

Determinants of Health Insurance Coverage and Out-of-pocket Payments for Health Care in Jordan:

Secondary Analysis of the 2017-18 JPFHS



DHS Further Analysis Reports No. 138

September 2020

This publication was produced for review by the United States Agency for International Development. It was prepared by Kristin Bietsch, Rebecca Rosenberg, John Stover, and William Winfrey.

DHS Further Analysis Reports No. 138

**Determinants of Health Insurance Coverage and
Out-of-pocket Payments for Health Care in Jordan:
Secondary Analysis of the 2017-18 JPFHS**

Kristin Bietsch¹
Rebecca Rosenberg¹
John Stover¹
William Winfrey¹

ICF
Rockville, Maryland, USA

September 2020

¹ Avenir Health

Corresponding author: Kristin Bietsch, Avenir Health, 655 Winding Brook Drive, 4th Floor, Glastonbury, CT 06033 USA; phone: 860-657-5300; fax: 860-657-5302; email: kbietsch@avenirhealth.org

Acknowledgments: The authors wish to thank Shireen Assaf, Emily Sonneveldt, Stephen Penfold, Susan Razzaz, Nagham Abu Shaqra, and John Callanta for their helpful feedback on this report.

Editor: Cathy Johnson

Document Production: Joan Wardell and Natalie Shattuck

This report presents findings from a further analysis undertaken as part of the follow-up to the 2017-18 Jordan Population and Family Health Survey (JPFHS) implemented by the Department of Statistics (DOS). ICF provided technical assistance for the project. This report is a publication of The DHS Program, which is designed to collect, analyze, and disseminate data on fertility, family planning, maternal and child health, nutrition, and HIV/AIDS.

This study was carried out with support provided by the United States Agency for International Development (USAID) through The DHS Program (#720-OAA-18C-00083). The views expressed are those of the authors and do not necessarily reflect the views of USAID or the United States Government.

The DHS Program assists countries worldwide in the collection and use of data to monitor and evaluate population, health, and nutrition programs. Additional information about The DHS Program can be obtained from ICF, 530 Gaither Road, Suite 500, Rockville, MD 20850 USA; telephone: +1 301-407-6500, fax: +1 301-407-6501, email: info@DHSprogram.com, internet: www.DHSprogram.com.

Recommended citation:

Bietsch, Kristin, Rebecca Rosenberg, John Stover, and William Winfrey. 2020. *Determinants of Health Insurance Coverage and Out-of-pocket Payments for Health Care in Jordan: Secondary Analysis of the 2017-18 JPFHS*. DHS Further Analysis Reports No. 138. Rockville, Maryland, USA: ICF.

CONTENTS

TABLES	v
FIGURES	vii
ACRONYMS AND ABBREVIATIONS	ix
ABSTRACT	xi
EXECUTIVE SUMMARY	xiii
BACKGROUND	1
Introduction	1
What Are Out-of-Pocket Health Expenditures?	1
What Problems Are Associated with Out-of-Pocket Health Expenditures?	2
How Can Health Insurance Reduce Out-of-Pocket Health Expenditures?.....	3
Out-of-Pocket Expenditures for Inpatient and Outpatient Care	3
Health Care in Jordan	3
Results from the Jordan Household Income and Expenditure Survey 2017 and Jordan Population and Family Health Survey 2017-2018	5
Jordan Household Income and Expenditure Survey 2017	5
Health Care and Health Insurance Results from 2018 Jordan Population and Family Health Survey.....	6
FURTHER ANALYSIS OF THE JORDAN POPULATION AND FAMILY HEALTH	
SURVEY 2017-2018	9
Research Questions.....	9
Data and Methods.....	9
Data.....	9
Variables	10
Methods	11
Results	11
Who are the uninsured and insured?.....	11
For Different Types of Reasons for Medical Care, What Proportion of Patients Have Insurance?	14
Where Do the Insured and Uninsured Seek Treatment?.....	16
Are Individuals with Insurance More Likely to Use Health Facilities Than Individuals Without Insurance?	17
How Much Out of Pocket Is Spent on Care?	20
Outpatient care.....	20
Inpatient care	21
What Are the Socioeconomic Characteristics of People Who Spent 50 Dinars or More, or Less than 50 Dinars, on Treatment? Where Did They Seek Treatment and Did They Have Insurance?	22
What Are the Mean Expenditures of Inpatient and Outpatient Treatment Paid by People of Different Socioeconomic Characteristics?.....	26
Discussion.....	28
Insurance on care seeking.....	28
Insurance and out-of-pocket expenditures	28
Limitations	29
Conclusions.....	30

REFERENCES.....	31
APPENDIX.....	35

TABLES

Table 1	Distribution of ever-married women age 15-49 with socioeconomic characteristics by health insurance status, percentage and 95% C.I. of any insurance coverage, and adjusted odds ratios of any insurance coverage, Jordan PFHS 2017-18.....	11
Table 2	Distribution of men age 15-49 with socioeconomic characteristics by health insurance status, percentage and 95% C.I. of any insurance coverage, and adjusted odds ratios of any insurance coverage, Jordan PFHS 2017-18.....	13
Table 3	Among de jure household members who visited a health facility in the 4 weeks before the survey, insurance status by reason for visit, Jordan PFHS 2017-18.....	15
Table 4	Among de jure household members who stayed overnight in a health facility in the 6 months before the survey, insurance status by reason for visit, Jordan PFHS 2017-18..	15
Table 5	Among de jure household members who visited a health facility or sought advice or treatment in the 4 weeks before the survey, percent distribution of facility type by insurance status, Jordan PFHS 2017-18.....	16
Table 6	Among de jure household members who stayed overnight in a health facility in the 6 months before the survey, percent distribution of facility type by insurance status, Jordan PFHS 2017-18.....	17
Table 7	Among de jure household members who stayed overnight in a health facility in the 6 months before the survey, mean cost of care received during the most recent inpatient visit (in Jordanian dinars), according to type of facility providing the care and insurance status, Jordan PFHS 2017-18.....	22
Table 8	Among de jure household members who visited a health facility in the 4 weeks before the survey, percent distribution by background characteristics of those who spent 50 Jordanian Dinars or more, those who spent less than 50 Jordanian Dinars, and percentage and 95% C.I. of those who spent 50 or more Dinars, Jordan PFHS 2017-18..	23
Table 9	Among de jure household members who stayed overnight in a health facility in the 6 months before the survey, percent distribution by background characteristics of those who spent 50 Jordanian Dinars or more, those who spent less than 50 Jordanian Dinars, and percentage and 95% C.I. of those who spent 50 or more Dinars, Jordan PFHS 2017-18.....	25
Table 10	Among de jure household members who stayed overnight in a health facility in the 6 months before the survey or who visited a health facility or sought advice or treatment in the 4 weeks before the survey, mean cost of visit by background characteristics (in Jordanian Dinars), Jordan PFHS 2017-18.....	27
Appendix Table A1	Unadjusted odds ratios (UOR), adjusted odds ratios (AOR), and 95% confidence intervals (CI) of ever married women utilizing inpatient (in last 6 months) and outpatient (in last 4 weeks) services, Jordan PFHS.....	35
Appendix Table A2	Unadjusted odds ratios (UOR), adjusted odds ratios (AOR), and 95% confidence intervals (CI) of men utilizing inpatient (in last 6 months) and outpatient (in last 4 weeks) services, Jordan PFHS.....	36

Appendix Table A3	Among de jure household members who visited a health facility in the 4 weeks before the survey, percent distribution by total cost and cost of various components of the care received during the most recent outpatient visit (in Jordanian dinars), according to insurance status type of facility providing the care, Jordan PFHS 2017-18	37
-------------------	--	----

FIGURES

Figure 1	Percent of individuals who have health insurance, Jordan Household Income and Expenditure Survey 2017	5
Figure 2	Percent of Individuals with any health insurance, Jordan Population and Family Health Survey 2017-18	6
Figure 3	Percentage of ever-married women 15-49 and all men 15-59 who are de jure household members who stayed overnight at a hospital or clinic in the last 6 months or received outpatient care in the last 4 weeks, by insurance status, Jordan PFHS 2017-18.....	18
Figure 4	Adjusted and unadjusted odds ratios of staying overnight at a hospital or clinic in the last 6 months or receiving outpatient care in the last 4 weeks, by insurance status, for ever-married women and all men, Jordan PFHS 2017-18.....	19
Figure 6	Among de jure household members who visited a health facility in the 4 weeks before the survey, mean total cost and cost of various components of the care received during the most recent outpatient visit (in Jordanian dinars), by insurance status and type of facility providing the care, Jordan PFHS 2017-18.....	21

ACRONYMS AND ABBREVIATIONS

AOR	Adjusted Odds Ratios
CI	Confidence Intervals
CIP	Civil Insurance Program
DOS	Department of Statistics
GOJ	Government of Jordan
JPFHS	Jordan Population and Family Health Survey
MoH	Ministry of Health
NGO	Non-Governmental Organization
OOP	Out of Pocket
UHC	Universal Health Coverage
UNHCR	United Nations High Commissioner for Refugees
UNRWA	United Nations Relief and Works Agency for Palestine Refugees in the Near East
UOR	Unadjusted Odds Ratios
USAID	United States Agency for International Development
WHO	World Health Organization

ABSTRACT

As part of the Sustainable Development Goals, United Nations Member States are trying to achieve universal health coverage (UHC) by 2030, which would allow everyone to have access to quality care without financial hardship. The Government of Jordan's 2016-2020 National Strategy for Health Sector sets out a vision of high-quality lifelong health care for the whole population, with a focus on financial protection. Health insurance provides financial risk protection against illness or injury through risk pooling and is found to lead to better access and less economic burden.

Our analysis finds that the uninsured in Jordan are disproportionately urban, live in Amman, and are non-Jordanian (Syrian and other nationalities). Accidents and injuries are the outpatient services least likely to be paid for with insurance, followed by vaccinations and fevers. For inpatient care, the services least likely to be paid for with insurance are newborn and child care and pregnancy and delivery. Cancer treatment is the most likely to be paid for with insurance, thanks to insurance with exemptions being provided to cancer patients.

Most individuals without insurance seek care in private facilities for both inpatient and outpatient treatments, where they are much less likely to receive free treatment and more likely to pay higher costs. In total, 13% of people seeking outpatient services pay more than 50 dinars, and 30% of inpatient visits cost more than 50 dinars. The highest share of outpatient costs is medication, followed by consultations. People with insurance spend on average 16.1 dinars for outpatient care, compared to 46.2 dinars for people without insurance, while for inpatient care, the gap between those with insurance and those without is much greater: the average cost is 143.7 dinars for those with insurance, 31.2 dinars for those with insurance with exemptions, and 919.3 dinars for those without insurance.

Expanding insurance would reduce out-of-pocket health expenditures, a sizable share of many families' household expenditures.

Key words: Health insurance, out-of-pocket expenditures, care seeking, inequality

EXECUTIVE SUMMARY

The goal of this Further Analysis Report is to answer the following research questions on insurance coverage and out-of-pocket expenditures. Below is a summary of the report findings.

Who are the uninsured and insured? Where do they live? Are they Jordanians or non-Jordanians? What are the socioeconomic characteristics of the uninsured population compared to the insured population?

Over half of the uninsured population (of ever-married women 15-49 and men 15-49) live in Amman, which has the lowest rate of insurance coverage of any Governorate. While most uninsured people are Jordanians because of their high concentration in the population, Jordanians have higher rates of insurance coverage than Syrians and other non-Jordanians. Those with higher levels of education are more likely to have insurance than those with lower levels of education, but there is very little difference in insurance coverage by wealth status.

For different types of reasons for medical care, what proportion of patients have insurance?

Newborn or child care is the reason for seeking outpatient medical treatment with the highest proportion of patients with insurance. For inpatient care, cancer treatment is the reason for visit with the highest proportion of patients with insurance; suffering from cancer qualifies individuals to receive insurance with exemption.

Where do the insured and uninsured seek treatment? How does this differ for inpatient and outpatient care?

The majority of people with insurance, which is overwhelmingly public insurance, seek treatment in public facilities for outpatient and inpatient care. The rates of those seeking care in public facilities are higher for inpatient treatment than outpatient treatment. Some people with public insurance receive care in private facilities. Half of people with UNRWA, UNHCR, or NGO insurance receive care in one of their health centers.

Are individuals with insurance more likely to use health facilities than individuals without insurance?

For ever-married women, we do not find evidence of differences in percent visiting a health facility by insurance status for either inpatient or outpatient care. For men, we find statistically significant results for receiving inpatient care, but not for outpatient care.

How much out of pocket is spent on care:

For outpatient care, do out-of-pocket expenditures vary by place of treatment and insurance status? What individual components make up the largest costs?

The highest out-of-pocket expenditures are for those who received care in a public facility with no insurance, and the lowest are those at a public facility with insurance. The largest component in out-of-pocket expenditures is medication, which follows the same pattern as overall expenditures.

For inpatient care, do out-of-pocket expenditures vary by place of treatment and insurance status?

The group with the lowest out-of-pocket expenditures for inpatient care are people with insurance with exemption who received treatment at a public facility, followed by those with insurance at a public facility. The highest are those with no insurance at a private facility.

What are the socioeconomic characteristics of people who spent more than or less than 50 dinars on treatment? Where did they seek treatment, and did they have insurance?

People without insurance are more likely have out-of-pocket expenditures exceeding 50 dinars compared to those with insurance or insurance with exemption. Private facility visits are also more likely to result in higher out-of-pocket expenditures than visits to public facilities. Wealthier, more highly educated, older individuals, and residents of Amman are all more likely spend more than 50 dinars compared to their counterparts.

What are the mean expenditures of inpatient and outpatient treatment paid by people of different socioeconomic characteristics?

Mean out-of-pocket expenditures are lowest for those under age 5 for both inpatient and outpatient care. Jordanians have lower out-of-pocket expenditures compared to Syrians and other non-Jordanians. The wealthiest have the highest out-of-pocket expenditures of all wealth quintiles.

BACKGROUND

Introduction

As the Government of Jordan aims to expand high-quality and affordable health care to the entire population (High Health Council and World Health Organization n.d.), a detailed understanding of the current levels of insurance and out-of-pocket health expenditures is necessary. Many forms of health insurance exist in Jordan. Depending on the type of insurance, health services can be accessed through public and/or private facilities. Jordanians can have more than one type of insurance. As an expansion of the health insurance and health spending data published in the Jordan Population and Family Health Survey 2017-2018, this Further Analysis provides analysis of insurance status and out-of-pocket expenditures among those who access inpatient and outpatient care and descriptions of the insured and uninsured populations in Jordan.

What Are Out-of-Pocket Health Expenditures?

The World Health Organization (WHO) defines out-of-pocket payments (OOPs) for health expenditures as direct payments from individuals to providers when receiving health services (WHO Health Financing n.d.). These costs are part of health financing and can be a major source of income for health providers. The payments are separate from insurance premiums, which fund health care by spreading financial risks across a large group of people (WHO 2019).

Globally, in 2017, the WHO estimates that OOPs make up 33% of current health expenditures, with low-income countries spending more **out-of-pocket** (40%) than high-income countries (22%) (WHO Global Health Observatory Data Repository 2020). The 2017 share for Jordan was 30% (WHO Global Health Observatory Data Repository 2020).

Previous work on OOPs for health expenditures using DHS data for four Africa countries found that expenditures were associated with an individual's age and sex (Wang, Temsah, and Carter 2016). A study in Tanzania found older people, women, those who were obese, and those with functional disabilities to have higher out-of-pocket costs (Brinda, Andres, and Enemark 2014). A study in Kuwait showed that out-of-pocket health expenditures are higher for persons in a household with chronic illness (Burney et al. 2016). Household size was also associated with higher out-of-pocket expenditures, but this could have been due to the fact that larger households tended to have higher illness rates (Burney et al. 2016). The relationship between level of education and out-of-pocket health expenditures was weak, but the study revealed that those with higher education had lower rates of illness (Burney et al. 2016). In both Turkey and Kuwait, wealthier households were more likely to have higher out-of-pocket health expenditures than the poor, likely due to the presence of free/lower cost care in public clinics/hospitals where the poor population is more likely to seek services (Brown, Hole, and Kilic 2014; Burney et al. 2016).

Out-of-pocket health expenditures can contribute to a more sustainable health-care system. However, without an effective exemption or waiver system, out-of-pocket health expenditures (in addition to other costs associated with accessing health care) may lead to debt and catastrophic health expenditures for vulnerable populations (Brinda et al. 2014).

What Problems Are Associated with Out-of-Pocket Health Expenditures?

