

Syrian refugees in Lebanon

## Secondary and tertiary health care at a glance

January – June 2014



*Photo credit: A. Branthwaite/UNHCR*

UNHCR's public health approach is based on a primary health care (PHC) strategy. In Lebanon, the government provides services through the Ministry of Public Health (MOPH) and the Ministry of Social Affairs with nationals paying part of the cost. In addition, PHC services are provided by private practitioners, local and international non-governmental organizations (NGOs) and other charities.

Public secondary and tertiary health care institutions in Lebanon are semi-autonomous and referral care is expensive. Not all adhere strictly to the MOPH flat rate for hospital care. To harmonise access to secondary health care and manage costs, UNHCR has put in place referral guidelines in Lebanon. The costs covered by UNHCR vary by estimated cost of care, vulnerability status, and type of care (e.g. emergency life-saving, obstetric, medical and surgical). For estimated costs of USD <1500, 75% of costs are covered by UNHCR and the refugees cover the remaining 25%. If estimated costs are USD ≥1500 or refugees present outside the pre-approved hospital network, partner agencies are required to consult with UNHCR. Emergency UNHCR approval is strictly for immediate life-saving cases. UNHCR refers all non-emergency cases to an Exceptional Care Committee that is responsible for authorisation of coverage.



## Key findings

- Between January and June 2014, there were 30,073 referrals for secondary and tertiary health care in Lebanon; referrals by region were Bekaa 10,513 (35%), North Lebanon 7,499 (25%), Beirut and Mt Lebanon 7,157 (24%) and South Lebanon 4,904 (16%). The referral rate was 6.3 per 100 refugees per year; the rate for 2013 was 7.9 per 100 refugees per year.
- Referrals were reported from 99 hospitals across the country. The top 20 hospitals accounted for 75% of referrals. The proportion of referrals to contracted hospitals by region was Beirut and Mt Lebanon 58%, Bekaa 83%, North Lebanon 83% and South Lebanon 78%.
- Approx. 70% of patients were female and 24% were children younger than 5 years old. Only 52% of the population is female, the disproportionate referral among females is due to referrals for obstetric care (mainly deliveries).
- There were 366 deaths (equivalent to 1.2% of all referrals) including 138 (38%) neonatal deaths and 13 (4%) maternal deaths reported.
- Approximately 48% of referrals were for obstetric care. Other main reasons for referrals were respiratory infections (8%), gastrointestinal conditions (7%) and trauma and other injuries (7%). Among obstetric care referrals, main reasons for seeking care were deliveries (92%), miscarriages and other early pregnancy complications, and complications of labour and delivery. Among hospital deliveries, the proportion of caesarean deliveries was 32%. A peak in referrals due to respiratory infections was observed in Bekaa in February.
- The estimated total hospital bill for January to June 2014 was USD 17.5 million. The estimated share of the cost for UNHCR was 13.1 million (75%). **The estimated annualised per capita hospital cost was USD 37 per registered refugee.** Per capita cost was highest in South Lebanon (USD 45) and lowest in North Lebanon (USD 34).
- The average hospital cost per referral was USD 590; the highest average cost was observed among cases with neonatal or congenital conditions (USD 1,731).
- Adjusted for disease category, gender and age, the average cost among the top 20 hospitals was lowest at Hermel hospital (USD 361) and highest at Mazloun (USD 833).

27,553

Number of refugees referred  
between January and June 2014

25,579

referred once

1,589

referred twice

275

referred thrice

110

referred 4 or more  
times

30,073

Total number of referrals between  
January and June 2014

26,929

approved  
directly or by  
ECC\*

30

approved after  
consultations  
with UNHCR

3,114

not approved\*\*

\*ECC: exceptional care committee tasked with reviewing referrals exceeding USD 1500

