Syrian refugees in Lebanon
Secondary and tertiary health care at a glance
January – June 2014

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 caeserean 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 Mazloum (USD 833).

27,553
Number of refugees referred between January and June 2014

25,579	1,589
referred once	referred twice

275	110
referred thrice	referred 4 or more times

30,073
Total number of referrals between January and June 2014

26,929	30	3,114
approved directly or by ECC*	approved after consultations with UNHCR	not approved**

*ECC: exceptional care committee tasked with reviewing referrals exceeding USD 1500
**Did not meet guideliness 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
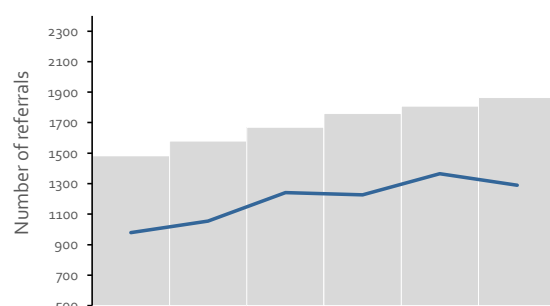
7,157
referrals in Beirut & Mt Lebanon

7,499
referrals in North

4,904
referrals in South

Trends of referrals and population by region

Beirut and Mt Lebanon

Bekaa

Legend: Population — Referrals
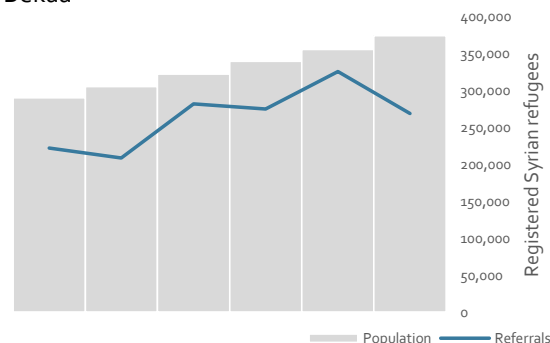
North
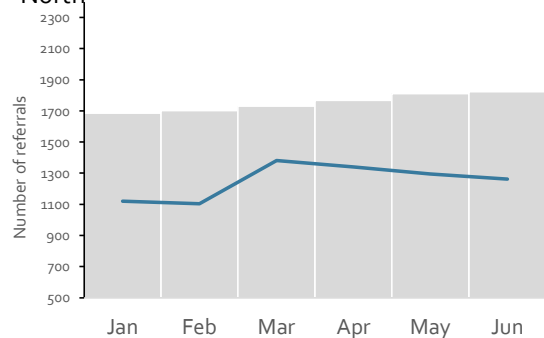
South
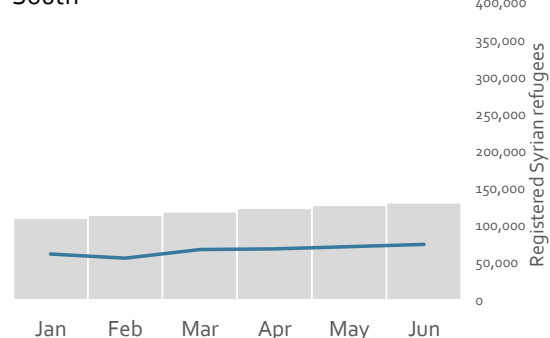
1.2 Gender

70.2%
Female

1.3 Age group

23.9%
were under 5 years

13.5%
were under 1 years

Cases by age and gender

Legend: FEMALE, MALE

Age groups (x-axis): Under 1 year, 1 to <5 years, 5 to 17 years, 18 to 59 years, 60 years +
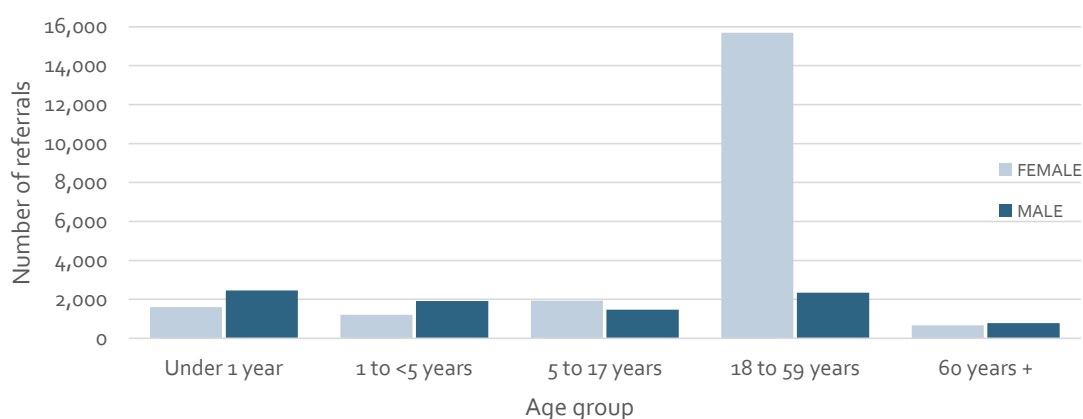
Between January and June 2014, a total of 27,553 refugees were referred. Among them 25,579 (93%) were referred once, 1,589 (6%) were referred twice and 385 (1%) were referred three or more times.