When out-of-pocket expenditures are high, they can act as a barrier to access for health care (WHO Health Financing n.d.). Health expenditures can take up large shares of household resources and may pose a more severe financial burden on low-income households (Ku, Chou, Lee, and Pu 2018). It is estimated that globally, more than 100 million people are forced into poverty as a result of out-of-pocket health-care payments (Barasa, Maina, and Ravishankar 2017). A 2011 study examining the economic burden of accessing health care and medicines using World Health Survey data from 70 countries found that among households with non-zero health-care expenditures, households allocated between 11% (in high-income countries) and 42% (among poor households in low-income countries) of overall 4-week household expenditures to health care (Wagner et al. 2011). Overall, 40% of households in low-income countries had to sell assets, borrow money, or use savings to pay (Wagner et al. 2011). Health expenditures are deemed “catastrophic” when the share of out-of-pocket payments crosses the estimated threshold when the household must sacrifice other basic needs, sell assets, incur debt, or be forced into poverty (Gotsadze, Zoidze, and Rukhadze 2009). The estimated threshold for catastrophic health expenditures varies in the literature from 13-50% of the household’s nonsubsistence income (Gotsadze, Zoidze, and Rukhadze 2009).

A 2003 study examining survey data from 59 countries found the proportion of households facing catastrophic health expenditures in a given country to range from less than 0.01% to 10.5% (Xu et al. 2003). Among low-income countries, 10 had more than 3% of households facing catastrophic out-of-pocket health expenses (Xu et al. 2003). There are many factors that might contribute to the likelihood of a household experiencing a catastrophic health-care expenditure. Households that are larger, poorer, lack prepayment or health insurance, have an elderly or chronically ill member, and those that are in rural or marginalized regions have an increased likelihood of incurring catastrophic health expenditures (Barasa, Maina, and Ravishankar 2017; Gotsadze, Zoidze, and Rukhadze 2009; Xu et al. 2003; Yardim, Cilingiroglu, and Yardim 2009).

Most studies assessing catastrophic health expenditures focus only on direct health-care payments, but other indirect costs (e.g., transportation, food, lost earnings) may also contribute to catastrophic health spending. For example, a 2017 study in Kenya revealed the incidence of catastrophic health expenditures to be 5%, but when transportation costs were included, the incidence increased to 7% (Barasa, Maina, and Ravishankar 2017). A 2019 study in Northern India, which assessed the extent of direct out-of-pocket expenses and indirect costs due to injury-related hospitalization, found direct out-of-pocket expenditure for hospitalizations to be INR 16,768 (USD 263), while indirect productivity loss accounted for an additional INR 8,164 (USD 128) (Prinja et al. 2019).

The WHO also acknowledges that OOPs for health expenditures can exacerbate inequality, encouraging overuse of the system by people for whom the fees are a small portion of expenses, but underuse when the same fee is a high proportion of expenses (World Health Organization 2010). In fact, high out-of-pocket expenses may compel poorer people to forgo treatment and preventative care services, which may result in higher rates of adverse events and emergency department visits and worse overall health and productivity (Ku, Chou, Lee, and Pu, 2018; Wagner et al. 2011; Gotsadze, Zoidze, and Rukhadze 2009).

As part of the Sustainable Development Goals, United Nations Member States are trying to achieve universal health coverage (UHC) by 2030, which would allow everyone to have access to quality care

without financial hardship (WHO 2019). The WHO suggests three strategies to reduce out-of-pocket costs: ending user fees at public facilities, exempting specific populations (for example, the poor, pregnant women, children), and exempting specific health services from official payments (WHO Health Financing n.d.). Alternative sources of funding must be found and allocated to fill budget gaps.

How Can Health Insurance Reduce Out-of-Pocket Health Expenditures?

Health insurance provides financial risk protection against illness or injury through risk pooling (Ku, Chou, Lee, and Pu 2018; Yardim, Cilingiroglu, and Yardim 2009). Several studies have shown an association between health insurance coverage and reduced economic burdens of health care and better access (Ku, Chou, Lee, and Pu 2018; Wagner et al. 2011; Sun and Lyu 2020). However, some studies have found no significant association between health insurance and catastrophic health expenditures (Mehraban, Hajimoladarvish, and Raghfar 2018). The effects of health insurance on out-of-pocket health expenditures and access to services and medicines depends on the type and extent of benefits as well as the copay rates (Wagner et al. 2011; Mehraban, Hajimoladarvish, and Raghfar 2018).

Several studies have revealed that people with health insurance actually spend less on health care overall (Ku, Chou, Lee, and Pu 2018). A study in China found that individuals with insurance were more likely to seek treatment and spent less out of pocket (Zhang, Nikoloski, and Mossialos 2017). A study of Taiwan's National Health Insurance program also found a decrease in out-of-pocket expenditures for health-care services and pharmaceuticals, especially among those of a lower socioeconomic status (Ku, Chou, Lee, and Pu 2018). In a study analyzing World Health Survey data from 70 different countries, health insurance was associated with better access to care and a lower risk of economic burden (Wagner et al. 2011).

Out-of-Pocket Expenditures for Inpatient and Outpatient Care

In the DHS questionnaire, health care is considered inpatient when a person stays overnight in a health facility, and outpatient when they do not. Previous DHS work in four African countries showed that inpatient out-of-pocket expenditures are much larger than outpatient expenditures (Wang, Temsah, and Carter 2016).

OOPs can vary by the type of facility and the type of service. A WHO analysis revealed that for outpatient visits, average charges per visit were higher in private facilities than public facilities in 27 out of 39 countries, and in 30 out of 39 for inpatient visits (Saksena, Xu, Elovainio, and Perrot 2010). In the same analysis, expenditure on medicine accounted for the largest component of outpatient out-of-pocket expenditures in both public and private facilities, on average. Consultation fees were the most dominant inpatient out-of-pocket expense at private facilities, and expenditure on medicine was the largest share of inpatient out-of-pocket expenses in public facilities (Saksena, Xu, Elovainio, and Perrot 2010).

Health Care in Jordan

The Government of Jordan's 2016-2020 National Strategy for Health Sector sets out a vision of high-quality lifelong health care for the whole population. This vision includes financial protection with universal health coverage through social health insurance schemes (High Health Council and World Health Organization n.d.).

Public expenditure on secondary health-care services in Jordan far exceeds expenditures on primary health-care services, emphasizing a need to shift focus to primary and preventative health-care programs (High Health Council and World Health Organization n.d.). Universal health coverage has been a strategic goal of the Government of Jordan for over three decades, but only about 67% of Jordanian citizens are covered by health insurance, most of whom are covered by the public sector (High Health Council and World Health Organization n.d.; Department of Statistics 2020). Health insurance in Jordan is available through the public sector and the private sector. The public sector is composed of the Civil Insurance Program (CIP), Royal Medical Services, and university hospitals (Halasa-Rappel et al. 2020). The private sector, which includes employers and professional unions, covers a much smaller portion of the population (Halasa-Rappel et al. 2020). Jordanians can have multiple types of insurance. Recently, the Government of Jordan expanded coverage of the CIP to continue making progress toward universal health coverage.

Before the recent expansion, CIP (a health insurance fund managed by the Ministry of Health [MoH]) only covered civil servants and their dependents at MoH facilities and at other public and private facilities. Now, under CIP, the following groups are exempt from user fees for health services provided at MoH facilities: children under six, individuals classified as poor, individuals living in areas classified as “less fortunate” or remote, blood donors, and families in which one member is an organ donor (High Health Council and World Health Organization n.d.). Paid membership in the CIP is also available for citizens who wish to be enrolled and are not otherwise covered, including pregnant women and those age 65 or younger (High Health Council and World Health Organization n.d.). All residents, even those who lack formal health insurance coverage, can benefit from the subsidized health-care services provided at MoH Facilities (Halasa-Rappel et al. 2020). A 2020 study estimated the cost of expanding the CIP even further to cover Jordan’s uninsured vulnerable population (5% of the total population) and found it would cost US\$ 79 million annually, or about 3.5% of the public health expenditure (Halasa-Rappel et al. 2020). This expansion would represent an important step toward universal coverage, but might also require additional resources to meet the needs of increased service demands. Even with the increased costs associated with expansion of the CIP, if implemented appropriately, the expansion may improve the efficiency of the health-care system and reduce overall public health expenditure (Halasa-Rappel et al. 2020).

Jordan is also committed to providing humanitarian aid to Syrian refugees despite the burden it places on the health-care system (High Health Council and World Health Organization n.d.). As of February 2020, there were over 655,000 Syrian refugees registered with the UNHCR in Jordan, but the total number of Syrian refugees who have settled in Jordan (registered and unregistered) may be as high as 1.2 million (UNHCR 2020; Ravishankar, and Gausman 2016). For the last few years, the UNHCR with support from the MoH has been providing health care to Syrian refugees living within camps, free of charge. Up until late 2014, the MoH provided free health care to all Syrian refugees registered with UNHCR, but the burden on the health-care system became too great (Nazar and Tuffaha 2017). At that point Syrians were required to pay 20% of the costs, or the same amount as uninsured Jordanians. In January 2018, the Government of Jordan (GOJ) issued a new regulation requiring Syrian refugees to pay 80% of the rates established for health-care services, similar to those fees paid by uninsured foreigners (Brown et al. 2019). Following a USAID-coordinated intervention, multiple donors provided funding to a multi-donor account, which enabled the GoJ to reverse this policy in 2019 (Global Concessional Financing Facility 2019). Now, Syrians living outside of the refugee camps must pay the same 20% out-of-pocket rate for health-care services as uninsured Jordanians. Despite the highly subsidized prices at public institutions, the expense is still a

considerable burden for the financially vulnerable, causing some to forgo health care, especially for conditions seen as less urgent (Nazar and Tuffaha 2017).

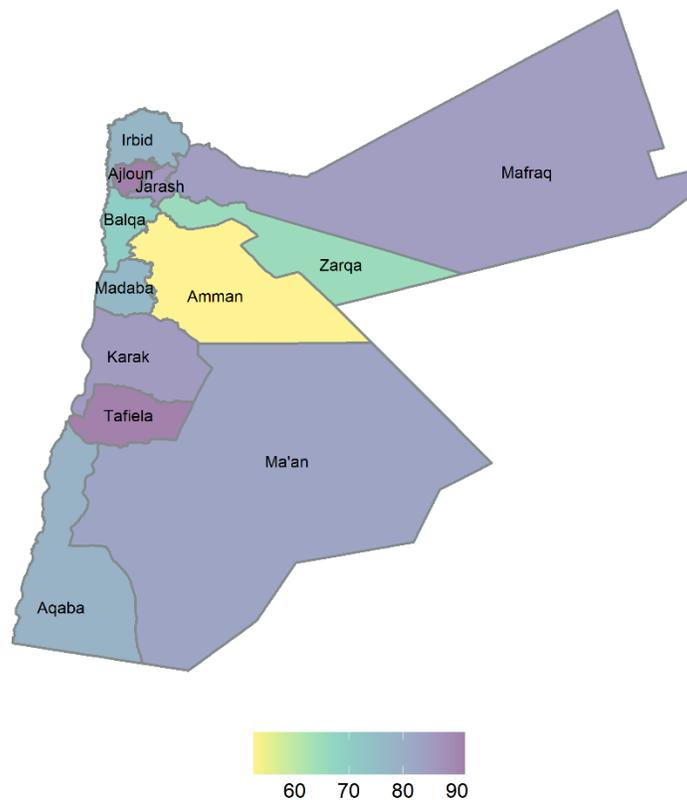
Results from the Jordan Household Income and Expenditure Survey 2017 and Jordan Population and Family Health Survey 2017-2018

Two recent surveys conducted in Jordan queried insurance coverage and health expenditures, the Jordan Household Income and Expenditure Survey 2017 and the Jordan Population and Family Health Survey (JPFHS) 2017-2018, the latter of which serves as data for this Further Analysis.

Jordan Household Income and Expenditure Survey 2017

The 2017 Jordan Household Income and Expenditure Survey finds that 67% of individuals are insured (Department of Statistics 2020). The most common type of insurance is provided by the MoH (through the CIP), followed by the Royal Medical Services. Individuals are more likely to be insured in the rural areas than urban areas (85% compared to 65%) (Department of Statistics 2020). As Figure 1 shows, health insurance coverage is highest in Tafiela and Ajloun, where over 90% of individuals have health insurance coverage. The lowest insured governorate is Amman, where only 52% have insurance.

Figure 1 Percent of individuals who have health insurance, Jordan Household Income and Expenditure Survey 2017



On average, households spend 497.3 Jordanian dinars (1 USD = 0.708 Jordanian dinars, Fiscal Data 2020) annually on health care, ranging from 157.7 dinars in Tafiela to 715.9 dinars in Amman. This is more than

is spent on communication or recreation, but less than is spent on housing, clothing, or education (Department of Statistics 2020).

Health Care and Health Insurance Results from 2018 Jordan Population and Family Health Survey

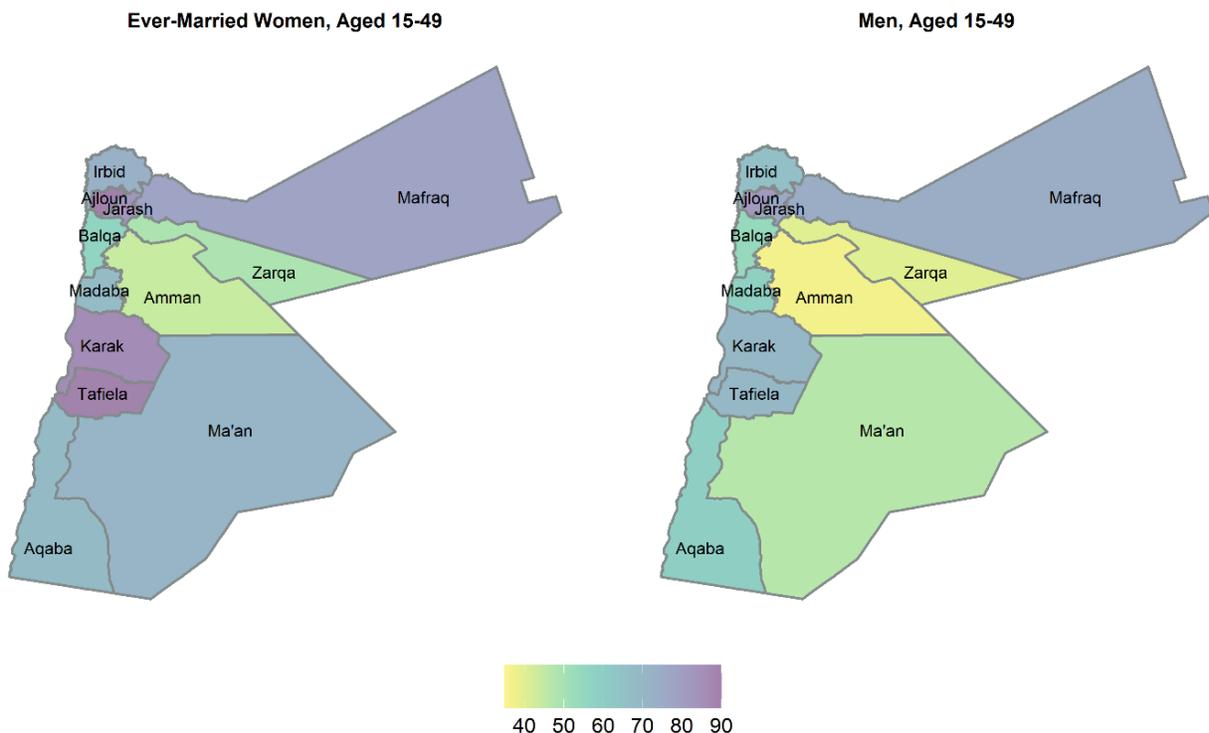
Information published in the final report of the 2017-2018 JPFHS shows that 3% of household members stayed overnight in a health facility in the 6 months before the survey, while 11% of household members received outpatient care in the 4 weeks prior to the survey (Department of Statistics and ICF 2019). Household members over the age of 60 were more likely to have recently used both outpatient and inpatient services.

Public and private sector facilities are utilized for both inpatient and outpatient care. Compared to 48% for outpatient care, 71% of inpatient care took place at public facilities. For outpatient care, half of patients did not pay for services (51%), 43% paid less than 100 dinars, and the remainder paid more than 100 dinars.

Among people who received outpatient care, 69% had some form of health insurance, compared to 77% of patients who received inpatient care.

