Communication Support	2,050,000	2,500,000
Engender Health	1,050,000	840,000
Policy	300,000	650,000
Central Contraceptive Procurement	300,000	60,000
Linkages	430,000	600,000
Commercial Market Strategies(CMS)	950,000	1,400,000
Implementing AIDS Prevention & Control Activities (IMPACT)	300,000	300,000
Total	13,239,491	18,469,183
Total in JD(000s)	9,373,650	13,076,182

Source: USAID Population and Health Office, Jordan

Annex B. Bibliography

- Al-Madani, Ali, Lubna Al-Shatwieen, Dwayne Banks, Manjiri Bhawalkar, Hani Brosk, Taissir Fardous, Hashem Irsaid, A.K. Nandakumar, et al. March 2000. *Jordan National Health Accounts* [1998]. Bethesda, MD: Partnerships for Health Reform Project, Abt Associates Inc.
- Banks, Dwayne, Hanan Sabri. 2001. *The Provision of Private Health Insurance in Jordan: The HIPS Survey of Private Sector Firms*. Amman, Jordan: Partnerships for Health Reform Project, Abt Associates Inc.
- Banks, Dwayne A. et al. June 2002. *Implementing Hospital Autonomy in Jordan: An Economic Cost Analysis of Princess Raya Hospital*. Bethesda, MD: Partners for Health Reformplus Project, Abt Associates Inc.
- Banks, Dwayne A., et al. June 2002. *Implementing Hospital Autonomy in Jordan: An Economic Cost Analysis of Al Karak Hospital*. Bethesda, MD: Partners for Health Reformplus Project, Abt Associates Inc.
- Central Bank of Jordan. 2001. *Annual Report*. <http://www.cbj.gov.jo>.
- De, Susna and Ibrahim Shehata. March 2001. *Comparative Report of National Health Accounts Findings from Eight Countries in the Middle East and North Africa*. Partnerships for Health Reform Project, Abt Associates Inc.
- Department of Statistics, Jordan. 2001. "Employment Survey." <http://www.dos.gov.jo>
- General Union of Voluntary Societies in Jordan. 2001. "Executive Board Annual Financial and Administrative Report." Amman, Jordan.
- Hollander, Neil and Margie Rauch. October 1998. *Assessment of Third Party Payers in Jordan*. Bethesda, MD: Partnerships for Health Reform Project, Abt Associates Inc.
- Insurance Regulatory Commission, 2001. "Insurance Business in Jordan, Annual Report". <http://www.irc.gov.jo>.
- Ministry of Health, Jordan. 2001 and 2002. "Ministry of Health Annual Report." Amman, Jordan.
- Partners for Health Reformplus Project. 2000. *Jordan Health Care Utilization and Expenditure Survey*. Amman, Jordan.
- Royal Medical Services, Jordan. 2001 and 2002. "RMS Annual Report." Amman, Jordan.
- Social Security Corporation, Jordan. 2001. "Annual Report." Amman, Jordan.
- Social Security Corporation, Jordan. 2001. "Social Security Law, No.19, 2001." Amman, Jordan.

World Bank Group. 2002. "A Quarterly Publication of the Jordan Country Unit."

World Bank Group. 2002. "Country Profile Tables." <http://www.worldbank.org>.

World Health Organization, World Bank, and the United States Agency for International Development. 2003. *Guide to producing national health accounts with special applications for low-income and middle-income countries* (Producers Guide). Geneva.

World Health Organization. 2002. *World Health Report 2002: Reducing Risks, Promoting Healthy Life, and Statistical Annex*. Geneva: WHO.

World Health Organization. 2001. "Country Indicators." <http://www.who.org>.

www.jordantimes.com/tue/economy: accessed on 7/23/04