\*\*Did not meet guideline as per Standard Operating Procedure for referral care

## 1. Demographic information - Referrals

### 1.1 Referral cases

**30,073**

total number  
referred

**10,513**

referrals in Bekaa

**7,157**

referrals in Beirut &  
Mt Lebanon

**7,499**

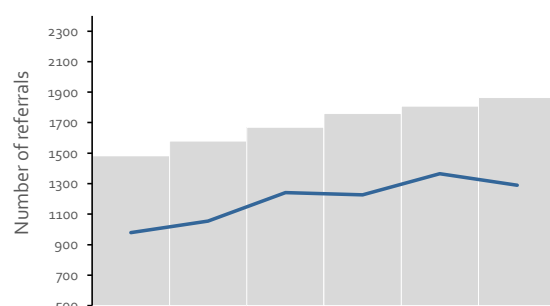
referrals in North

**4,904**

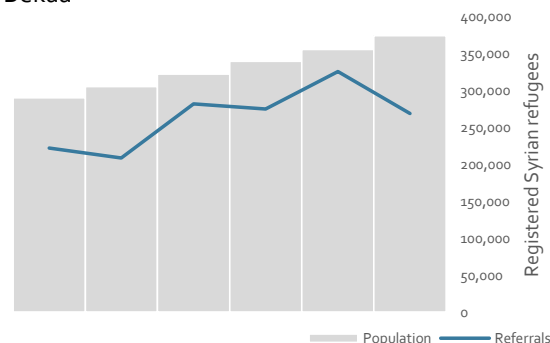
referrals in South

### Trends of referrals and population by region

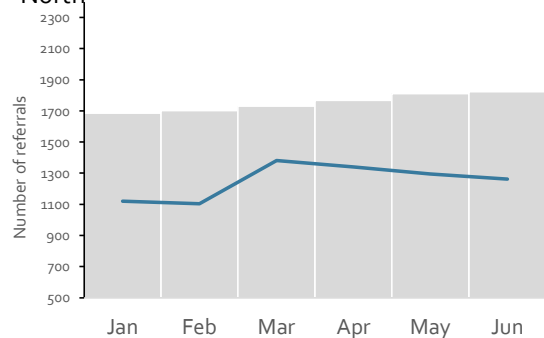
#### Beirut and Mt Lebanon



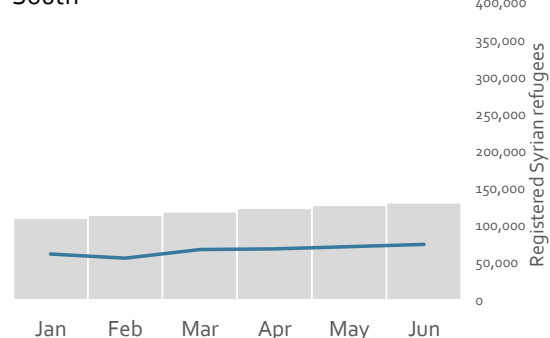
#### Bekaa



#### North



#### South



### 1.2 Gender

**70.2%**

Female

### 1.3 Age group

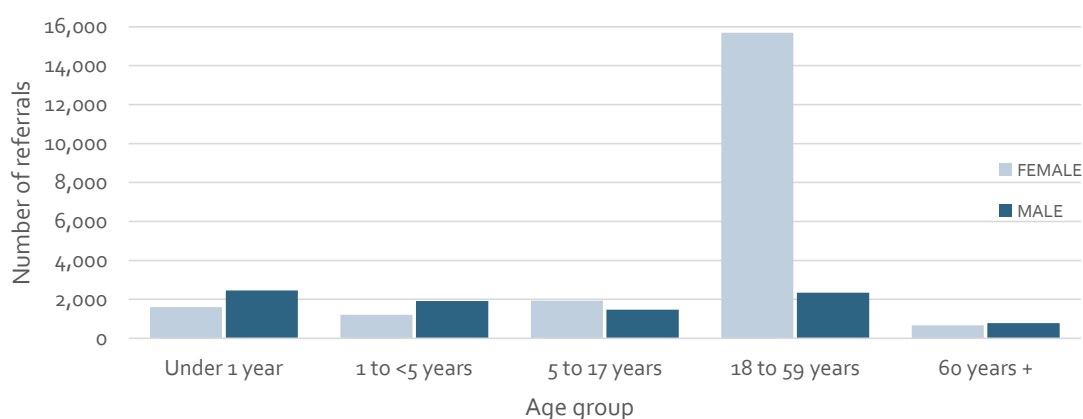
**23.9%**

were under 5 years

**13.5%**

were under 1 years

### Cases by age and gender

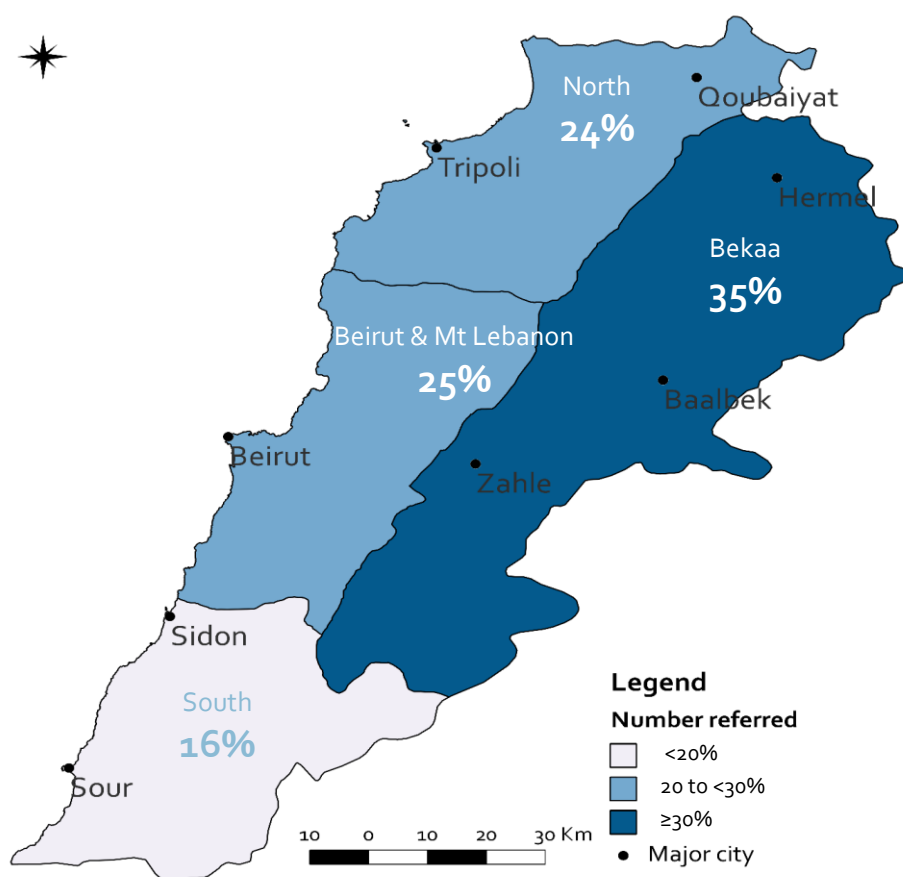


Between January and June 2014, a total of 27,553 refugees were referred. Among them 25,579 (93%) were referred once, 1,589 (6%) were referred twice and 385 (1%) were referred three or more times.

Among those who benefitted from referral care, 70% were female and 24% were children younger than 5 years old and 14% were infants younger than 1 year. The high female proportion is attributed to the reproductive-age females who obtained secondary health care services for obstetric reasons. The overall median age was 23 years. The median age among females was 25 years (range 0 to 99) and the median age for males was 5 years (range 0 to 95).

## 1. Referrals by region and by approval status

Map of Lebanon showing referrals by region, January - June 2014



### 1.2 Approval status

**89.6%**

Approved

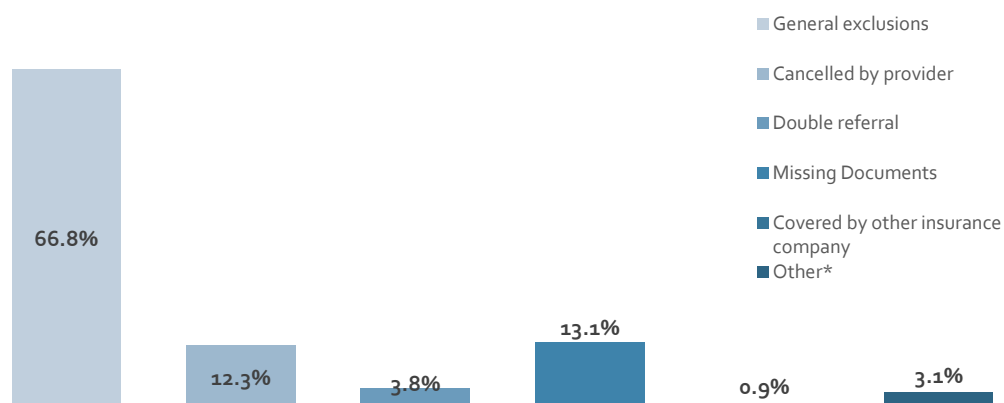
**0.1%**

Approved after consultations

**10.4%**

Not approved

### Reasons referrals were not approved



\*Other: includes presenting outside network, process abuse etc

A total of 30,073 referrals were reported; referrals by region were Bekaa 10,513 (35%), North Lebanon 7,499 (25%), Beirut and Mt Lebanon 7,157 (24%) and South Lebanon 4,904 (16%).