Ever-married women and all men were included in the individual questionnaires report if they have health insurance. Figure 2 illustrates how coverage for women and men varies by governorate, with findings similar to the Jordan Household Income and Expenditure Survey. Amman has the lowest percent of the population insured for both men and women, with 44% of ever-married women and 37% of men. Ajloun has the highest rates for both groups, with 90% for ever-married women and 82% for men.

Figure 2 Percent of Individuals with any health insurance, Jordan Population and Family Health Survey 2017-18



Data collected on health-care utilization and health expenditures by the 2017-18 JPFHS offer additional avenues for analysis, which will be discussed in the following sections.

Most people in Jordan have health insurance and a sizable portion have insurance with exemption. Insurance with exemption is for people who do not have insurance but meet any of the following criteria: over the age of 60, disabled, suffering from cancer, or can prove that they are below the poverty line. In this report, unless specifically mentioned, insurance with exemption is grouped with insurance. A detailed breakdown of the types of insurance among Jordanians is described in the Final Report.

FURTHER ANALYSIS OF THE JORDAN POPULATION AND FAMILY HEALTH SURVEY 2017-2018

The JPFHS contains additional questions about health insurance and out-of-pocket health spending that were not analyzed in the Final Report. This data can provide insight into the differences between the insured and uninsured in Jordan and detailed expenditure data on accessing care through the public and private sectors.

Research Questions

This Further Analysis report aims to answer the following research questions:

Who are the uninsured and insured? Where do they live? Are they Jordanians or non-Jordanians? What are the socioeconomic characteristics of the uninsured population compared to the insured population?

For different types of reasons for medical care, what proportion of patients have insurance?

Where do the insured and uninsured seek treatment? How does this differ for inpatient and outpatient care?

Are individuals with insurance more likely to use health facilities than individuals without insurance?

How much out of pocket is spent on care?

For outpatient care, do out-of-pocket expenditures vary by place of treatment and insurance status?
What individual components make up the largest costs?

For inpatient care, do out-of-pocket expenditures vary by place of treatment and insurance status?

What are the socioeconomic characteristics of people who spent more than or less than 50 dinars on treatment? Where did they seek treatment, and did they have insurance?

What are the mean expenditures of inpatient and outpatient treatment paid by people of different socioeconomic characteristics?

Data and Methods

Data

Four questionnaires were included in the JPFHS: household, women, men, and biomarkers. The first three contain questions on health care or health insurance. Half of households were eligible for the health expenditures module. In the selected households, the household survey asks all de jure¹ household members if they spent the night in a health facility over the last 6 months or received outpatient care in the last 4 weeks. All household members who indicated receiving inpatient care were asked to complete the health

¹ In the JPFHS, de jure population is defined as usual residents, whether or not they stayed in the household the night before the interview.

expenditure module. One member (if more than one household member received outpatient care) was randomly selected to answer detailed questions about outpatient care.

All ever-married women age 15-49 who were either residents of the selected households or visitors who stayed in the households the night before the survey were eligible for the women's questionnaire. In one of every two household in the subsample, all men age 15-59 who were usual residents of the households or who spent the previous night in the households were eligible for the men's questionnaire. Respondents of these questionnaires were asked if they have health insurance and what type. Matching the household questionnaire with the men's and women's questionnaires allows us to analyze care-seeking behavior based on insurance status.

In total, 9,397 households were interviewed about health expenditures, 14,689 ever-married women age 15-49 were asked about health insurance, and 6,428 men age 15-59 were asked about health insurance.

Variables

For analysis of the household survey, variables of interest include age, marital status, nationality, sex, residence, region, governorate, education, wealth, insurance coverage, and type of facility visited for care. Age is grouped to reflect different age groups that are associated with different types of care. Groups include 0-4, 5-17, 18-29, 30-39, 40-49, 50-59, and 60+. Marital status is only asked of household members who are over the age of 15, so we include those under 15 in the analysis as marital status "Not Asked." The other marital categories are never married, married, and formerly married. Nationality is grouped into Jordanian, Syrian, and other (which includes Egyptians, Iraqis, other Arab nationalities, and non-Arab nationalities). For descriptive analysis, we include both the region (Central, North, and South) and the more detailed governorates. Education is grouped as none, elementary, preparatory, secondary, and higher. We use the five wealth quintiles calculated for the final report. We group insurance as none, insurance, and insurance with exemption. Facilities are classified as public (which can include government hospitals, university hospitals, Royal/Military hospital/medical center, and other public sector), private (which includes private hospitals or clinics, pharmacies, private doctors, mobile clinics, UNWWA health centers, UNHCD/NGOs, and other private medical sector), and other.

For analysis using the ever-married women survey, variables of interest include age, residence, region, governorate, education, wealth, and occupation. Age is grouped into 5-year categories from 15-19 to 45-49. Residence, nationality, region, governorate, education, and wealth are coded in the same manner as the household survey. Occupation categories include not working, professional/ technical/ managerial, clerical, sales and services, skilled manual, unskilled manual, domestic service, agriculture, and information missing on occupation. We use the same coding for men's descriptive analysis; however, we extend the age range to 15-59 for the regression analysis.

For the regression analysis, our independent variable of interest is insurance, where we group individuals into having any versus no insurance. Our outcomes of interest are stayed overnight in a health facility in the last 6 months or used outpatient services in the last 4 weeks.

Methods

To answer our research questions, we rely primarily on descriptive statistics and logistic regressions. We include information from the household questionnaire, women's questionnaire, and men's questionnaire. When looking at care-seeking behavior, we conduct logistic regressions with control variables, separately for ever-married women and all men because of differences in age ranges. Socioeconomic variables of interest include age, marital status, nationality, sex, residence, region, governorate, education, wealth, and occupation. All analysis is conducted using R and employs the Survey package to apply sample weights and adjust for sample design using cluster and strata variables.

Results

Who are the uninsured and insured?

Insurance status is available for ever-married women 15-49 and all men 15-59 who responded to the women's and men's questionnaires. 58% of ever-married women 15-49 and 50% of men 15-49 have some type of insurance. Table 1 shows the distribution of insured and uninsured ever-married women by socioeconomic characteristics, the percent of people in each group who have insurance, and the adjusted odds ratios of having insurance.

Table 1 Distribution of ever-married women age 15-49 with socioeconomic characteristics by health insurance status, percentage and 95% C.I. of any insurance coverage, and adjusted odds ratios of any insurance coverage, Jordan PFHS 2017-18

Type	Labels	Any	None	All ever-married women, 15-49	Any health insurance and 95% C.I.	Adjusted odds ratio
Age	15-19	2.0	3.2	2.5	47.3 [39.5,55.1]	<i>Reference Group</i>
	20-24	9.5	11.8	10.5	53.0 [48.3,57.6]	1.1 [0.8,1.5]
	25-29	16.9	16.8	16.9	58.5 [54.9,61.9]	1.3 [0.9,1.8]
	30-34	18.8	18.3	18.6	59.0 [55.7,62.3]	1.2 [0.9,1.7]
	35-39	17.7	18.3	18.0	57.6 [54.2,61.0]	1.2 [0.9,1.6]
	40-44	17.9	16.0	17.1	61.0 [57.5,64.5]	1.5* [1.1,2.0]
45-49	17.0	15.7	16.5	60.3 [56.4,64.0]	1.5* [1.0,2.0]	
Residence	Urban	86.2	95.0	89.9	55.9 [53.7,58.1]	<i>Reference Group</i>
	Rural	13.8	5.0	10.1	79.3 [75.0,83.0]	1.7*** [1.4,2.2]
Region ¹	Central	50.4	79.2	62.4	47.1 [44.7,49.5]	
	North	36.7	16.0	28.0	76.2 [73.6,78.7]	
	South	12.9	4.8	9.5	79.1 [76.4,81.5]	
Governorate	Amman	30.9	54.7	40.8	44.1 [40.9,47.4]	<i>Reference Group</i>
	Balqa	5.0	5.3	5.1	56.7 [52.5,60.8]	1.6*** [1.3,1.9]
	Zarqa	11.9	17.5	14.3	48.9 [44.7,53.1]	1.4** [1.1,1.7]
	Madaba	2.6	1.7	2.2	68.1 [63.5,72.4]	2.7*** [2.1,3.4]
	Irbid	21.7	11.3	17.4	72.8 [68.6,76.5]	4.0*** [3.2,5.1]
	Mafraq	7.8	3.0	5.8	78.2 [74.7,81.4]	6.7*** [4.9,9.0]
	Jarash	4.0	1.1	2.8	83.2 [80.1,86.0]	7.0*** [5.5,9.0]
	Ajloun	3.3	0.5	2.1	89.7 [87.0,91.9]	11.4*** [8.5,15.2]
	Karak	5.5	1.2	3.7	86.3 [83.6,88.6]	6.8*** [5.3,8.9]
	Tafiela	2.3	0.4	1.5	89.1 [86.3,91.4]	10.0*** [7.4,13.5]
	Ma'an	2.1	1.2	1.7	70.7 [62.8,77.5]	2.8*** [1.8,4.3]
Aqaba	3.1	2.0	2.6	68.5 [63.7,73.0]	2.7*** [2.1,3.6]	
Nationality	Jordanian	92.1	79.7	86.9	61.8 [59.5,64.0]	<i>Reference Group</i>
	Syrian	5.8	12.4	8.6	39.5 [34.3,44.8]	0.3*** [0.3,0.4]
	Other	2.1	7.9	4.5	27.5 [22.3,33.4]	0.3*** [0.2,0.4]

Continued...

Table 1—Continued

Type	Labels	Any	None	All ever-married women, 15-49	Any health insurance and 95% C.I.	Adjusted odds ratio
Education	None	1.7	3.0	2.2	43.3 [36.5,50.4]	<i>Reference Group</i>
	Elementary	6.1	8.2	7.0	51.1 [46.0,56.2]	2.1*** [1.5,2.9]
	Preparatory	11.6	14.7	12.9	52.4 [48.0,56.8]	1.9*** [1.4,2.6]
	Secondary	39.5	45.7	42.0	54.7 [52.0,57.4]	1.8*** [1.3,2.5]
	Higher	41.2	28.4	35.8	67.0 [64.5,69.3]	2.6*** [1.9,3.6]
Wealth	Poorest	20.1	19.8	20.0	58.8 [55.3,62.1]	<i>Reference Group</i>
	Poorer	21.1	20.2	20.7	59.4 [56.2,62.5]	0.8* [0.7,1.0]
	Middle	21.5	20.3	21.0	59.7 [56.2,63.1]	0.8 [0.7,1.0]
	Richer	20.2	20.8	20.5	57.6 [54.2,60.9]	0.9 [0.7,1.1]
	Richest	17.1	18.9	17.9	55.8 [51.7,59.7]	0.9 [0.7,1.2]
Occupation	Not working	82.3	90.0	85.5	56.1 [53.9,58.3]	<i>Reference Group</i>
	Professional/technical/managerial	13.2	3.5	9.2	83.9 [80.6,86.7]	3.6*** [2.8,4.6]
	Clerical	1.2	0.4	0.9	79.0 [64.3,88.7]	3.3** [1.5,7.0]
	Sales and services	1.3	1.7	1.5	50.5 [38.5,62.5]	0.9 [0.5,1.5]
	Skilled manual	0.3	1.0	0.6	30.3 [17.4,47.3]	0.4* [0.2,0.9]
	Unskilled manual	0.1	0.3	0.2	28.1 [10.0,58.0]	0.4 [0.1,1.4]
	Domestic service	1.0	2.5	1.6	35.4 [24.7,47.7]	0.9 [0.5,1.6]
	Agriculture	0.1	0.1	0.1	59.5 [33.1,81.3]	0.9 [0.3,2.5]
	Missing	0.5	0.4	0.4	64.6 [38.1,84.4]	1.1 [0.4,3.0]
Total	Total	100	100	100	58.3 [56.2,60.4]	
Number		8,564	6,125	14,689	14,689	14,689

¹ Excluded due to collinearity with Governorate
 *** p < 0.001; ** p < 0.01; * p < 0.05.

Among ever-married women, health insurance is most common among older women – over 60% (CI[56,64]) of women 40-49 had health insurance, compared to 47% (CI[40,55]) for ever-married women age 15-19, these difference are significant even after controlling for other variables. 79% (CI[75,83]) of rural women had health insurance, compared to 56% (CI[54,58]) of urban women. 62% (CI[59,64]) of Jordanians had health insurance, but only 39% (CI[34,45]) of Syrians and 27% (CI[22,33]) of other nationalities, both statistically less likely to have insurance even when controlling for other factors. Insurance does not vary by wealth quintile for ever-married women, ranging from 56% (CI[52,60]) of the highest wealth quintile to 60% (CI[56,63]) of the middle quintile (Department of Statistics and ICF 2019).

Looking at the distribution by insurance group to see where the uninsured are concentrated, the most populous age group for uninsured women are ages 30-34 and 35-49, while 30-34 is the most common for women with any type of insurance (Table 1 also shows that women age 30-34 are the largest 5-year age group of ever-married women). Uninsured women disproportionately live in urban areas – 95% of uninsured women live in an urban area, compared to 86% of insured women. When looking at the three regions in Jordan, 79% of the uninsured lived in the Central region, with 16% in the North, and 5% in the South. This is a much different distribution than for insured women, where 50% are in the Central region, 37% are in the North, and 13% are in the South. Over half of all the uninsured live in Amman (55%), while 17% live in Zarqa and 11% in Irbid.

Of the 58% of women with insurance living in Jordan, 92% are Jordanian, 6% are Syrian, and 2% are other nationalities. For the 42% who are uninsured, the distribution is skewed differently – 80% are Jordanian, 12% are Syrian, and 8% are other nationalities. By education, the largest group for the uninsured is among

women with secondary education, but women with higher education make up the largest group of the insured. For both the insured and uninsured groups, women are equally distributed among the five wealth quintiles; this is in line with findings from the adjusted odds ratios, where women of all wealth quintiles had similar levels of insurance coverage. Compared to 82% of the insured, 90% of the uninsured were not working.

Turning to men, Table 2 shows patterns similar to women. Older men have higher rates of insurance coverage than younger men – 56% (CI[49,62]) among 45-49 year-olds compared to 45% (CI[39,50]) among 15-19 year-olds (though when controlling for other variables the differences are not statistically significant) – and rates are higher in rural (72% (CI[66,77])) than urban (48% (CI[44,51])) areas, and are statistically significant after controlling for other variables. 53% (CI[50,57]) of Jordanian men had health insurance, while only 39% (CI[29,49]) of Syrians and 13% (CI[8,22]) of other nationalities had insurance, though the difference between Jordanian men and Syrian men was not statistically different when controlling for other variables.

Table 2 Distribution of men age 15-49 with socioeconomic characteristics by health insurance status, percentage and 95% C.I. of any insurance coverage, and adjusted odds ratios of any insurance coverage, Jordan PFHS 2017-18

Type	Labels	Any	None	All men, 15-49	Any health insurance and 95% C.I.	Adjusted odds ratio
Age	15-19	17.6	22.0	19.7	44.8 [39.4,50.3]	<i>Reference Group</i>
	20-24	17.9	26.6	22.2	40.5 [35.5,45.8]	0.5*** [0.4,0.8]
	25-29	15.4	14.7	15.1	51.4 [45.9,57.0]	0.6** [0.4,0.9]
	30-34	14.4	10.0	12.2	59.4 [53.4,65.2]	1.0 [0.6,1.5]
	35-39	14.1	9.9	12.1	59.1 [52.6,65.3]	1.0 [0.7,1.6]
	40-44	10.9	8.9	9.9	55.4 [48.8,61.8]	1.0 [0.6,1.5]
	45-49	9.7	7.9	8.8	55.6 [48.6,62.4]	1.2 [0.8,1.7]
Residence	Urban	84.5	93.8	89.1	47.8 [44.2,51.3]	<i>Reference Group</i>
	Rural	15.5	6.2	10.9	71.6 [65.8,76.9]	1.8** [1.3,2.5]
Region ¹	Central	50.6	76.2	63.3	40.2 [35.9,44.7]	
	North	38.1	16.9	27.6	69.6 [65.5,73.5]	
	South	11.3	6.9	9.1	62.5 [56.6,68.1]	
Governorate	Amman	30.4	52.2	41.2	37.1 [31.0,43.7]	<i>Reference Group</i>
	Balqa	6.6	5.6	6.1	54.4 [45.3,63.2]	2.3*** [1.4,3.6]
	Zarqa	10.8	16.5	13.7	40.0 [34.2,46.1]	1.2 [0.8,1.8]
	Madaba	2.7	1.9	2.3	58.8 [51.4,65.8]	2.4*** [1.6,3.5]
	Irbid	22.5	11.9	17.3	65.6 [59.3,71.4]	3.6*** [2.4,5.4]
	Mafraq	8.2	2.8	5.5	74.6 [69.1,79.3]	6.2*** [4.0,9.6]
	Jarash	4.3	1.4	2.8	75.7 [70.0,80.7]	6.8*** [4.3,10.8]
	Ajloun	3.2	0.7	1.9	82.1 [76.9,86.4]	8.4*** [5.4,13.1]
	Karak	5.1	2.2	3.7	70.0 [62.7,76.4]	3.4*** [2.2,5.4]
	Tafiela	1.8	0.8	1.3	69.7 [63.9,75.0]	4.2*** [2.8,6.3]
	Ma'an	1.7	2.0	1.8	47.0 [29.8,65.0]	1.3 [0.5,3.3]
Aqaba	2.7	1.9	2.3	58.9 [52.2,65.3]	2.5*** [1.6,3.7]	
Nationality	Jordanian	94.1	83.3	88.7	53.4 [50.1,56.7]	<i>Reference Group</i>
	Syrian	4.5	7.2	5.8	38.7 [28.9,49.4]	0.7 [0.4,1.1]
	Other	1.5	9.5	5.5	13.4 [8.0,21.5]	0.2*** [0.1,0.3]
Education	None	0.8	2.2	1.5	28.2 [16.6,43.5]	<i>Reference Group</i>
	Elementary	4.6	7.8	6.2	37.3 [30.3,44.8]	1.6 [0.8,3.2]
	Preparatory	11.1	15.5	13.3	42.0 [36.5,47.8]	1.7 [0.9,3.4]
	Secondary	45.0	47.9	46.5	48.8 [45.0,52.6]	2.3* [1.2,4.5]
	Higher	38.5	26.7	32.6	59.4 [54.1,64.6]	3.8*** [1.9,7.6]

Continued...

Table 2—Continued

Type	Labels	Any	None	All Men, 15-49	Any Health Insurance and 95% C.I.	Adjusted Odds Ratio
Wealth	Poorest	15.1	18.6	16.8	45.1 [39.4,50.8]	<i>Reference Group</i>
	Poorer	19.6	18.2	18.9	52.3 [47.0,57.5]	0.9 [0.6,1.2]
	Middle	21.9	18.0	20.0	55.2 [49.4,60.8]	1.1 [0.8,1.5]
	Richer	20.9	21.4	21.2	49.8 [43.5,56.0]	1.0 [0.7,1.4]
	Richest	22.6	23.8	23.2	49.0 [41.8,56.3]	1.2 [0.8,1.7]
Occupation	Not working	35.5	52.8	44.1	40.6 [36.5,44.8]	<i>Reference Group</i>
	Professional/technical/managerial	20.4	7.9	14.2	72.3 [66.2,77.7]	3.5*** [2.4,5.0]
	Clerical	2.8	0.8	1.8	78.1 [62.2,88.6]	5.2*** [2.3,11.5]
	Sales and services	25.3	11.1	18.3	69.9 [64.9,74.4]	3.3*** [2.4,4.6]
	Skilled manual	10.1	22.9	16.4	31.0 [26.0,36.4]	0.9 [0.6,1.2]
	Unskilled manual	3.0	1.7	2.3	63.8 [50.5,75.3]	3.5*** [1.9,6.6]
	Domestic service	0.4	0.2	0.3	63.8 [23.6,91.0]	3.7 [0.9,15.3]
	Agriculture	1.2	1.9	1.6	39.5 [25.5,55.4]	0.9 [0.4,1.8]
	Missing	1.2	0.7	1.0	64.1 [40.3,82.5]	2.2 [0.8,5.7]
	Total	Total	100	100	100	50.4 [47.1,53.6]
Number		2,832	2,791	5,623	5,623	5,623

¹ Excluded due to collinearity with Governorate

*** p < 0.001; ** p < 0.01; * p < 0.05.

Table 2 includes those 15-49 to create a closer comparison to the women sample, and shows younger men are disproportionately in the uninsured group – men under 25 constitute 49% of the uninsured, compared to only 36% of insured men. Like women, uninsured men are overwhelmingly urban – 94%, compared to 85% of insured men. 76% of uninsured men live in the Central region, and a majority live in Amman. 94% of insured men are Jordanians, 4% are Syrian, and 1% are other nationalities, while 83% of uninsured men are Jordanians, 7% are Syrian, and 10% are other nationalities. The largest education groups for both the insured and uninsured are men with secondary education. Half of uninsured men are not working (53%), compared to a third of insured men (36%). 20% of insured men have professional, technical, or managerial jobs, compared to 8% of uninsured men. Uninsured men are disproportionately skilled, manual laborers (23%), compared to insured men (10%).

Ever-married men and women age 15-49 have nearly the same insurance coverage – 59% for men, and 58% for women.

For Different Types of Reasons for Medical Care, What Proportion of Patients Have Insurance?

Information about what procedures were covered by insurance can inform policy planning, as it tells us where additional health funding would be needed if there were a shift to universal health insurance. Questions on specific medical procedures are not asked in the survey, but the broader “reason for visit” is asked for both inpatient and outpatient visits.

Among outpatient services, the reason for visit with the highest coverage of insurance (which includes insurance with exemption) was newborn and childcare, with 86% of events covered by some type of insurance (Table 3). The next highest covered conditions were the treatment of hypertension (80%), heart

disease (77%), diabetes (74%), and diarrhea (74%). The three reasons for visit with the lowest insurance coverage were fever (61%), vaccination (61%), and accidents/injuries (57%).

Table 3 Among de jure household members who visited a health facility in the 4 weeks before the survey, insurance status by reason for visit, Jordan PFHS 2017-18

Reason	Insurance			Don't know	Number
	Insurance	with exemption	None		
Accident/injury	53.1	4.4	42.5	0.0	110
Antenatal care/delivery/postnatal care	64.8	2.5	32.7	0.0	105
Check-up/preventive care	61.9	8.8	29.3	0.0	189
Diabetes	69.8	4.3	25.9	0.0	295
Diarrhea	(73.2)	(0.9)	(25.9)	(0.0)	33
Family planning	*	*	*	*	14
Fever	57.0	4.1	38.3	0.7	330
Heart disease	71.7	5.5	22.9	0.0	151
Hypertension	71.4	8.8	19.8	0.0	258
Newborn/childcare	81.7	4.0	14.3	0.0	53
Other illness	61.7	6.8	31.5	0.0	1,253
Vaccination	(57.0)	(4.4)	(38.6)	(0.0)	46

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

While outpatient newborn care has high levels of insurance coverage, inpatient newborn and childcare have the lowest insurance coverage of the pre-coded reasons for visit included in the questionnaire – 57% of overnight stays were covered by insurance (Table 4). Pregnancy and delivery have the second lowest insurance coverage at 71%. Cancer treatment has the highest insurance coverage of inpatient care at 92%, because people with cancer are eligible for insurance with exemption (56% of cancer treatments are under insurance coverage and 36% are under insurance with exemption).

Table 4 Among de jure household members who stayed overnight in a health facility in the 6 months before the survey, insurance status by reason for visit, Jordan PFHS 2017-18

Reason	Insurance			Number
	Insurance	with exemption	None	
Accident/injury	66.8	7.6	25.7	134
Cancer	(56.0)	(36.0)	(8.0)	43
Diabetes	73.5	3.8	22.8	92
Heart disease	64.9	17.3	17.8	163
Newborn/child care	54.7	2.6	42.6	135
Other illness	76.6	4.9	18.5	474
Pregnancy/delivery	70.3	0.8	28.8	212
Surgeries	68.9	14.7	16.5	162

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

Where Do the Insured and Uninsured Seek Treatment?

Place of treatment varies greatly based on insurance status of the individual and type of insurance. For outpatient care, Table 5 shows that less than a quarter (23%) of individuals who sought care with no insurance attended a public facility when sick, compared to 58% with insurance, and 72% of those with insurance with exemption, which is in line with most insurance being provided through public channels. Individuals with public insurance attended a public facility 70% of the time, compared to only 12% for people with private not-for-profit insurance and 6% for people with private for-profit insurance. For individuals with public insurance, 16% sought care at a private pharmacy, and 8% with a private doctor. For private, nonprofit insurance, 29% received care through UNHCR/NGO and 23% through a UNRWA Health Center, reflecting that most not-for-profit insurance is provided by the two groups. People with private, for-profit insurance overwhelmingly accessed care through private doctors (45%), private hospitals or clinics (37%) and pharmacies (12%). For individuals without insurance, 77% receive care in private facilities, mainly private doctors (29%), pharmacies (28%), and private hospitals and clinics (14%). Pharmacies are the most common private facility accessed by individuals with insurance (15%) or insurance with exemption (10%).

Table 5 Among de jure household members who visited a health facility or sought advice or treatment in the 4 weeks before the survey, percent distribution of facility type by insurance status, Jordan PFHS 2017-18

Facility Type	Insurance	Public insurance ¹	Private insurance (not for profit) ²	Private insurance (for profit) ³	Insurance with exemption	None
Public	57.8	70.4	12.3	6.0	72.4	23.4
Government hospital	24.0	28.3	8.2	2.4	51.6	12.7
University hospital	4.9	6.3	0.1	1.6	3.2	1.3
Royal/military hospital/medical center	11.8	15.6	0.0	1.0	14.0	0.1
Government health center	17.1	20.3	4.0	1.0	3.7	9.3
Private	42.2	29.6	87.7	94.0	27.6	76.6
Private hospital/clinic	8.9	4.4	8.4	37.1	5.6	13.6
Pharmacy	15.0	15.6	13.0	12.0	10.5	28.4
Private doctor	12.7	7.7	14.3	44.8	8.0	28.7
Mobile clinic	0.1	0.1	0.3	0.0	0.0	0.3
UNRWA health center	3.1	1.5	22.6	0.0	2.6	3.0
UNHCR/NGO	2.3	0.1	29.1	0.0	0.9	2.6
Other private medical sector	0.1	0.1	0.0	0.1	0.0	0.0
Total	100	100	100	100	100	100
Number	1,826	1,372	138	230	174	889

¹ Public Insurance includes: Ministry of Health insurance, Royal/Military Health insurance, and University Hospital insurance.

² Private Insurance (Not for Profit) includes: UNRWA insurance, UNHCR insurance, and NGO insurance.

³ Private Insurance (For Profit) includes: Privately purchased commercial health insurance and private sector insurance.

For inpatient care, Table 6 shows that 90% of those with insurance with exemption stayed at a public facility, compared to 77% with insurance, and 47% without insurance. The most common was a government hospital, followed by Royal or Military Hospital or Health Center, then a university hospital. For those who went to a private facility, almost all went to a private hospital or clinic. When looking at facility type by type of insurance, 92% of public insurance people went to public facilities, but only 44% of those with private not-for-profit insurance and 17% of those with private for-profit insurance.

Table 6 Among de jure household members who stayed overnight in a health facility in the 6 months before the survey, percent distribution of facility type by insurance status, Jordan PFHS 2017-18

Facility Type	Insurance	Public insurance ¹	Private insurance (not for profit) ²	Private insurance (for profit) ³	Insurance with exemption	None
Public	76.6	91.8	44.0	17.1	89.6	47.1
Government hospital	46.2	55.0	40.0	7.8	61.3	39.6
University hospital	8.5	9.3	1.1	7.1	11.3	2.7
Royal/military hospital/ medical center	21.7	27.4	0.0	2.1	16.9	2.6
Other public sector	0.2	0.1	2.9	0.0	0.0	2.2
Private	22.2	8.0	40.0	82.0	10.4	51.5
Private hospital/clinic	22.2	8.0	40.0	82.0	10.4	50.9
Other private medical sector	0.0	0.0	0.0	0.0	0.0	0.7
Other	1.2	0.1	16.0	0.9	0.0	1.3
Total	100	100	100	100	100	100
Number	995	773	55	165	110	332

¹ Public Insurance includes: Ministry of Health insurance, Royal/Military Health insurance, and University Hospital insurance.

² Private Insurance (Not for Profit) includes: UNRWA insurance, UNHCR insurance, and NGO insurance.

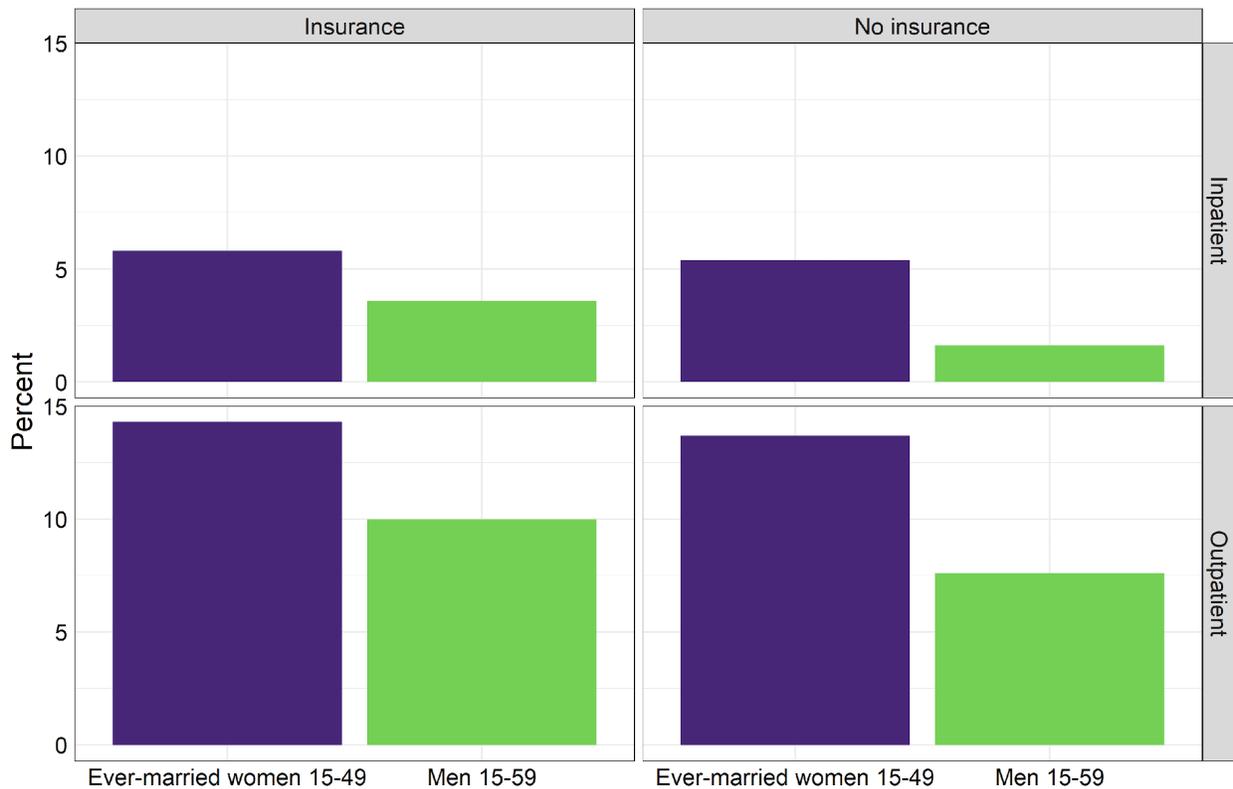
³ Private Insurance (For Profit) includes: Privately purchased commercial health insurance and private sector insurance.

Are Individuals with Insurance More Likely to Use Health Facilities Than Individuals Without Insurance?

One concern with a lack of universal health insurance is that those without insurance are more likely to delay or avoid seeking treatment for health problems because of the cost. We find mixed results in Jordan. We test care-seeking behavior in Jordan using the data from the ever-married women's questionnaire, men's questionnaire, and household questionnaire. Men and women who respond to the individual questionnaires are asked if they are covered by health insurance. In the household roster, for households selected for the health-care module, the household respondent reports on any overnight stay in the last 6 months or outpatient care in the last 4 weeks for each household member. Combining the results of the individual and household questionnaires, we can see if individuals with insurance were more likely to interact with the health system. Descriptive statistics are presented in Figure 3. Because insurance status is not random, for example insurance with exemption is available to the elderly, the poor, the disabled and cancer patients, we run logistic regressions to control for many socioeconomic variables. We run these regressions separately for men and women, since age and marital status are different among the two populations. Results for the insurance covariates are presented in Figure 4, and the full regression results are shown in Appendix Tables 1 and 2.