Of the 30,073 referrals, 26,929 (90%) were referrals that were approved directly or by an Exceptional Care Committee (ECC) tasked with reviewing referrals exceeding USD 1500. There were 30 (0.1%) referrals that were approved after consultations with UNHCR. The remaining 3,114 (10%) referrals were not approved because they didn't meet the referral criteria as per the Standard Operating Procedures.

## 2. Distribution by diagnosis

### 2.1 Referral reasons

**47.6%**

were referred for  
Obstetric care

**7.6%**

were referred for  
Respiratory  
infections

**6.9%**

were referred for  
Gastrointestinal  
condition

**6.8%**

were referred for  
Trauma and other  
injuries

**4.9%**

were referred for  
Neonatal or  
congenital condition

### 2.2 What were the obstetric referrals?

**62.2%**

for Normal delivery

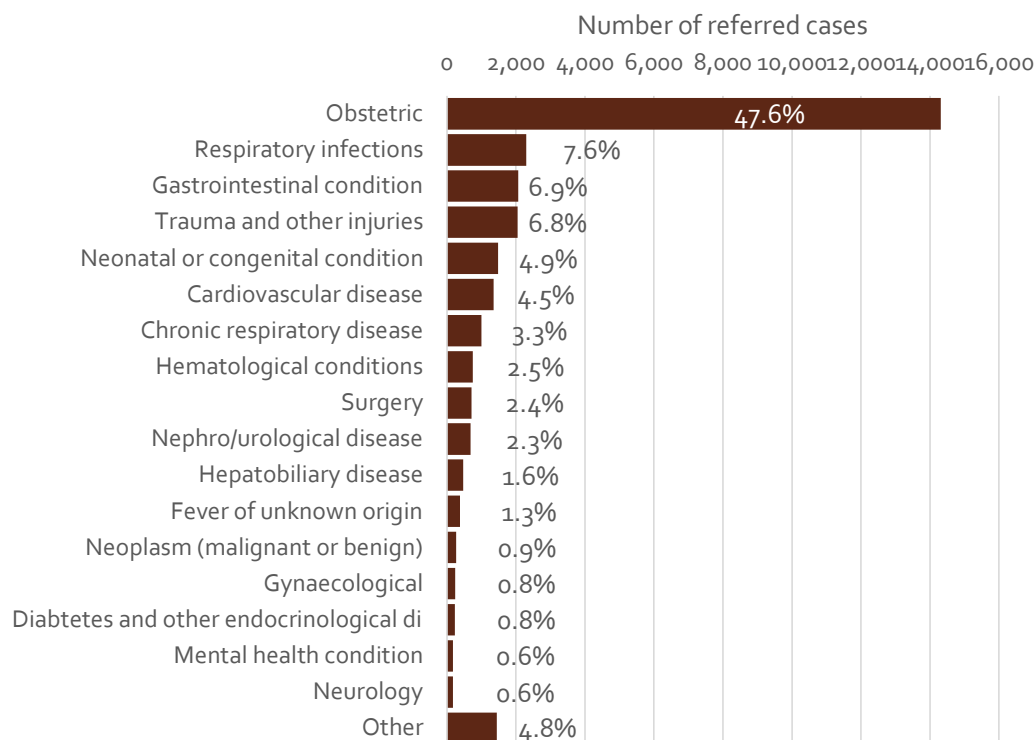
**29.8%**

for Caeserean section

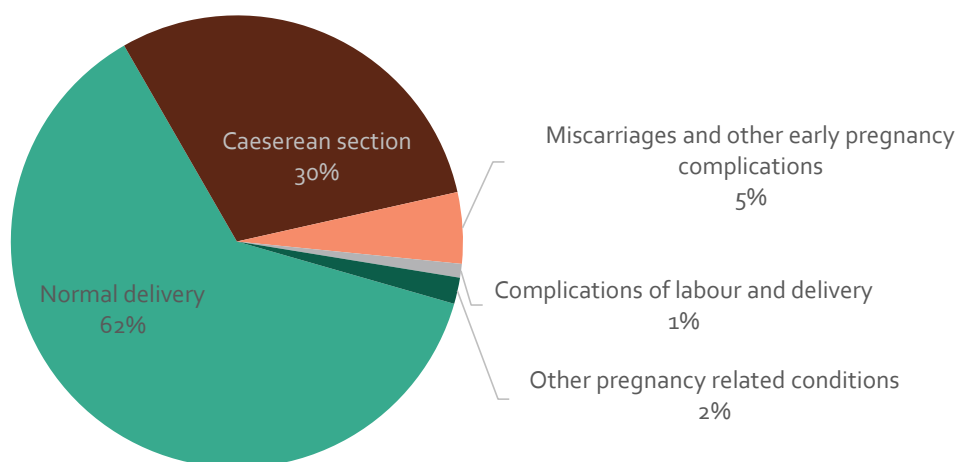
**5.1%**

for Miscarriages and  
other early  
pregnancy  
complications

### Distribution of referral cases by diagnosis category



### Reasons for obstetric referrals



The top 5 reasons for referrals were: obstetric conditions 48%, respiratory infections (8%) gastrointestinal conditions (7%), trauma and other injuries (7%), and neonatal and congenital conditions (5%).

Among obstetric-related cases, 62% were referred for normal delivery, 30% caesarean section, 5% miscarriages and other early pregnancy complications, and 2% for other pregnancy related conditions.