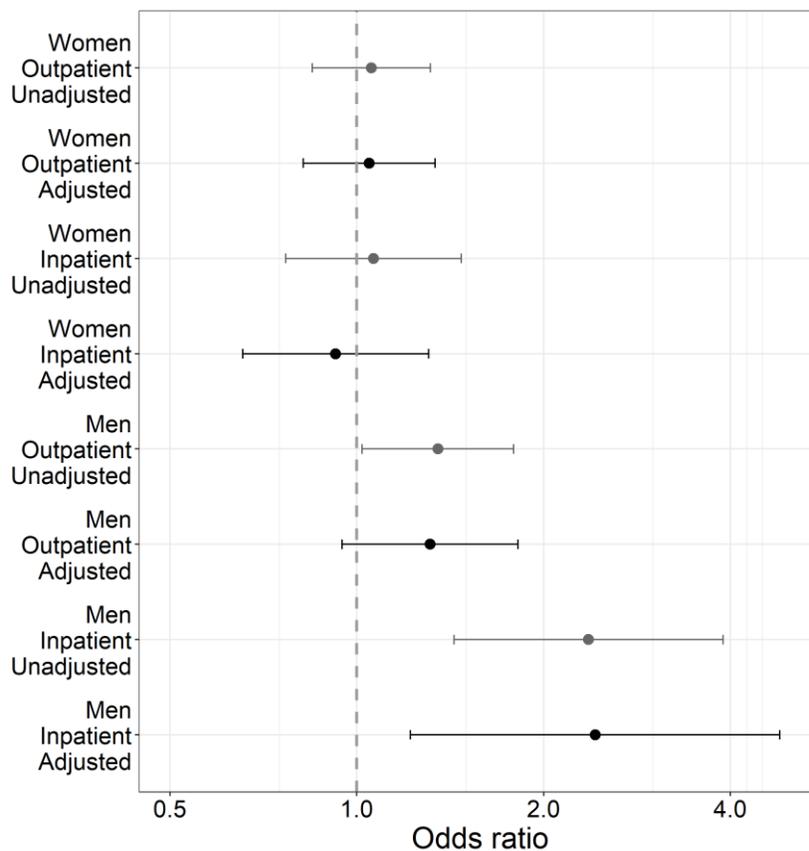
Figure 3 shows what percent of individuals received inpatient and outpatient care, by sex and insurance status. Ever-married women have fewer differences in health-care utilization by insurance status than men, and appear more likely to have sought care than men. 14% of women with insurance in the sample accessed outpatient care in the last 4 weeks, and 6% spent the night in a facility in the last 6 months. For women without insurance, the numbers were 14% and 5% respectively. Looking at Figure 4, we see that even without control variables, the differences in seeking treatment by insurance status is not statistically significant. For men with insurance, 10% received outpatient care and 4% received inpatient care, compared to 8% and 2% without insurance. The differences are statistically significant when no control variables are included. When looking at the unadjusted odds ratios for men and women, women have higher odds of seeking treatment than men for both inpatient and outpatient care, but the difference is only statistically significant for outpatient care (Inpatient OR: 1.1 [1.0,1.3], Outpatient OR: 1.1 [1.0,1.2]) (results not shown).

Figure 3 Percentage of ever-married women 15-49 and all men 15-59 who are de jure household members who stayed overnight at a hospital or clinic in the last 6 months or received outpatient care in the last 4 weeks, by insurance status, Jordan PFHS 2017-18



The regression results for women that show the differences in health-care utilization by insurance status are not statistically significant, with or without control variables (Figure 4). Looking at the unadjusted odds ratios, we see that women over 40 are less likely to access inpatient services than women 15-19, but there is no statistical difference for outpatient care (Appendix Table 1). There are no statistically significant differences between urban and rural residence when it comes to accessing care (Appendix Table 1), though several governorates have significantly less utilization for outpatient care when compared to Amman (Figure 5).

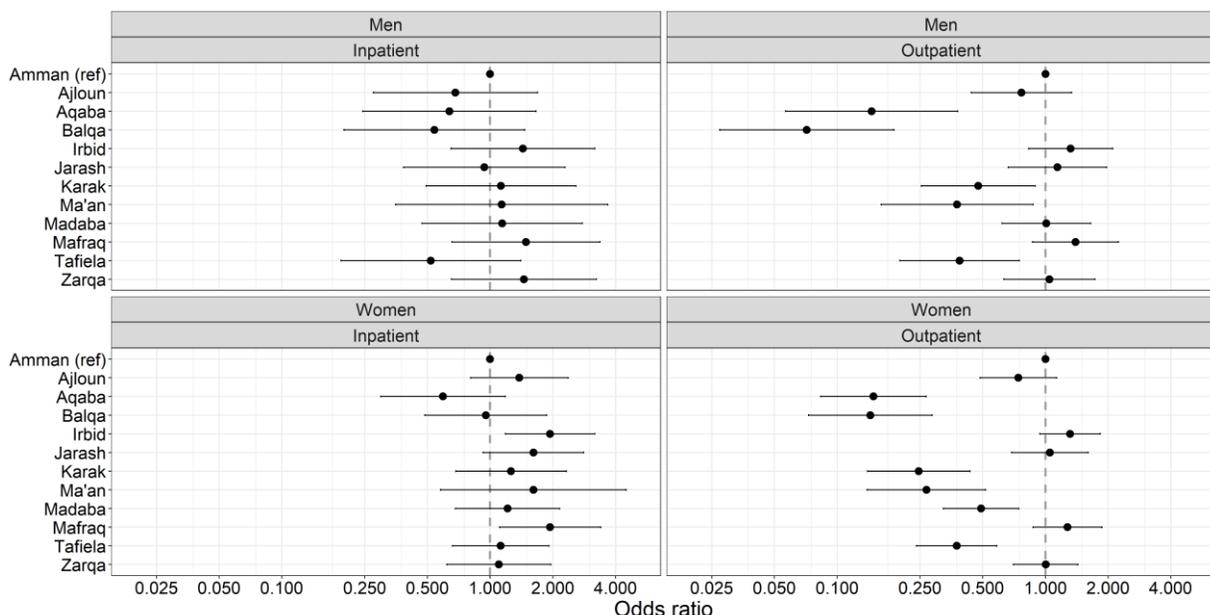
Figure 4 Adjusted and unadjusted odds ratios of staying overnight at a hospital or clinic in the last 6 months or receiving outpatient care in the last 4 weeks, by insurance status, for ever-married women and all men, Jordan PFHS 2017-18



For men, while insurance is significant for both inpatient and outpatient care without controls, when adjusting for other covariates, only the difference in inpatient care remains statistically significant (Figure 4). Men with insurance have higher odds of receiving inpatient care than men without insurance, when controlling for socioeconomic status. Looking at other predictors of health-care utilization, older men have higher odds of using inpatient and outpatient services than younger men (Appendix Table 2). As with women, we find no statistically significant differences by urban rural residence (Appendix Table 2). There are no statistically significant differences for the other governorates compared to Amman for inpatient care, but there are for outpatient care (Figure 5).

Overall, we do not find strong evidence that insurance is associated with higher care seeking – only inpatient services for men showed statistically significant differences after controlling for socioeconomic variables.

Figure 5 Adjusted odds ratios of staying overnight at a hospital or clinic in the last 6 months or receiving outpatient care in the last 4 weeks, by Governorate, for ever-married women and all men, Jordan PFHS 2017-18



How Much Out of Pocket Is Spent on Care?

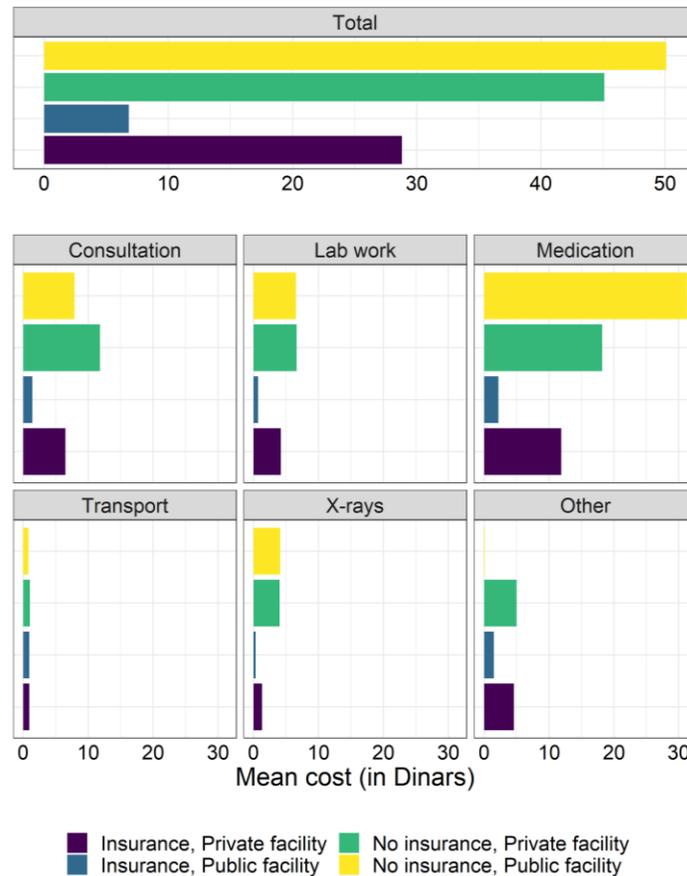
Outpatient care

The Final Report of the JPFHS details out-of-pocket expenditures for outpatient care. The majority of outpatient treatment (51%) is free, with a mean expenditure of 25.3 Jordanian dinars (those who paid 0 dinars are included in the mean calculations). The most expensive individual component is medication (10.8 dinars), followed by the consultation (5.8 dinars). Mean expenditures in private facilities were much higher than in public facilities (36.1 dinars compared to 13.0 dinars). If we look only at people who had out-of-pocket expenditures, the mean was 51.3 dinars. For individual components, the highest expenditures for those with out-of-pocket expenditures were for lab work (40.0 dinars) and X-rays (39.2 dinars), followed by medication (25.9 dinars), consultation fees (22.7 dinars), and finally transportation (8 dinars).

Figure 6 and Appendix Table 3 expand on these results by looking at expenditures based on insurance status. Appendix Table 3 shows that for people with insurance, 64% received treatment without out-of-pocket expenditures, compared to 20% with no insurance. There are also large differences in public versus private facilities. For a public facility with insurance, 82% of patients had no expenditures, compared to 40% at a private facility with insurance, 41% at a public facility with no insurance, and 14% at a private facility with no insurance. The mean expenditure shown in Figure 6 also varies considerably, with the highest at 50.1 dinars at public facilities without insurance, followed closely by private facilities with no insurance at 45.1 dinars. With insurance, the mean expenditure was 28.8 dinars at private facilities and 6.8 dinars at public facilities. In most cases, medication composed the highest share of total expenditures. Individuals who received medication at a public facility without insurance paid on average 31.4 dinars, compared to 18.2 dinars at a private facility without insurance, 11.9 dinars at a private facility with insurance, and 2.2 dinars at a public facility with insurance. For medication, we took a deeper look into the type of facility visited (without looking at insurance status) and found that visits to pharmacies resulted in average out-of-pocket

expenditures on medication of 15.0 dinars, while expenditures from visiting a private doctor were 12.6 dinars, and visits to any public facility averaged 2.5 dinars spent out-of-pocket on medication. It is important to note that we are unable to distinguish if a person received medication with no expenditures or received no medication in their visit.

Figure 6 Among de jure household members who visited a health facility in the 4 weeks before the survey, mean total cost and cost of various components of the care received during the most recent outpatient visit (in Jordanian dinars), by insurance status and type of facility providing the care, Jordan PFHS 2017-18



Inpatient care

Consultation expenditures were highest in private facilities when individuals did not have insurance: 11.8 dinars, compared to 7.9 in public facilities without insurance, 6.5 dinars in private facilities with insurance, and 1.4 dinars in public facilities with insurance. Transport expenditures were negligible among all groups, at around 1 dinar on average. Over 90% of X-rays were free regardless of insurance status or type of facility, though without insurance the average expenditure was 4 dinars compared to less than 1 dinar with insurance. Lab work was around 6 dinars without insurance, regardless of type of facility, but for those with insurance lab work was under 1 dinar on average in public facilities and 4.2 dinars in a private facility.

Looking at these costs for Syrians, we find that the lowest total out-of-pocket costs are paid by those with insurance who visit private facilities (17.8); visits to private facilities without insurance have average out-of-pocket expenditures of 43.7 dinars. We are unable to report mean expenditures for visits to public

facilities by insurance status because of small sample sizes. The largest gap between out-of-pocket expenditures by insurance status for Syrians visiting private facilities is for medication: 4.4 dinars with insurance, compared to 25.5 dinars without insurance.

While detailed expenditures are not asked of inpatient costs in the JFPHS, total expenditures are collected, and average expenditures are shown in Table 7. In total, the average out-of-pocket expenditure of inpatient care was 309.4 dinars. For those with insurance, a stay at a public facility costs 53.4 dinars, while a stay at a private facility costs 502.3 dinars. For those with insurance with exemptions, the average expenditures at any facility was 31.2 dinars, and at a public facility was 5.2 dinars (the number of stays at a private facility was too small to calculate a mean expenditure). For those with no insurance, a stay at a public facility costs 136.7 dinars on average, compared to 1,619.8 dinars at a private facility.

Table 7 Among de jure household members who stayed overnight in a health facility in the 6 months before the survey, mean cost of care received during the most recent inpatient visit (in Jordanian dinars), according to type of facility providing the care and insurance status, Jordan PFHS 2017-18

Facility	Insurance	Cost	Number
Any	All	309.4	1,436
	Insurance	143.7	995
	Insurance with exemption	31.2	110
	None	919.3	332
Public	All	53.4	1,017
	Insurance	42.7	762
	Insurance with exemption	5.2	98
	None	136.7	156
Private	All	952.1	403
	Insurance	502.3	221
	Insurance with exemption	*	11
	None	1,619.8	171
Other	All	(938.9)	16
	Insurance	(0)	11
	Insurance with exemption	*	0
	None	*	4

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

What Are the Socioeconomic Characteristics of People Who Spent 50 Dinars or More, or Less Than 50 Dinars, on Treatment? Where Did They Seek Treatment, and Did They Have Insurance?

Table 8 shows the distribution of people who spent 50 dinars or more, or less than 50 dinars, on outpatient services, and the percent of each group that spent 50 or more dinars. We use 50 dinars as a cutoff because the vast majority of inpatient and outpatients paid less than 50 dinars, and wanted a threshold high enough to signify potential significant expenditures, but to have enough sample size to look at variations by socioeconomic status. In total, 13% paid 50 dinars or more and 87% paid under 50 dinars. 8% (CI[6,10]) of individuals with insurance paid 50 or more dinars, compared to 7% (CI[3,16]) of individuals with insurance with exemption, and 26% (CI[21,31]) of individuals with no insurance. 22% (CI[16,29]) of those over the age of 60 paid 50 or more dinars, the highest of any age group. Syrians and other non-Jordanians had a similarly high share of people paying more than 50 dinars, 23% (CI[15,34]) and 24% (CI[13,40]), respectively, compared to Jordanians, 12% (CI[10,15]). The poorest had the lowest share, paying 50 or

more dinars (8% (CI[5,11])), while the richest had the highest share (21% (CI[15,27])). 6% (CI[4,10]) of visits to public facilities cost more than 50 dinars, compared to 20% (CI[16,24]) of private facility visits.