### 3. Hospital deaths

#### 3.1 Deaths by region

**366**

**(1.2%)\***

Number of hospital deaths reported

**1.4%**

Bekaa deaths as a proportion of referrals

**0.9%**

Beirut & Mt Leb deaths as a proportion of referrals

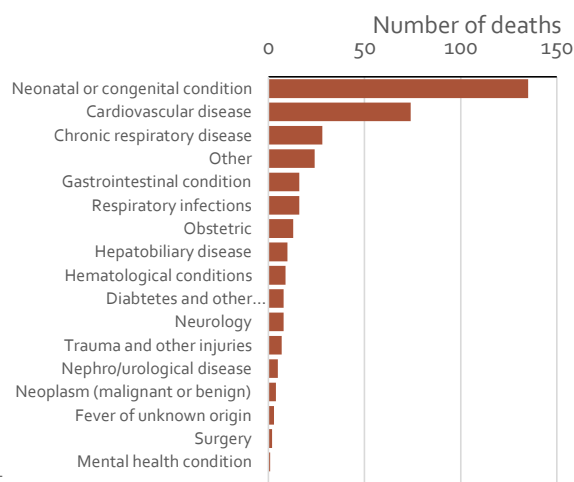
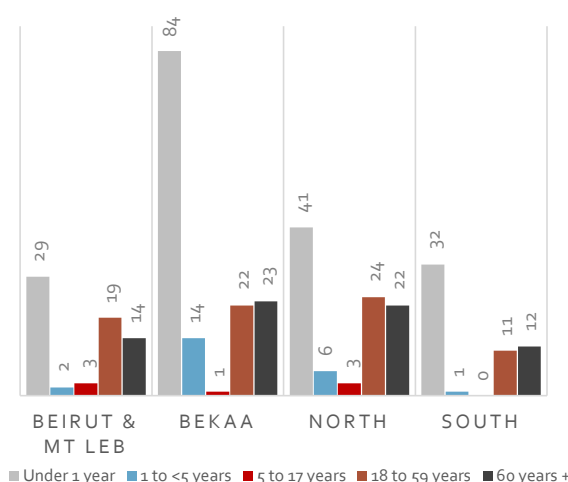
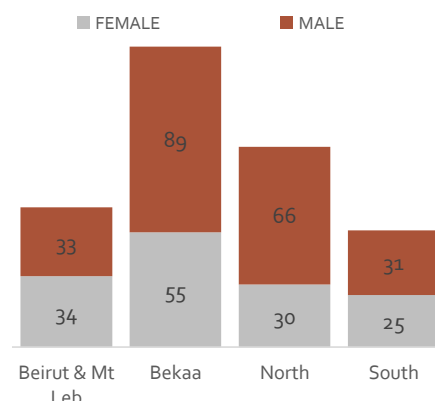
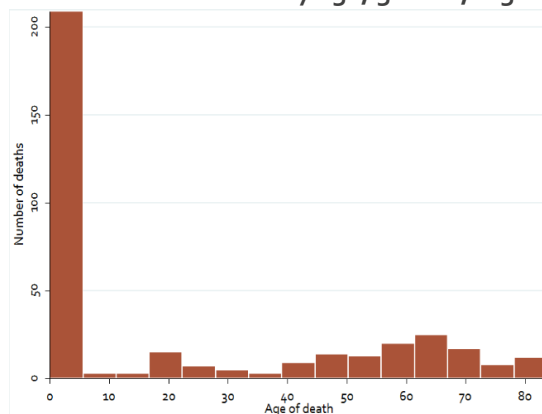
**1.3%**

North Lebanon deaths as a proportion of referrals

**1.1%**

South Lebanon deaths as a proportion of referrals

Distribution of deaths by age, gender, region, and diagnosis



\*proportion of all referrals that ended up in deaths

#### 3.2 Deaths age and diagnosis

**57.6%**

of deaths were in children <5 years

**20.4%**

proportion of deaths due to cardiovascular disease

**13**

Maternal deaths reported

**138**

Neonatal deaths reported

A total of 366 hospital deaths (equivalent to 1.2% of all referrals) were reported. There were 144 (40%) deaths reported from Bekaa, 96 (26%) from North Lebanon, 67 (18%) from Beirut & Mt Lebanon, and 56 (15%) from South Lebanon. As a proportion of referrals from each region, the proportion of referrals that ended in death was lowest in Beirut & Mt Lebanon (0.9%), followed by South Lebanon (1.1%), North Lebanon (1.3%) and highest in Bekaa (1.4%).

There were 186 (51%) deaths reported for children <1 year including 138 (38%) among neonates. Total reported deaths for children <5 years was 209 (58%).

In addition to neonatal and congenital conditions 134 (37%) which were the number one diagnostic category associated with hospital deaths, cardiovascular diseases 74 (20%), chronic respiratory diseases 28 (8%), gastrointestinal conditions 16 (4%), and respiratory infections 16 (4%) were the other leading categories. The number of maternal hospital deaths reported was 13 (4%).

### 3. Hospital receiving referrals

#### 3.1 Hospital counts

**99**  
hospitals received  
referrals

**65**  
hospitals received  
referrals from Bekaa

**83**  
hospitals received  
referrals from Beirut  
& Mt Leb

**68**  
hospitals received  
referrals from North

**64**  
hospitals received  
referrals from South

#### 3.2 Referrals by hospital

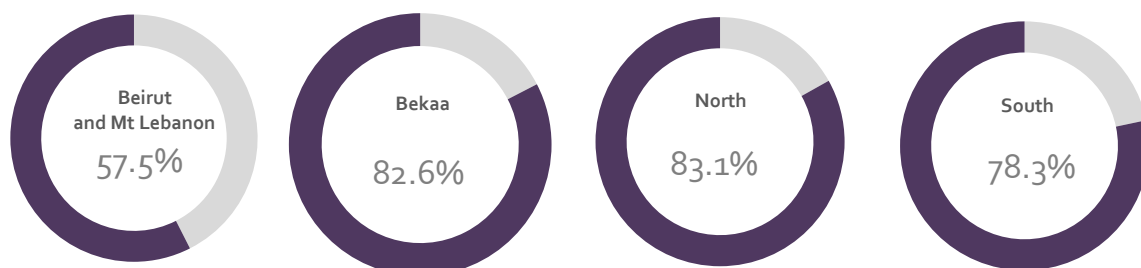
**4,154**  
received by taanayel  
general hosp