Table 8 Among de jure household members who visited a health facility in the 4 weeks before the survey, percent distribution by background characteristics of those who spent 50 Jordanian Dinars or more, those who spent less than 50 Jordanian Dinars, and percentage and 95% C.I. of those who spent 50 or more Dinars, Jordan PFHS 2017-18

Type	Labels	Under 50	50 and over	Percentage who spent 50 dinars or more and 95% C.I.	Number
Age	0-4	13.1	4.4	4.9 [2.2,10.7]	344
	5-17	12.6	7.1	8.0 [4.5,13.9]	332
	18-29	12.0	15.7	16.8 [11.5,23.9]	366
	30-39	15.1	14.4	12.9 [8.3,19.5]	426
	40-49	14.2	10.4	10.2 [6.5,15.6]	392
	50-59	14.6	15.0	13.7 [8.3,21.7]	422
	60+	18.4	33.0	21.7 [15.8,29]	610
Marital Status	Never married	8.7	13.3	19.0 [12.7,27.3]	271
	Married	56.9	56.3	13.3 [10.5,16.7]	1,648
	Formerly married	10.9	20.5	22.5 [15.1,32.2]	354
	Not asked ¹	23.5	9.9	6.2 [3.5,10.5]	618
Nationality	Jordanian	89.1	78.5	12.0 [9.6,14.9]	2,538
	Syrian	6.6	12.6	22.9 [14.6,34.1]	214
	Other	4.4	8.9	23.9 [13,39.7]	139
Sex	Male	47.4	43.5	12.4 [9.4,16.3]	1,375
	Female	52.6	56.5	14.2 [11.3,17.8]	1,516
Residence	Urban	90.7	93.3	13.7 [11.1,16.8]	2,625
	Rural	9.3	6.7	10.1 [5.5,17.6]	266
Region	Central	61.4	76.4	16.1 [12.7,20.3]	1,788
	North	34.4	22.8	9.3 [6.8,12.5]	991
	South	4.2	0.8	3.0 [1.5,5.7]	112
Governorate	Amman	41.7	57.8	17.7 [13,23.5]	1,230
	Balqa	1.8	0.6	4.6 [1.4,14]	49
	Zarqa	16.3	16.9	13.8 [10.1,18.6]	465
	Madaba	1.7	1.1	9.6 [5.4,16.4]	45
	Irbid	21.8	17.6	11.1 [7.6,16]	651
	Mafraq	7.6	3.3	6.3 [3.8,10.3]	206
	Jarash	2.9	1.0	5.0 [2.6,9.3]	80
	Ajloun	2.0	0.8	6.0 [3.1,11.3]	54
	Karak	1.9	0.4	3.2 [1.1,9.5]	47
	Tafiela	0.5	0.1	3.4 [1.1,10]	17
	Ma'an	0.8	0.2	3.5 [1.2,9.9]	23
	Aqaba	1.0	0.1	1.7 [0.2,12]	25
Education	None	24.0	10.9	6.5 [3.7,11.2]	647
	Elementary	17.5	14.6	11.4 [7.5,17.0]	487
	Preparatory	13.7	14.5	14.0 [9.3,20.6]	402
	Secondary	22.1	31.7	18.1 [13.2,24.4]	676
	Higher	22.6	28.4	16.2 [11.4,22.6]	678
Wealth	Poorest	21.8	11.5	7.5 [5.0,11.2]	586
	Poorer	22.2	19.5	11.9 [8.2,17.0]	635
	Middle	16.7	13.0	10.7 [7.0,16.1]	488
	Richer	20.6	24.6	15.6 [9.9,23.9]	600
	Richest	18.7	31.4	20.6 [15.4,27.1]	582
Insurance	None	26.3	58.9	25.7 [20.7,31.5]	889
	Health insurance	67.0	37.8	8.0 [6.2,10.4]	1,826
	Health insurance with exemption	6.7	3.3	7.0 [2.9,16.1]	174
Facility	Public	50.6	22.4	6.4 [3.8,10.5]	1,392
	Private	49.4	77.6	19.5 [15.9,23.7]	1,499
	Other	0.0	0.0	*	0
Total	Total	100	100	13.4 [11.0,16.2]	2,891
Number		2,325	359		

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

¹ Questions on marital status were not asked for household members under age 15.

Of those who spent less than 50 dinars, 67% had insurance, 7% had insurance with exemption, and 26% had no insurance. The distribution for those who spent more than 50 dinars is very different – a majority (59%) did not have insurance, 38% had insurance, and 3% had insurance with exemption. Those who spent under 50 dinars were equally split between private and public facilities (49% and 51% respectively), while those who spent 50 dinars or more were overwhelmingly in private facilities (78%).

Among people who paid 50 dinars or more, many were in the higher wealth quintiles: 31% were in the highest wealth quintile, and 25% were in the next wealth quintile, while only 39% were in the bottom two wealth quintiles. Among those who spent less than 50 dinars, this may be because poorer households are eligible for insurance with exemption. Educational differences were similar. People with secondary or higher education were more concentrated among those who paid over 50 dinars compared to those who paid under 50 dinars. There was a large difference among those with no education: they made up 24% of those who paid under 50 dinars, but only 11% of those who paid at or over 50 dinars.

Syrians and other non-Jordanians were more highly concentrated in the over 50 dinars group (13% and 9%) compared to the under 50 dinars group (7% and 4%).

Women were more represented in both groups, which is in line with what we saw in Figure 3, where women were more likely to have had outpatient care in the last 4 weeks. Women made up 56% of the 50 dinars and over group, and 53% of the under 50 dinars group. People over 60 made up a larger share of the 50 dinars and over group (33%) compared to the under 50 dinars group (18%). Children were more represented in the under 50 dinars group (26% of the group was under 18) compared to the higher group (11%), which is in line with children under 6 being eligible for the CIP.

Urban residents were slightly more concentrated in the 50 dinars and over group (93%) than under (91%), as were residents of the Central region (76% compared to 61%). Aligning with Amman's high concentration of uninsured individuals, Amman also had a high concentration of residents who paid 50 dinars or more for outpatient care (58% compared to 42% for under 50 dinars).

Turning to inpatient care, Table 9 shows that 30% paid 50 dinars or more and 70% paid less. Those age 30-39 were most likely to pay 50 or more dinars (33% (CI[25,42])), followed closely by those age 60+ (32% (CI[23,43])), while children 0-4 were the least likely (17% (CI[10,27])). As with outpatient care, Syrians and other non-Jordanians were much more likely to pay 50 or more dinars than Jordanians. Only 11% (CI[7,16]) of rural residents paid 50 or more dinars, compared to 32% (CI[28,36]) of urban residents. Almost half of the richest residents paid 50 or more dinars (47% (CI[36,58])), compared to less than a quarter of the poorest residents (22% (CI[16,30])).

Table 9 Among de jure household members who stayed overnight in a health facility in the 6 months before the survey, percent distribution by background characteristics of those who spent 50 Jordanian Dinars or more, those who spent less than 50 Jordanian Dinars, and percentage and 95% C.I. of those who spent 50 or more Dinars, Jordan PFHS 2017-18

Type	Labels	Under 50	50 and over	Percentage who spent 50 dinars or more and 95% C.I.	Number
Age	0-4	13.8	6.5	16.7 [9.8,27.0]	163
	5-17	12.6	10.6	26.1 [16.1,39.3]	174
	18-29	14.7	24.3	41.0 [31.6,51.1]	251
	30-39	13.9	16.1	32.8 [24.7,42.1]	205
	40-49	11.9	8.9	24.1 [16.1,34.5]	163
	50-59	14.4	12.3	26.5 [17.8,37.6]	204
	60+	18.7	21.3	32.5 [23.2,43.4]	277
Marital Status	Never Married	8.3	9.5	32.5 [20.1,48.0]	129
	Married	58.9	68.6	33.0 [28.3,38.0]	885
	Formerly Married	9.4	6.2	21.8 [12.3,35.5]	123
	Not Asked ¹	23.4	15.7	22.0 [15.1,30.9]	298
Nationality	Jordanian	92.3	74.3	25.3 [21.5,29.6]	1,244
	Syrian	5.4	15.3	54.5 [40.8,67.5]	128
	Other	2.3	10.4	65.3 [44.7,81.5]	64
Sex	Male	48.6	44.6	27.9 [22.8,33.6]	685
	Female	51.4	55.4	31.3 [26.1,36.9]	751
Residence	Urban	87.3	96.3	31.8 [27.7,36.2]	1,288
	Rural	12.7	3.7	10.9 [7.3,16.0]	148
Region	Central	50.1	69.9	37.1 [31.4,43.2]	784
	North	40.4	26.7	21.8 [17.4,27.1]	541
	South	9.6	3.3	12.8 [8.7,18.3]	111
Governorate	Amman	29.9	50.9	41.8 [33.8,50.2]	506
	Balqa	3.9	2.0	17.6 [8.4,33.4]	49
	Zarqa	14.5	15.7	31.4 [23.4,40.5]	206
	Madaba	1.8	1.4	24.4 [15.0,37.3]	23
	Irbid	25.7	20.7	25.4 [19.0,33.0]	368
	Mafraq	8.6	4.2	17.2 [11.1,25.6]	106
	Jarash	3.5	1.5	15.0 [8.6,25.0]	42
	Ajloun	2.5	0.3	5.0 [2.1,11.5]	25
	Karak	4.2	1.6	13.6 [7.8,22.7]	48
	Tafiela	1.3	0.1	2.9 [0.7,11.3]	16
	Ma'an	1.9	0.7	13.1 [4.8,31.1]	21
	Aqaba	2.2	1.0	15.8 [7.9,29.3]	26
Education	None	24.8	13.1	18.2 [12.4,26.0]	301
	Elementary	19.5	15.4	24.9 [17.9,33.6]	265
	Preparatory	12.6	14.6	32.7 [23.1,44]	196
	Secondary	24.2	24.8	30.3 [23.7,37.7]	345
	Higher	18.6	32.1	42.1 [32.9,51.9]	327
	Don't Know	0.3	0.0	*	2
Wealth	Poorest	26.3	17.7	22.1 [15.7,30.0]	341
	Poorer	27.5	17.5	21.2 [14.9,29.2]	350
	Middle	19.3	14.9	24.5 [17.0,34.1]	254
	Richer	13.5	22.1	40.8 [30.1,52.3]	235
	Richest	13.3	27.9	47.0 [36.4,57.8]	257
Insurance	None	10.2	52.3	68.4 [59.5,76.1]	332
	Health insurance	79.6	45.0	19.3 [15.6,23.5]	995
	Health insurance with exemption	10.2	2.7	10.0 [3.8,23.6]	110
Facility	Public	84.5	40.2	16.7 [13.4,20.7]	1,017
	Private	14.5	58.9	63.2 [53.9,71.7]	403
	Other	1.1	0.9	(26.8)	16
Total	Total	100	100	29.7 [25.9,33.7]	1,436
Number		939	396		

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

¹ Questions on marital status were not asked for household members under age 15.

For those with no insurance, 68% (CI[59,76]) paid 50 or more dinars, compared to 19% (CI[16,24]) with insurance, and 10% (CI[4,24]) with insurance with exemption. Stays in private facilities cost 63% (CI[54,72]) of patients 50 or more dinars, while only 17% (CI[13,21]) of people who stayed in a public facility paid 50 or more dinars.

The differences in distribution by insurance status were more extreme than for outpatient care. 80% of those who paid under 50 dinars had insurance, 10% had insurance with exemption, and only 10% did not have insurance. For those who paid 50 dinars or more, 45% had insurance, 3% had insurance with exemption, and 52% had no insurance.

Most individuals who paid 50 dinars or more for overnight care stayed in private facilities (59%), while 84% who paid less than 50 dinars stayed in a public facility. Distributions were also skewed by wealth quintile. Among those paying 50 dinars or more, 28% were in the richest quintile, and 22% in the second richest quintile, while among those paying less than 50 dinars, the population was more likely to be in the lower wealth quintiles – 26% were in the poorest quintile, and 28% were in the second poorest quintile. People who paid 50 dinars or more were more highly educated than those paying less than 50 dinars.

Jordanians were more concentrated in the group paying less than 50 dinars (92%) compared to 50 dinars or more (74%). Syrians made up 15% of the population paying 50 dinars or more and only 5% of those paying less than 50 dinars, while other nationalities made up 10% of those paying more than 50 dinars, and only 2% of those paying less than 50 dinars. Women made up the majority of both groups, but with slightly higher share of the 50 dinars and over group (55%) compared to the under 50 dinars group (51%).

As with outpatient procedure, people under 18 are more highly concentrated in the under 50 dinars group (26%) compared to the 50 dinars or more group (17%). The largest difference by age group was for people 18-29, who make up 15% of the people who paid under 50 dinars, but 24% of the population who paid 50 dinars or more.

Almost all the people who paid 50 dinars or more for overnight care were from urban areas (96%), as the CIP offers coverage to people who live in poorer areas. Residents of the central region made up half (50%) of the people who paid under 50 dinars, but 70% of the population who paid 50 dinars or more. Residents of Amman made up less than a third of people who paid under 50 dinars (30%), but over half (51%) of people who paid more than 50 dinars.

What Are the Mean Expenditures of Inpatient and Outpatient Treatment Paid by People of Different Socioeconomic Characteristics?

Table 10 provides the mean costs of inpatient and outpatient services by socioeconomic characteristics. We see that by age, the lowest out-of-pocket costs are for those under 5, which is expected given the expansion of CIP to cover all children. Insurance with exemption is supposed to cover those over 60, but we find high out-of-pocket costs for both inpatient and outpatient visits.

Table 10 Among de jure household members who stayed overnight in a health facility in the 6 months before the survey or who visited a health facility or sought advice or treatment in the 4 weeks before the survey, mean cost of visit by background characteristics (in Jordanian Dinars), Jordan PFHS 2017-18

Type	Labels	Inpatient		Outpatient	
		Mean cost	Number	Mean cost	Number
Age	0-4	55.8	155	10.9	320
	5-17	184.0	160	12.7	318
	18-29	274.2	234	35.4	336
	30-39	177.6	194	28.8	403
	40-49	172.4	147	27.5	367
	50-59	682.8	184	19.2	393
	60+	483.0	257	35.1	547
Marital Status	Never married	370.6	116	24.6	251
	Married	396.8	821	28.2	1,525
	Formerly married	238.1	113	36.5	327
	Not asked ¹	57.8	282	11.6	581
Nationality	Jordanian	231.3	1,157	23.8	2,352
	Syrian	445.7	111	35.5	198
	Other	1,499.4	63	36.4	134
Sex	Male	384.8	629	24.9	1,259
	Female	241.8	702	25.7	1,425
Residence	Urban	305.3	1198	26.0	2,444
	Rural	345.4	134	18.6	240
Region	Central	435.2	744	28.0	1,702
	North	161.2	485	22.0	880
	South	98.7	103	9.4	101
Governorate	Amman	574.2	479	28.4	1,177
	Balqa	130.9	44	9.1	44
	Zarqa	189.1	198	28.0	439
	Madaba	233.5	22	34.4	43
	Irbid	192.0	323	27.0	570
	Mafraq	127.3	97	13.2	190
	Jarash	85.8	39	14.7	71
	Ajloun	10.9	25	8.9	50
	Karak	54.4	46	8.4	46
	Tafiela	11.7	12	19.1	13
	Ma'an	230.5	20	6.8	20
	Aqaba	117.2	25	8.2	23
Education	None	71.4	285	13.1	597
	Elementary	156.2	244	26.8	460
	Preparatory	117.9	176	33.5	370
	Secondary	380.9	325	28.7	629
	Higher	699.1	299	27.5	628
Wealth	Poorest	94.4	317	16.5	549
	Poorer	341.3	328	23.3	586
	Middle	84.8	241	23.6	436
	Richer	331.1	214	30.3	567
	Richest	772.2	232	32.4	547
Weighted N			1,331		2,684

Note: Figures in parentheses are based on 25-49 unweighted cases. An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

¹ Questions on marital status were not asked for household members under age 15.

Jordanians paid the lowest out-of-pocket for inpatient and outpatient treatment (231.3 dinars and 23.8 dinars respectively), which is much lower than what Syrians paid (445.7 dinars for inpatient and 35.5 dinars for outpatient), and both pay less than those of other nationalities (1,499.4 dinars for inpatient and 36.4 dinars for outpatient). Comparing uninsured Jordanians to uninsured Syrians, the differences in out-of-pocket expenditures are not statistically significant. For inpatient visits, uninsured Jordanians paid 695.4 dinars,

compared to 786.4 dinars for uninsured Syrians, while for outpatient visits the out-of-pocket expenditures were 46.0 dinars and 48.9 dinars respectively.

The poorest, who if classified as poor are eligible for CIP, pay the least for outpatient care (16.5 dinars), but for inpatient care those in the middle wealth quintile pay the least on average (84.8 dinars).

Children and the poorest households have lower out-of-pocket costs of treatment, but the oldest Jordanians still pay high out-of-pocket costs.

Discussion

Insurance on care seeking

While other research has found that insurance is linked to health-care access (Zhang, Nikoloski, and Mossialos 2017), we do not find, for ever-married women 15-49, that having insurance is associated with a greater likelihood of visiting a health facility for either inpatient or outpatient care. For inpatient care, there may be no statistical difference because 38% of care is for pregnancy/delivery care or newborn/child care. Since 98.1% of births take place in a health facility (Department of Statistics and ICF 2019), insurance does not seem to be a barrier to seeking care for these types of health needs.

For men, there is a positive and significant relationship between having insurance and accessing inpatient care – though for outpatient care the relationship, while positive, is not statistically significant. The regressions do not control for health needs, and since individuals with disabilities and cancer are eligible for insurance with exemption, this may explain why care is higher among men with insurance. Future surveys focused on health insurance and health-care utilization would benefit from the inclusion of characteristics that could qualify people for insurance with exemption, as well as information on health-care needs.