**2,078**  
received by notre  
dame de la paix

**1,873**  
received by tripoli  
governmental

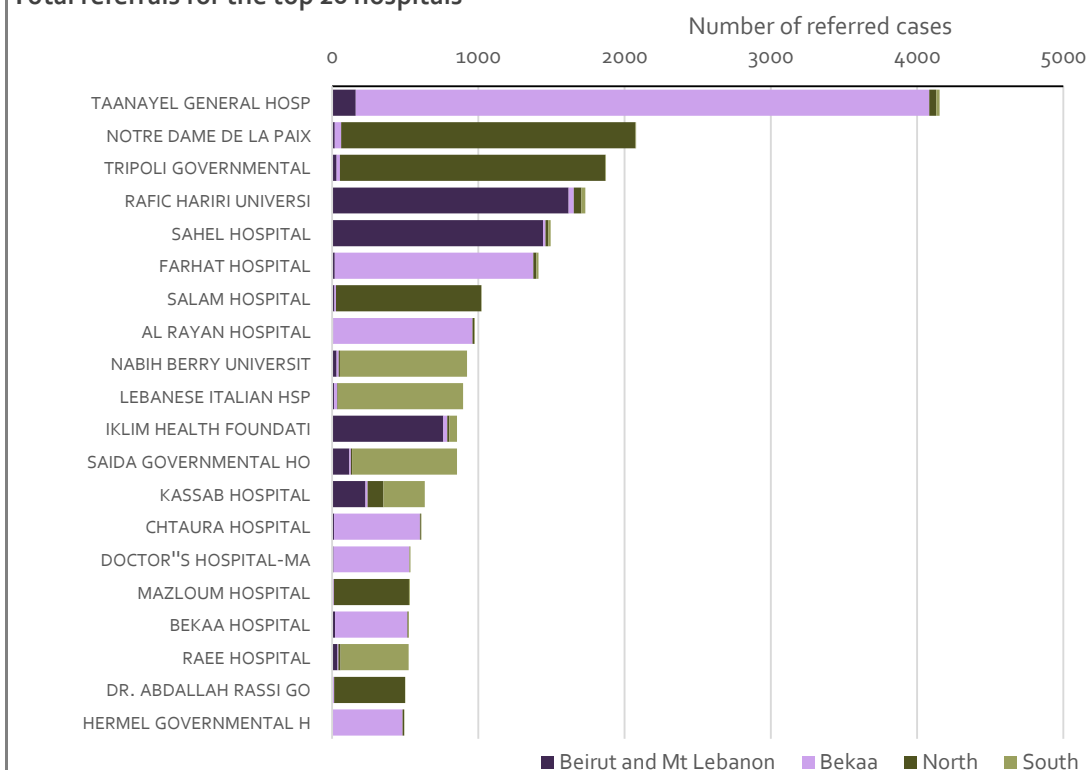
**1,732**  
received by rafic  
hariri universi

#### Proportion of referrals utilising contracted\* hospitals



\*contracted hospitals list as per the "Guidelines for Referral Health Care in Lebanon, UNHCR 2014"

#### Total referrals for the top 20 hospitals

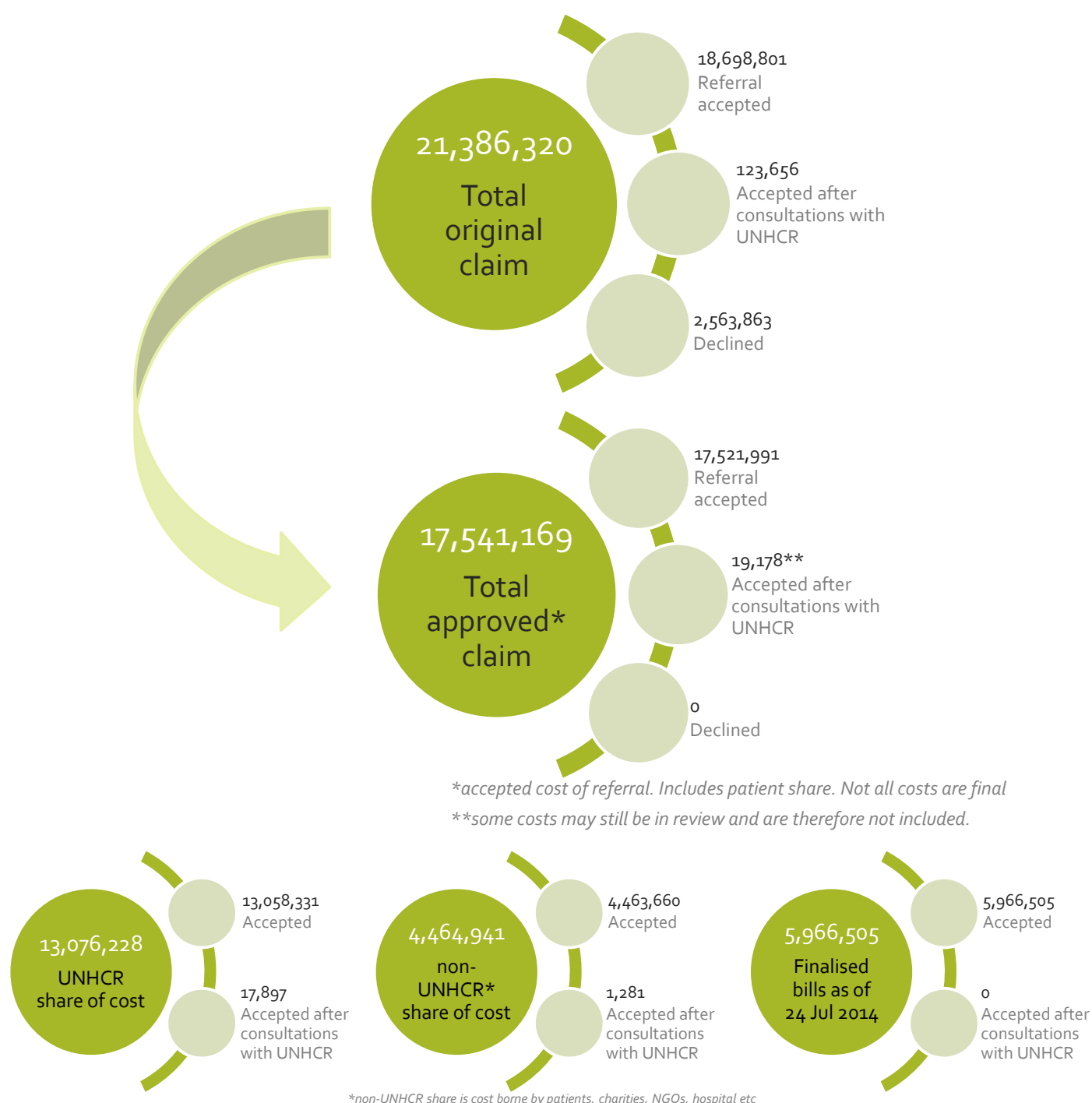


There were 99 hospitals across Lebanon that received Syrian refugee referrals. The number of hospitals receiving referrals by region were Beirut and Mt Lebanon 83 (84%), North Lebanon 68 (69%), Bekaa 65 (66%) and South Lebanon 64 (65%). The top five hospitals receiving referrals were Taanayel General Hospital (4,154), Notre Dame de la Paix (2,078), Tripoli government hospital (1,873), Rafic Hariri University hospital (1,732) and Sahel hospital (1,494)

UNHCR has identified a number of hospitals and contracted them (through GlobeMed Lebanon) to provide secondary and tertiary health care. The proportion of referrals using contracted hospitals (as per the "Guidelines for Referral health Care in Lebanon, UNHCR 2014") was 83.1% in North Lebanon, 82.6% in Bekaa, 78.3% in South Lebanon, and 57.5% in Beirut and Mt Lebanon.

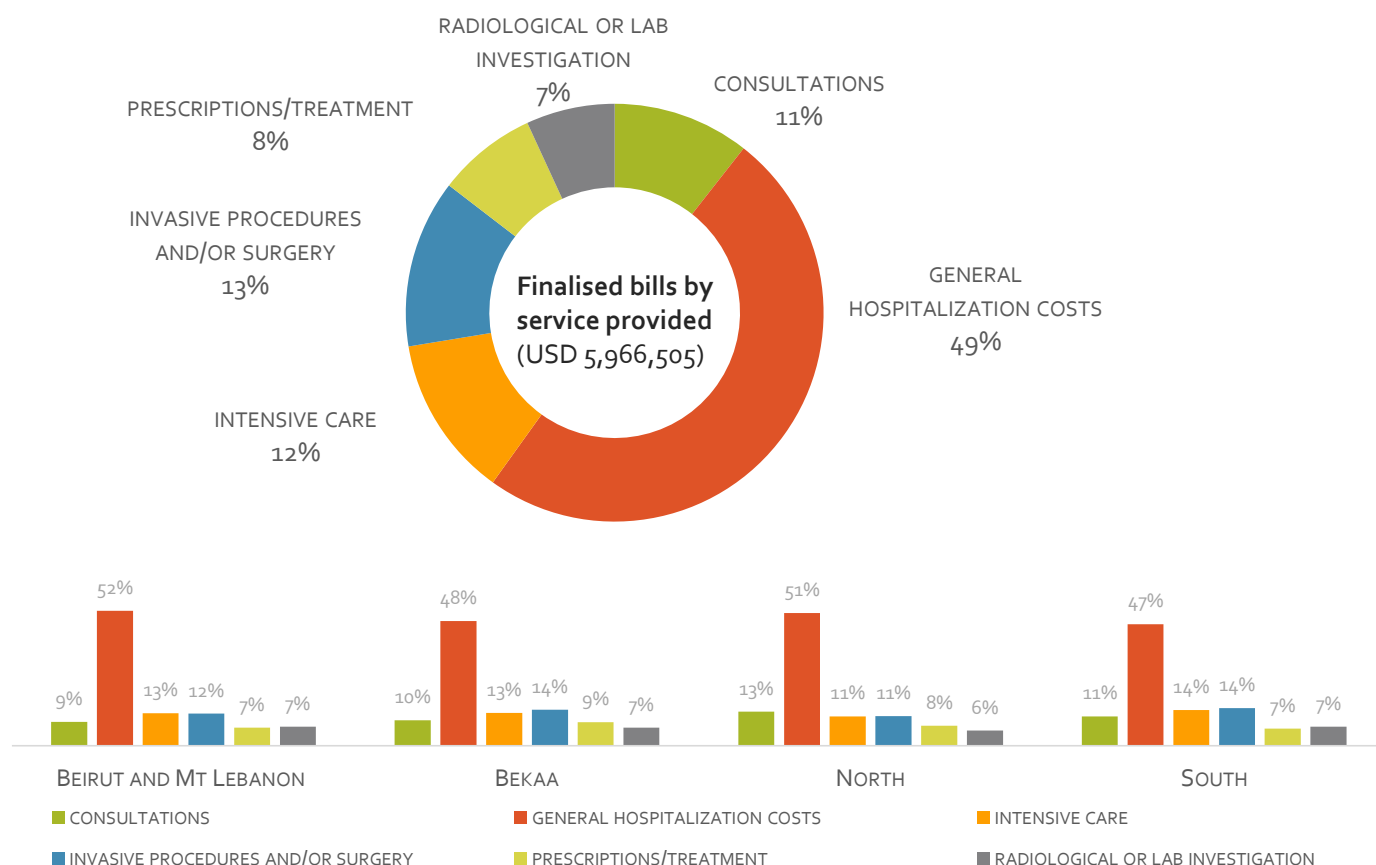


#### 4. Costs snapshot by approval status and service provided



Of the approximately USD 21.4 million total original claim made by hospitals in the first half of 2014, USD 17.5 million was approved after review. The USD 3.8 million difference between the total original claim and the final approved was achieved primarily due to savings obtained from referrals that were not approved because they did not meet guidelines (USD 2.6 million) or a decrease in the amount billed for referrals that were accepted (USD 1.2 million). Of the USD 17.5 million approved, the estimated UNHCR share of cost was 13.1 million (75%). As of 24 July 2014, bills worth USD 6.0 million had gone through review and were finalised (closed).

## Finalised bills as of 24 July 2014 by provided service

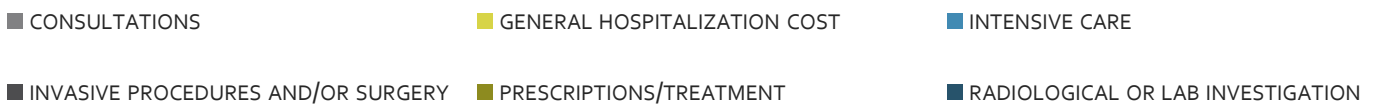


Reliable details on where money was spent was available for the USD 6.0 million finalised bills. For all referrals, 49% of the cost of referrals was attributed to general hospitalisation costs, followed by costs due to invasive procedures or surgery (13%), intensive care costs (12%), consultation costs (11%), and prescriptions and/or treatment (8%).