Insurance and out-of-pocket expenditures

Our analysis finds that the uninsured in Jordan are disproportionately urban, live in Amman, and are non-Jordanian (Syrian and other nationalities). Almost as many Syrians live outside of camps as in camps in Jordan (UNHCR 2020, Ravishankar, and Gausman 2016), where they do not have access to the same health insurance as in camps. Compared to Jordanians, they are much less likely to have insurance and more likely to pay 50 dinars or more for care. When looking only at uninsured Jordanians and Syrians, the out-of-pocket expenditures for inpatient and outpatient care are not statistically different, suggesting that lack of insurance is the driving factor in the higher out-of-pocket expenditures among Syrians. When looking at the probability of having insurance among ever-married women and all men, we found that when controlling for other socioeconomic characteristics, Syrian women have statistically significant lower odds of having health insurance compared to Jordanian women, but for men the difference was not statistically significant. We found no statistically significant differences in care seeking by Syrians compared to Jordanians (Appendix 1 and 2), when controlling for other factors.

The non-Jordanian, non-Syrians are the nationality group in the country with the lowest levels of insurance coverage and the highest out-of-pocket costs. Most individuals without insurance seek care in private facilities for both inpatient and outpatient treatments, where they are much less likely to receive free treatment and more likely to pay higher costs. Accidents and injuries are the outpatient services least likely

to be paid for with insurance, followed by vaccinations and fevers. For inpatient care, the services least likely to be paid for with insurance are newborn and child care and pregnancy and delivery. Cancer treatment is the most likely to be paid for with insurance, thanks to insurance with exemptions being provided to cancer patients.

As found in previous research in other locations (Wang, Temsah, and Carter 2016), inpatient out-of-pocket health expenditures are higher than outpatient costs for the JPFHS 2017-18. We also find that, in general, out-of-pocket costs are higher among older people, though the relationship is not linear. Research from Tanzania shows that women had higher costs, but in Jordan, mean costs for inpatient care were higher for men and near equal to outpatient costs. Our findings on out-of-pocket expenditures by wealth are consistent with findings from Turkey and Kuwait (Brown, Hole, and Kilic 2014; Burney et al. 2016) that people in wealthier households have higher out-of-pocket expenditures, which highlights the achievement of policies to give poorer households access to health insurance and free or lower cost care. We find that, in general, having insurance does not vary by wealth when accounting for other variables (Tables 1 and 2). Findings that the wealthy pay higher out-of-pocket costs but have the same insurance coverage suggest that some are willing to go to more expensive facilities for care because of nonmonetary benefits such as perceived quality, more convenient hours, specialists, and lower waiting times. This may also be the reason we find sizable portions of the population with public insurance visiting private facilities (29.6% for outpatient care and 8.0% for inpatient care). Future surveys would benefit from including questions on why individuals chose the facility they visited.

Medicine made up the largest component of outpatient costs, in line with other research (Ku, Chou, Lee, and Pu 2018; Saksena, Xu, Elovainio, and Perrot 2010). This was true regardless of place of care or insurance status, though for those without insurance, public facilities had higher costs of medication than private facilities. Overall, in line with Saksena, Xu, Elovainio, and Perrot (2010), private facility visits led to more out-of-pocket expenditures than public facility visits for both inpatient and outpatient services.

With the CIP expansion to children under 6 and the poor, we should expect out-of-pocket expenditures to be low among these groups. For the most part, we find this to be true. For children 0-4, the average expenditures for inpatient care were 55.8 dinars, much lower than any other age group, and 10.9 dinars for outpatient care, the lowest of the age groups. Looking at the bottom wealth quintile, they paid 94.4 dinars on average for inpatient care, and while the middle wealth group paid slightly less (84.8 dinars), the poorest paid 3 times less than the poorer and richer groups (341.3 and 331.1 dinars, respectively) and over 7 times less than the richest group (772.2 dinars). For outpatient care, while the disparities were not as large, the poorest paid the least out of pocket.

Limitations

This Further Analysis has several limitations. First, we do not know the insurance status of all individuals, just ever-married women 15-49, men 15-59, and those whose households were selected for the health module who sought either inpatient or outpatient care (and were selected from within their household). We also do not have information on some factors that may make individuals eligible for health care without user fees. If we had all this information, we could see if insurance with exemption was being used by the intended recipients, and if this resulted in no out-of-pocket expenditures. Additionally, while we know the amount paid, we do not have information on whether the out-of-pocket expenses paid by households for

health care caused financial burdens, nor the total amount of expenditures for the household for all individuals over longer periods of time, such as the 1-year window used by HIES.

Conclusions

This Further Analysis highlights the range of insurance coverage and out-of-pocket health-care expenditures in Jordan. Major differences exist in where the insured and uninsured seek treatment, with the insured more likely to go to a public health facility, and the uninsured disproportionately utilizing more expensive private facilities. While most visits for care result in no out-of-pocket expenditures, the difference in outpatient expenditures is almost 3 times as much for individuals without insurance compared to individuals with insurance (46.2 dinars versus 16.1 dinars). For inpatient care, individuals without insurance incur out-of-pocket expenditures over 6 times as much as those with insurance, and almost 30 times as much as individuals with insurance with exemption (919.3 dinars versus 143.7 dinars versus 31.2 dinars).

The majority of those without insurance are Jordanians, however Syrians and other non-Jordanians are a disproportionate share of the uninsured population. Individuals who are neither Jordanian nor Syrian have the highest out-of-pocket expenditures.

While this analysis did not find differences in care seeking by insurance status (except for men seeking inpatient care), increasing insurance coverage could have additional benefits, including reducing out-of-pocket expenditures.

This report finds that current levels of insurance coverage and out-of-pocket expenditures reflect the expansion of the CIP, with visits for young children and the poor having low out-of-pocket expenditures, as well as the high level of insurance coverage for outpatient newborn or child care and inpatient cancer treatment. The Government of Jordan is making progress towards achieving its vision of high-quality lifelong health care for the whole population with universal health coverage through social health insurance schemes (High Health Council and World Health Organization n.d.).

REFERENCES

- Barasa, E. W., T. Maina, and N. Ravishankar. 2017. "Assessing the Impoverishing Effects, and Factors Associated with the Incidence of Catastrophic Health Care Payments in Kenya." *International Journal for Equity in Health* 16(31): 1-14. <https://doi.org/10.1186/s12939-017-0526-x>.
- Brinda, E. M., R. A. Andres, and U. Enemark. 2014. "Correlates of Out-of-pocket and Catastrophic Health Expenditures in Tanzania: Results from a National Household Survey." *BMC International Health and Human Rights* 14 (5): 2-8. <https://doi.org/10.1186/1472-698X-14-5>.
- Brown, H., N. Giordano, C. Maughan, and A. Wadeson. 2019. *Vulnerability Assessment Framework: Population Study 2019*. Amman, Jordan: UNHCR Jordan. <https://data2.unhcr.org/en/documents/details/68856>.
- Brown, S., A. R. Hole, and D. Kilic. 2014. "Out-of-pocket Health Care Expenditure in Turkey: Analysis of the 2003-2008 Household Budget Surveys." *Economic Modeling* 41 (2014): 2011-2018. <https://doi.org/10.1016/j.econmod.2014.05.012>.
- Burney, N. A., M. Alenezi, N. Al-Musallam, and A. Al-Khayat. 2016. "The Demand for Medical Care Services: Evidence from Kuwait Based on Households' Out-of-pocket Expenses." *Applied Economics* 48 (28): 2636-2650. <https://doi.org/10.1080/00036846.2015.1128073>.
- Department of Statistics. 2020. Household Expenditures and Income Survey. <http://dosweb.dos.gov.jo/economic/expenditures-income/>.
- Department of Statistics (DOS) and ICF. 2019. *Jordan Population and Family Health Survey 2017-2018*. Amman, Jordan, and Rockville, Maryland, USA: DOS and ICF. <https://www.dhsprogram.com/pubs/pdf/FR346/FR346.pdf>.
- Fiscal Data. 2020. Treasury Reporting Rates of Exchange. <https://fiscaldata.treasury.gov/datasets/treasury-reporting-rates-exchange/>.
- Global Concessional Financing Facility. 2019. *Progress Report as of January 25, 2019*. https://globalcff.org/wp-content/uploads/2019/03/GCFF-Progress-Report-January-2019_clean.pdf.
- Gotsadze, G., A. Zoidze, and N. Rukhadze. 2009. "Household Catastrophic Health Expenditure: Evidence from Georgia and its Policy Implications." *BMC Health Services Research* 9(69). <https://doi.org/10.1186/1472-6963-9-69>.
- Halasa-Rappel, Y. A., T. Fardous, M. Jrasat, I. Al-Halaseh, M. Abu-Shaer, R. Hijazeen, and D. S. Shepard. 2020. "The Actuarial Cost and Fiscal Impact of Expanding the Jordan Civil Insurance Program for Health Coverage to Vulnerable Citizens." *Eastern Mediterranean Health Journal* 26 (2): 206-211. <https://doi.org/10.26719/2020.26.2.206>.

- High Health Council and World Health Organization. n.d. The National Strategy for Health Sector in Jordan 2016-2020.
https://extranet.who.int/countryplanningcycles/sites/default/files/planning_cycle_repository/jordan/national_strategy_for_health_sector_2016-2020_jordan.pdf.
- Ku, Y. C., Y. J. Chou, M. C. Lee, and C. Pu. 2018. "Effects of National Health Insurance on Household Out-of-pocket Expenditure Structure." *Social Science and Medicine* 222: 1-10.
<https://doi.org/10.1016/j.socscimed.2018.12.010>.
- Mehraban, S., N. Hajimoladarvish, and H. Raghfar. 2018. "The Place of Health Insurance in Reducing Catastrophic Health Expenditure." *Iranian Journal of Economic Studies* 7(2): 239-254. <https://doi.org/10.22099/ijes.2019.31010.1490>.
- Nazer L. H. and H. Tuffaha. 2017. "Health Care and Pharmacy Practice in Jordan." *Canadian Journal of Public Health* 70 (2): 150-155. <https://doi.org/10.4212/cjhp.v70i2.1649>.
- Prinja, S., J. Jagnoor, D. Sharma, S. Aggarwal, S. Katoch, P. V. M. Lakshimi, and R. Ivers. 2019. "Out-of-pocket Expenditure and Catastrophic Health Expenditure for Hospitalization due to Injuries in Public Sector Hospitals in North India." *PLoS ONE* 14(11): e0224721. <https://doi.org/10.1371/journal.pone.0224721>.
- Saksena, P., K. Xu, R. Elovainio, and J. Perrot. 2010. *Health Services Utilization and Out-of-pocket Expenditure at Public and Private Facilities in Low-income Countries. World Health Report (2010): Background Paper, 20*. Geneva, Switzerland: World Health Organization.
<https://www.who.int/healthsystems/topics/financing/healthreport/20public-private.pdf>.
- Sun, J., and S. Lyu. 2020. "The Effect of Medical Insurance on Catastrophic Health Expenditure: Evidence from China." *Cost Effectiveness and Resource Allocation* 18 (10): 1-11.
<https://doi.org/10.1186/s12962-020-00206-y>.
- UNHCR. 2020. Operational Update: Jordan.
<https://reliefweb.int/sites/reliefweb.int/files/resources/73847.pdf>.
- Wagner, A. K., A. J. Graves, S. K. Riess, R. Lecates, F. Zhang, and D. Ross-Degnan. 2011. "Access to Care and Medicines, Burden of Health Care Expenditures, and Risk Protection: Results from the World Health Survey." *Health Policy* 100 (2-3): 151-158. <https://doi.org/10.1016/j.healthpol.2010.08.004>.
- Wang, W., G. Temsah, and E. Carter. 2016. Levels and Determinants of Out-of-pocket Health Expenditures in the Democratic Republic of the Congo, Liberia, Namibia, and Rwanda. DHS Analytical Studies 59. Rockville, Maryland, USA: ICF International.
<https://www.dhsprogram.com/pubs/pdf/AS59/AS59.pdf>.
- WHO. 2019. Universal Health Coverage (UHC). [https://www.who.int/news-room/fact-sheets/detail/universal-health-coverage-\(uhc\)](https://www.who.int/news-room/fact-sheets/detail/universal-health-coverage-(uhc)).
- WHO Global Health Observatory Data Repository. 2020. "Out-of-pocket Expenditure as Percentage of Current Health Expenditure (CHE)." <https://apps.who.int/gho/data/>.

WHO Health Financing. n.d. “Out-of-pocket Payments, User Fees and Catastrophic Expenditure.” https://www.who.int/health_financing/topics/financial-protection/out-of-pocket-payments/en/.

World Health Organization. 2010. *Executive Summary: The World Health Report: health Systems Financing: The Path to Universal Coverage*. Geneva, Switzerland: World Health Organization. https://www.who.int/whr/2010/10_summary_en.pdf?ua=1.

Xu, K., D. B. Evans, K. Kawabata, R. Zeramdini, J. Klavus, and C. J. L. Murray. 2003. “Household Catastrophic Health Expenditure: A Multicountry Analysis.” *The Lancet* 362: 111-117. [https://doi.org/10.1016/S0140-6736\(03\)13861-5](https://doi.org/10.1016/S0140-6736(03)13861-5).

Yardim, M. S., N. Cilingiroglu, and N. Yardim. 2009. “Catastrophic Health Expenditure and Impoverishment in Turkey.” *Health Policy* 94 (2010): 26-33. <https://doi.org/10.1016/j.healthpol.2009.08.006>.

Zhang, A., Z. Nikoloski, and E. Mossialos. 2017. “Does Health Insurance Reduce Out-of-pocket Expenditure? Heterogeneity among China’s Middle-aged and Elderly.” *Social Science and Medicine* 190: 11-19. <https://doi.org/10.1016/j.socscimed.2017.08.005>.

APPENDIX

Appendix Table A1 Unadjusted odds ratios (UOR), adjusted odds ratios (AOR), and 95% confidence intervals (CI) of ever married women utilizing inpatient (in last 6 months) and outpatient (in last 4 weeks) services, Jordan PFHS