Regional variations were minimal. For example, the proportion attributed to general hospitalisation costs was highest in Beirut and Mt Lebanon (52%) followed by North Lebanon (51%), Bekaa (48%) and lowest in South Lebanon (47%).

Comparing across diagnosis categories, items for which referral money was spent varied considerably. The proportion of within-diagnosis-category referral costs spent on general hospitalization was highest in obstetric cases (98%) followed by those presenting with fever of unknown origin (30%), respiratory infections (26%), gastrointestinal conditions (21%) and mental health conditions (19%). For costs due to invasive procedures/surgery, the proportion was highest among those presenting with surgical conditions (97%) followed by trauma and other injuries (70%), neoplasms (60%), hepatobiliary disease (59%), and cardiovascular diseases (48%). Intensive care costs as a proportion, was highest for referrals for neonatal or congenital conditions (52%) and neurological conditions (27%).

5. Costs snapshot for key diagnosis categories by service provided. Total finalised bill in parenthesis



## 6. Estimated direct hospital costs of referrals

### 6.1 Overall

**17,541,170**  
Estimated total  
hospital bill in USD

**74.5%**  
Estimated proportion  
paid by UNHCR  
partners

**37.5%**  
Estimated proportion  
paid for obstetric care

**10.0%**  
Estimated proportion  
paid for surgery  
including for trauma  
and other injuries

**16.6%**  
Estimated proportion  
paid for neonatal and  
congenital conditions

### 6.2 Average costs

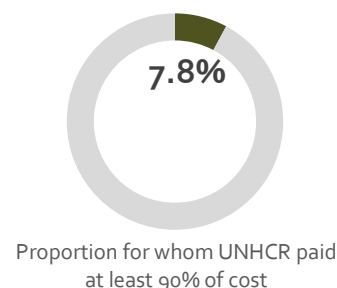
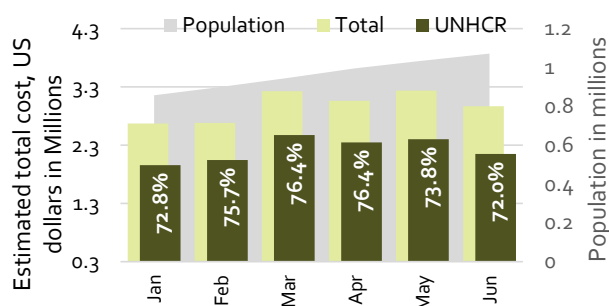
**590**  
Average cost in USD  
per referral

**1,731**  
Highest average cost  
observed in cases  
with Neonatal or  
congenital condition

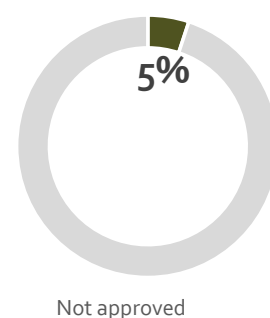
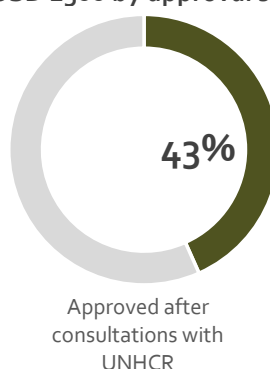
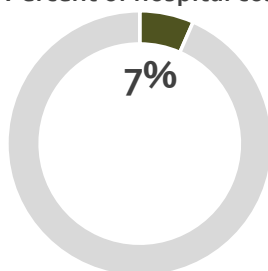
**355**  
Average cost in USD  
for normal delivery

**655**  
Average cost in USD  
for caesarian section

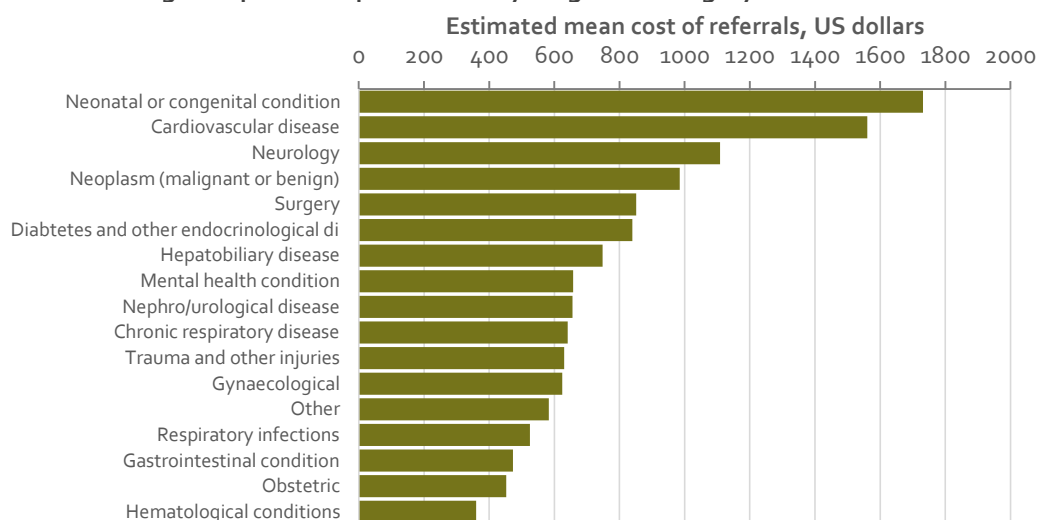
### Estimated total hospital cost and estimated proportion paid by UNHCR by month



### Percent of hospital costs above USD 1500 by approval status



### Estimated average hospital cost per referral by diagnosis category



Of the USD 17.5 million estimated direct hospital costs, the proportion spent on obstetric conditions was 37.5%, followed by neonatal and congenital conditions (17%), cardiovascular conditions (12%) and surgery or trauma/injuries (10.0%).

The average cost by diagnostic category was highest for neonatal and congenital conditions (USD 1,731), cardiovascular diseases (USD 1,561), neurological conditions (USD 1,109), and malignant/benign neoplasms (USD 985).

The average cost of obstetric cases was USD 452; the average cost for normal delivery was USD 355 and the caesarean section was USD 655.

## 7. Costs and referrals per capita

### 7.1 Overall

**37**  
Estimated annualised  
per capita hospital cost  
in USD

**33**  
estimated annualised  
per capita hospital cost  
for Bekaa

**40**  
estimated annualised  
per capita hospital cost  
for Beirut & Mt  
Lebanon

**34**  
estimated annualised  
per capita hospital cost  
for North

**44**  
estimated annualised  
per capita hospital cost  
for South

### 7.2 Average costs

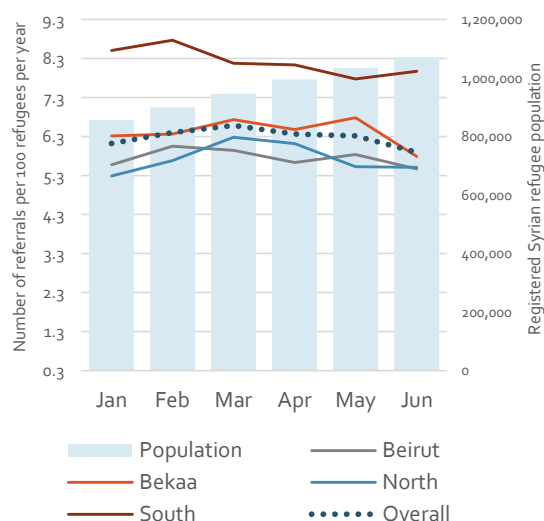
**778**  
Adjusted average cost  
estimate for Rafic Hariri  
hospital

**795**  
Adjusted average cost  
estimate for Bekaa  
hospital

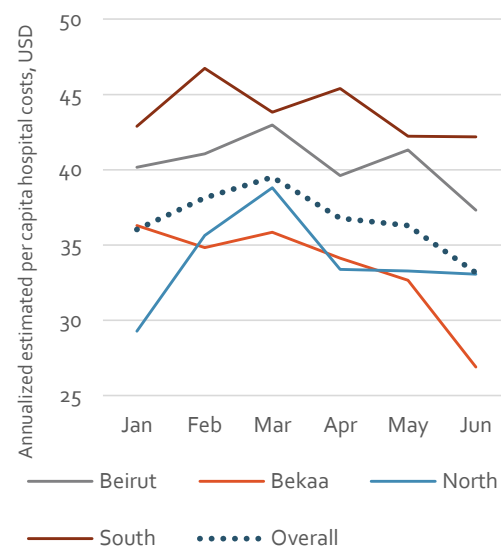
**670**  
Adjusted average cost  
estimate for Al Rayan  
hospital

**361**  
Adjusted average cost  
estimate for Hermel  
hospital

Trends of referrals by region since January 2014

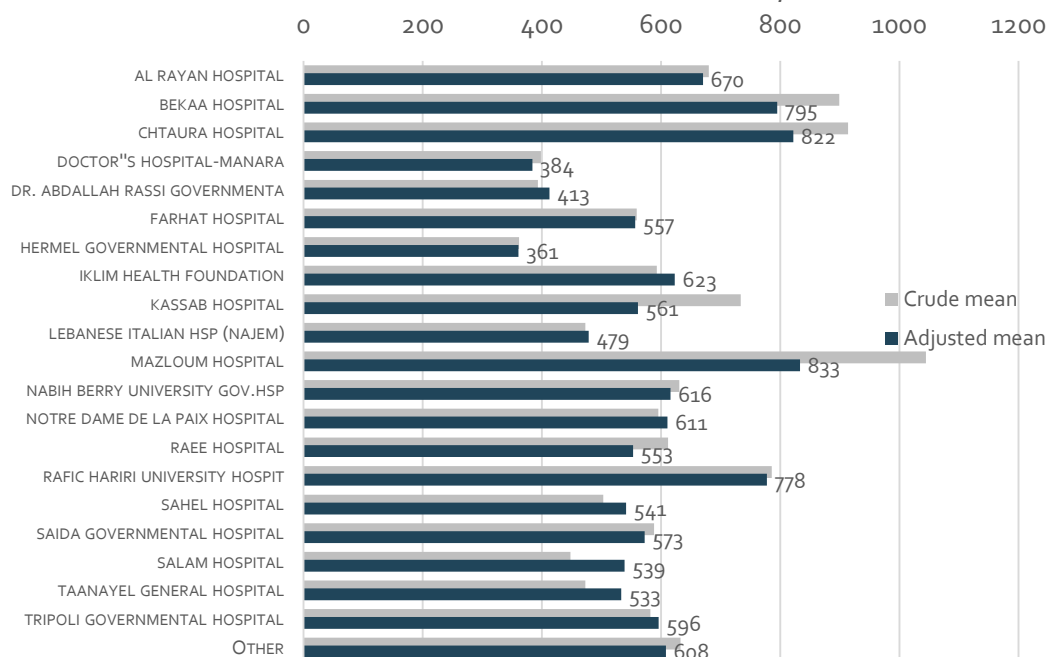


Trends of per capita hospital cost by region since January 2014



### Average costs by hospital (adjusted for disease category, gender, and age)

Estimated mean cost of referrals, US dollars



The rate of referrals was 6.3 per 100 refugees per year. The rates were 8.2 in South Lebanon, 6.4 in Bekaa, 5.8 in Beirut and Mt Lebanon and 5.7 in North Lebanon.

The estimated annualised per capita cost for a referral was USD 37 per refugee per year. The highest per capita cost was observed in South Lebanon (USD 44 per refugee per year) followed by Beirut and Mt Lebanon (USD 40), North Lebanon (USD 34) and Bekaa (USD 33).

In order to compare the costs between facilities, we adjusted costs for disease category, age, and gender. Adjusted average costs were highest in Mazloun hospital (USD 833) and lowest in Hermel hospital (USD 361).



*Note: The information presented is based on the most recent and best available data. We are grateful to the Lebanese Ministry of Public Health, UNHCR Lebanon, the International Medical Corps, Makhzoumi Foundation, Caritas Lebanese Migrant Centre, GlobMed and other local and international actors for providing services and/or data. Analysis of data and preparation of information sheets was carried out by UNHCR Public Health Section, Geneva. UNHCR and its partners will continually update and, where necessary, modify the data and analysis provided, in order to ensure that the most current and accurate view is available to key stakeholders and the public.*