	Inpatient				Outpatient			
	UOR	95% CI	AOR	95% CI	UOR	95% CI	AOR	95% CI
Insurance (ref=None)								
Any	1.1	[0.8,1.5]	0.9	[0.7,1.3]	1.1	[0.8,1.3]	1.0	[0.8,1.3]
Age (ref=15-19)								
20-24	0.9	[0.4,1.8]	1.1	[0.5,2.2]	0.8	[0.4,1.5]	0.9	[0.5,1.7]
25-29	0.7	[0.4,1.4]	0.9	[0.5,1.9]	0.6	[0.3,1.1]	0.7	[0.4,1.3]
30-34	0.4*	[0.2,0.8]	0.6	[0.3,1.1]	0.6	[0.4,1.1]	0.8	[0.4,1.4]
35-39	0.5	[0.2,1.0]	0.6	[0.3,1.3]	0.7	[0.4,1.2]	0.8	[0.4,1.4]
40-44	0.4*	[0.2,0.8]	0.5	[0.2,1.1]	0.6	[0.3,1.2]	0.7	[0.4,1.4]
45-49	0.2***	[0.1,0.5]	0.2**	[0.1,0.6]	0.7	[0.4,1.4]	0.8	[0.4,1.6]
Residence (ref=Urban)								
Rural	1.1	[0.7,1.7]	0.9	[0.6,1.4]	0.9	[0.6,1.3]	1.1	[0.7,1.6]
Governorate (ref=Amman)								
Balqa	0.9	[0.5,1.8]	1.0	[0.5,1.9]	0.2***	[0.1,0.3]	0.1***	[0.1,0.3]
Zarqa	1.2	[0.7,2.1]	1.1	[0.6,2.0]	1.1	[0.8,1.5]	1.0	[0.7,1.4]
Madaba	1.3	[0.7,2.2]	1.2	[0.7,2.2]	0.6**	[0.4,0.8]	0.5***	[0.3,0.7]
Irbid	2.1**	[1.3,3.3]	1.9**	[1.2,3.2]	1.4*	[1.1,2.0]	1.3	[0.9,1.8]
Mafraq	2.1**	[1.3,3.5]	1.9*	[1.1,3.4]	1.5*	[1.1,2.0]	1.3	[0.9,1.9]
Jarash	1.6	[1.0,2.8]	1.6	[0.9,2.8]	1.1	[0.8,1.7]	1.1	[0.7,1.6]
Ajloun	1.4	[0.9,2.3]	1.4	[0.8,2.4]	0.8	[0.6,1.2]	0.7	[0.5,1.1]
Karak	1.2	[0.7,2.2]	1.3	[0.7,2.3]	0.3***	[0.2,0.5]	0.2***	[0.1,0.4]
Tafiela	1.1	[0.7,1.9]	1.1	[0.7,1.9]	0.4***	[0.3,0.7]	0.4***	[0.2,0.6]
Ma'an	1.6	[0.6,4.1]	1.6	[0.6,4.5]	0.3***	[0.2,0.6]	0.3***	[0.1,0.5]
Aqaba	0.6	[0.3,1.3]	0.6	[0.3,1.2]	0.2***	[0.1,0.3]	0.1***	[0.1,0.3]
Nationality (ref=Jordanian)								
Syrian	1.3	[0.9,1.9]	0.8	[0.5,1.3]	1.2	[0.9,1.6]	0.8	[0.5,1.1]
Other	0.6	[0.2,1.4]	0.6	[0.2,1.6]	0.6	[0.4,1.1]	0.6	[0.4,1.1]
Education (ref=none)								
Elementary	2.2	[0.9,5.4]	2.0	[0.8,4.9]	1.6	[0.8,3.3]	1.2	[0.6,2.6]
Preparatory	2.9*	[1.3,6.6]	2.4*	[1.1,5.5]	1.4	[0.7,2.9]	1.0	[0.5,2.1]
Secondary	2.0	[0.9,4.4]	1.6	[0.7,3.6]	1.2	[0.6,2.4]	0.9	[0.4,1.8]
Higher	2.0	[0.9,4.4]	1.6	[0.7,3.8]	1.2	[0.6,2.5]	1.0	[0.5,2.1]
Wealth (ref=Poorest)								
Poorer	1.1	[0.8,1.7]	1.2	[0.8,1.8]	0.9	[0.7,1.3]	0.9	[0.7,1.3]
Middle	0.7*	[0.5,1.0]	0.8	[0.5,1.2]	0.6**	[0.5,0.9]	0.6**	[0.4,0.9]
Richer	0.6	[0.4,1.0]	0.9	[0.5,1.4]	0.8	[0.6,1.1]	0.8	[0.6,1.2]
Richest	0.5*	[0.3,0.9]	0.9	[0.5,1.6]	0.8	[0.5,1.1]	0.8	[0.5,1.2]
Employment (ref=Not Employed)								
Professional/ technical/ managerial	0.8	[0.5,1.4]	1.0	[0.6,1.8]	0.9	[0.6,1.3]	1.0	[0.6,1.5]
Clerical	0.9	[0.2,4.2]	1.1	[0.2,5.1]	0.6	[0.2,1.9]	0.7	[0.2,2.8]
Sales and services	0.1**	[0.0,0.5]	0.2*	[0.1,0.7]	0.6	[0.2,1.8]	0.7	[0.3,2.1]
Skilled manual	0.0***	[0.0,0.0]	0.0***	[0.0,0.0]	0.7	[0.2,2.2]	0.7	[0.2,2.3]
Unskilled manual	0.0***	[0.0,0.0]	0.0***	[0.0,0.0]	2.6	[0.4,16.0]	2.7	[0.4,18.6]
Domestic service	0.3*	[0.1,0.8]	0.3	[0.1,1.2]	0.3	[0.1,1.1]	0.4	[0.1,1.3]
Agriculture	2.3	[0.3,18]	3.0	[0.4,23.8]	1.1	[0.2,6.2]	1.2	[0.2,9.1]
N	6,921		6,921		6,921		6,921	

Note: Women whose occupation was missing were included in the model, but the odds ratios are not presented in the results.

*** p < 0.001; ** p < 0.01; * p < 0.05.

Appendix Table A2 Unadjusted odds ratios (UOR), adjusted odds ratios (AOR), and 95% confidence intervals (CI) of men utilizing inpatient (in last 6 months) and outpatient (in last 4 weeks) services, Jordan PFHS

	Inpatient				Outpatient			
	UOR	95% CI	AOR	95% CI	UOR	95% CI	AOR	95% CI
Insurance (ref=None)								
Any	2.4***	[1.4,3.9]	2.4*	[1.2,4.8]	1.4*	[1,1.8]	1.3	[0.9,1.8]
Age (ref=15-19)								
20-24	1.0	[0.2,5.6]	1.2	[0.2,6.4]	0.8	[0.4,1.7]	0.9	[0.4,1.9]
25-29	5.5*	[1.3,23]	6.8**	[1.8,24.9]	1.6	[0.9,3]	2.0*	[1.0,3.9]
30-34	3.7	[0.9,14.7]	4.1	[0.9,17.9]	3.1***	[1.7,5.6]	4.0***	[2.1,7.7]
35-39	5.8**	[1.6,20.7]	6.4**	[1.7,23.3]	2.6**	[1.4,4.8]	3.2***	[1.7,6.2]
40-44	5.1*	[1.3,19.3]	5.4*	[1.4,20.6]	2.8***	[1.6,5]	3.4***	[1.9,6.2]
45-49	7.2**	[2.0,26.2]	8.1**	[2.2,29.6]	3.7***	[2.1,6.4]	4.2***	[2.2,7.7]
50-54	12.4***	[3.5,44.5]	12.7***	[3.5,46.0]	4***	[2.3,7.1]	4.7***	[2.6,8.4]
55-59	23.1***	[6.6,81.6]	24.3***	[6.9,85.8]	5***	[2.6,9.4]	5.5***	[2.8,10.9]
Residence (ref=Urban)								
Rural	0.8	[0.5,1.4]	0.7	[0.4,1.3]	0.8	[0.5,1.1]	0.9	[0.6,1.3]
Governorate (ref=Amman)								
Balqa	0.6	[0.2,1.6]	0.5	[0.2,1.5]	0.1***	[0,0.2]	0.1***	[0.0,0.2]
Zarqa	1.4	[0.7,2.9]	1.5	[0.7,3.2]	1	[0.6,1.6]	1.0	[0.6,1.7]
Madaba	1.2	[0.6,2.7]	1.1	[0.5,2.8]	1	[0.6,1.5]	1.0	[0.6,1.7]
Irbid	1.6	[0.8,3.1]	1.4	[0.6,3.2]	1.3	[0.8,2]	1.3	[0.8,2.1]
Mafraq	1.4	[0.7,2.8]	1.5	[0.7,3.4]	1.3	[0.9,1.9]	1.4	[0.9,2.2]
Jarash	1.2	[0.6,2.4]	0.9	[0.4,2.3]	1.1	[0.7,1.8]	1.1	[0.7,2.0]
Ajloun	1.0	[0.5,2.1]	0.7	[0.3,1.7]	0.8	[0.5,1.2]	0.8	[0.4,1.3]
Karak	1.2	[0.6,2.4]	1.1	[0.5,2.6]	0.5**	[0.3,0.8]	0.5*	[0.3,0.9]
Tafiela	0.7	[0.3,1.6]	0.5	[0.2,1.4]	0.4**	[0.2,0.8]	0.4**	[0.2,0.8]
Ma'an	1.2	[0.4,3.4]	1.1	[0.4,3.7]	0.4**	[0.2,0.8]	0.4*	[0.2,0.9]
Aqaba	0.9	[0.4,2.1]	0.6	[0.2,1.7]	0.2***	[0.1,0.4]	0.1***	[0.1,0.4]
Nationality (ref=Jordanian)								
Syrian	0.5	[0.2,1.3]	0.4	[0.1,1.4]	1.4	[0.8,2.5]	1.4	[0.7,2.5]
Other	1.1	[0.3,3.6]	1.8	[0.5,7.2]	1.2	[0.6,2.4]	1.4	[0.7,2.8]
Education (ref=none)								
Elementary	0.6	[0.1,2.9]	1.1	[0.3,4.1]	0.5	[0.2,1.2]	0.4	[0.2,1.0]
Preparatory	0.3	[0.1,1.2]	0.5	[0.1,1.8]	0.5	[0.2,1.1]	0.5	[0.2,1.1]
Secondary	0.3	[0.1,1.3]	0.7	[0.2,2.6]	0.4*	[0.2,0.9]	0.5	[0.2,1.1]
Higher	0.4	[0.1,1.6]	0.6	[0.1,2.2]	0.5	[0.2,1.1]	0.4	[0.2,1.1]
Wealth (ref=Poorest)								
Poorer	0.9	[0.5,1.7]	0.8	[0.4,1.9]	1.3	[0.8,1.9]	1.5	[0.9,2.6]
Middle	1.1	[0.5,2.3]	1.0	[0.4,2.1]	0.8	[0.5,1.3]	0.9	[0.5,1.5]
Richer	0.8	[0.4,1.5]	0.7	[0.3,1.5]	1.4	[0.9,2.1]	1.7*	[1.0,2.7]
Richest	0.8	[0.4,1.5]	0.7	[0.3,1.6]	0.9	[0.6,1.5]	1.1	[0.6,2.1]
Employment (ref=Not Employed)								
Professional/ technical/ managerial	1.6	[0.7,3.4]	0.9	[0.4,2.5]	1.5	[1,2.3]	0.8	[0.5,1.3]
Clerical	2.2	[0.7,6.8]	1.1	[0.3,3.3]	1.1	[0.5,2.4]	0.6	[0.2,1.3]
Sales and services	0.8	[0.4,1.5]	0.5*	[0.2,1.0]	0.9	[0.6,1.3]	0.5**	[0.4,0.8]
Skilled manual	1.4	[0.8,2.8]	1	[0.5,2.1]	1.5	[1,2.2]	0.9	[0.6,1.3]
Unskilled manual	0.3	[0.1,1.2]	0.2*	[0.0,0.7]	1.9	[0.9,4]	1.2	[0.6,2.6]
Domestic service	0.5	[0.1,3.9]	0.4	[0.0,3.7]	2.2	[0.4,11.8]	1.7	[0.3,9.4]
Agriculture	0.2	[0.0,1.4]	0.1*	[0.0,0.9]	0.7	[0.2,1.8]	0.5	[0.2,1.3]
N	6,384		6,384		6,384		6,384	

Note: Men whose occupation was missing were included in the model, but the odds ratios are not presented in the results.

*** p < 0.001; ** p < 0.01; * p < 0.05.

Appendix Table A3 Among de jure household members who visited a health facility in the 4 weeks before the survey, percent distribution by total cost and cost of various components of the care received during the most recent outpatient visit (in Jordanian dinars), according to insurance status type of facility providing the care, Jordan PFHS 2017-18

		Insurance						
Type of care	Facility type	Free	<50	50-99	100-199	200+	Mean cost	Number
Total	Any	64.3%	27.8%	3.9%	2.2%	1.8%	16.1	1,862
	Private	39.9%	46.5%	5.8%	4.4%	3.4%	28.8	784
	Public	82.1%	14.1%	2.5%	0.6%	0.7%	6.8	1,077
Consultation	Any	84.9%	13.9%	0.8%	0.2%	0.2%	3.5	1,842
	Private	71.7%	25.8%	1.8%	0.4%	0.3%	6.5	771
	Public	94.4%	5.4%	0.0%	0.0%	0.2%	1.4	1,071
Medication	Any	70.6%	26.5%	1.7%	0.8%	0.5%	6.3	1,836
	Private	49.8%	44.8%	2.9%	1.7%	0.8%	11.9	767
	Public	85.5%	13.4%	0.8%	0.1%	0.3%	2.2	1,070
Lab work	Any	94.6%	4.2%	0.6%	0.5%	0.2%	2.2	1,839
	Private	91.4%	5.9%	1.3%	1.0%	0.4%	4.2	764
	Public	96.8%	3.0%	0.1%	0.1%	0.0%	0.7	1,075
X-rays	Any	96.9%	2.8%	0.2%	0.1%	0.0%	0.7	1,834
	Private	95.0%	4.3%	0.5%	0.2%	0.0%	1.3	763
	Public	98.2%	1.8%	0.0%	0.0%	0.0%	0.3	1,071
Transport	Any	91.4%	8.1%	0.2%	0.2%	0.0%	0.9	1,841
	Private	89.8%	9.7%	0.5%	0.0%	0.0%	0.9	769
	Public	92.7%	7.0%	0.0%	0.4%	0.0%	0.9	1,072
Other	Any	96.3%	3.1%	0.1%	0.3%	0.2%	2.8	1,806
	Private	92.6%	6.3%	0.2%	0.6%	0.4%	4.6	750
	Public	98.9%	0.8%	0.0%	0.2%	0.2%	1.5	1,056
		No Insurance						
Type of care	Facility type	Free	<50	50-99	100-199	200+	Mean cost	Number
Total	Any	19.9%	54.3%	15.1%	5.8%	4.9%	46.2	822
	Private	13.9%	59.2%	16.0%	5.6%	5.2%	45.1	643
	Public	41.3%	36.8%	11.7%	6.7%	3.5%	50.1	180
Consultation	Any	51.1%	45.2%	2.6%	0.9%	0.1%	10.9	806
	Private	48.6%	48.9%	1.5%	0.8%	0.2%	11.8	628
	Public	59.8%	32.1%	6.6%	1.6%	0.0%	7.9	178
Medication	Any	30.3%	61.8%	4.6%	2.5%	0.8%	21.1	802
	Private	23.9%	68.6%	4.3%	2.7%	0.5%	18.2	624
	Public	53.0%	37.6%	5.6%	1.8%	2.0%	31.3	178
Lab work	Any	83.7%	12.2%	2.7%	1.1%	0.3%	6.6	801
	Private	84.6%	11.7%	2.5%	0.8%	0.4%	6.6	623
	Public	80.8%	13.8%	3.2%	2.1%	0.0%	6.5	178
X-rays	Any	92.8%	3.4%	3.1%	0.4%	0.4%	4.0	797
	Private	93.6%	2.7%	2.7%	0.5%	0.5%	4.0	619
	Public	90.0%	5.7%	4.3%	0.0%	0.0%	4.1	177
Transport	Any	81.8%	18.2%	0.0%	0.0%	0.0%	1.0	804
	Private	81.2%	18.8%	0.0%	0.0%	0.0%	1.0	627
	Public	83.8%	16.2%	0.0%	0.0%	0.0%	0.8	177
Other	Any	92.7%	5.9%	0.1%	0.5%	0.9%	3.9	771
	Private	91.5%	6.7%	0.1%	0.6%	1.1%	5.0	608
	Public	97.2%	2.8%	0.0%	0.0%	0.0%	0.1	164

Continued...

Appendix Table A3—Continued

		All						
Type of care	Facility type	Free	<50	50-99	100-199	200+	Mean cost	Number
Total	Any	50.7%	35.9%	7.3%	3.3%	2.7%	25.3	2,684
	Private	28.2%	52.3%	10.4%	5.0%	4.2%	36.1	1,427
	Public	76.2%	17.3%	3.8%	1.5%	1.1%	13.0	1,257
Consultation	Any	74.6%	23.4%	1.3%	0.4%	0.2%	5.8	2,647
	Private	61.3%	36.2%	1.7%	0.6%	0.3%	8.9	1,399
	Public	89.4%	9.2%	1.0%	0.2%	0.2%	2.3	1,248
Medication	Any	58.4%	37.2%	2.6%	1.3%	0.6%	10.8	2,638
	Private	38.2%	55.5%	3.5%	2.2%	0.7%	14.7	1,390
	Public	80.9%	16.8%	1.4%	0.3%	0.5%	6.3	1,247
Lab work	Any	91.3%	6.6%	1.2%	0.7%	0.2%	3.5	2,640
	Private	88.3%	8.5%	1.8%	0.9%	0.4%	5.3	1,387
	Public	94.6%	4.5%	0.5%	0.4%	0.0%	1.5	1,253
X-rays	Any	95.6%	3.0%	1.1%	0.2%	0.1%	1.7	2,630
	Private	94.4%	3.6%	1.5%	0.3%	0.2%	2.5	1,382
	Public	97.0%	2.3%	0.6%	0.0%	0.0%	0.8	1,248
Transport	Any	88.5%	11.2%	0.1%	0.2%	0.0%	0.9	2,646
	Private	85.9%	13.8%	0.3%	0.0%	0.0%	1.0	1,396
	Public	91.4%	8.3%	0.0%	0.3%	0.0%	0.9	1,249
Other	Any	95.2%	3.9%	0.1%	0.4%	0.4%	3.1	2,578
	Private	92.1%	6.5%	0.1%	0.6%	0.7%	4.8	1,358
	Public	98.6%	1.1%	0.0%	0.2%	0.1%	1.3	1,220