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

North **24%**

Qoubaiyat

Tripoli

Hermel

Bekaa **35%**

Beirut & Mt Lebanon **25%**

Baalbek

Beirut

Zahle

Sidon

South **16%**

Sour

Legend

Number referred

- ☐ <20%
- ☐ 20 to <30%
- ☐ ≥30%
- • Major city

10 0 10 20 30 Km
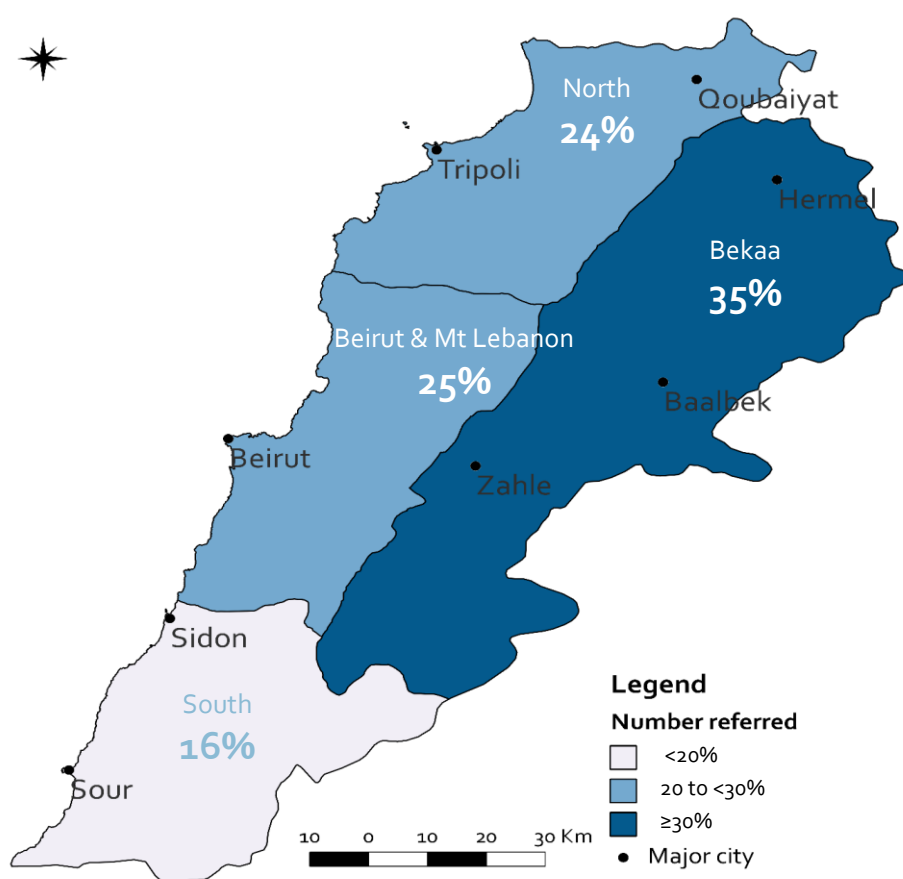
1.2 Approval status

89.6%
Approved

0.1%
Approved after consultations

10.4%
Not approved

Reasons referrals were not approved

- ☐ General exclusions
- ☐ Cancelled by provider
- ☐ Double referral
- ☐ Missing Documents
- ☐ Covered by other insurance company
- ☐ Other*

66.8%

12.3%

3.8%

13.1%

0.9%

3.1%
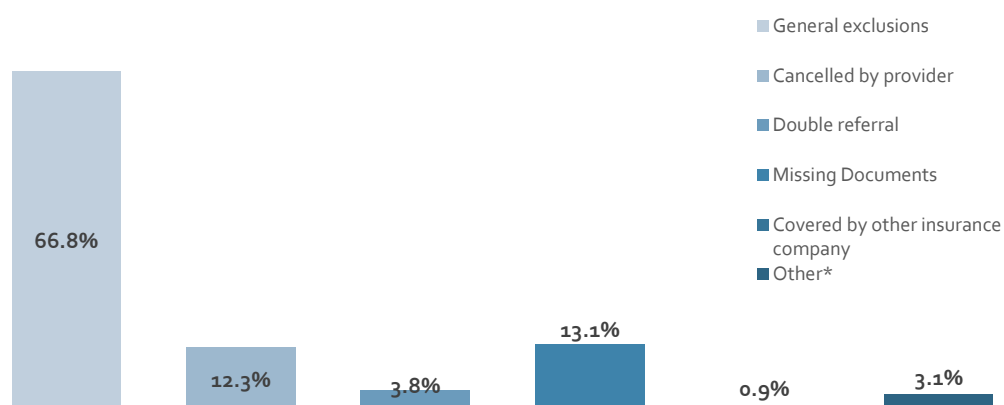
Other: includes presenting outside network, process abuse etc

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

Number of referred cases

Category	Percentage
Obstetric	47.6%
Respiratory infections	7.6%
Gastrointestinal condition	6.9%
Trauma and other injuries	6.8%
Neonatal or congenital condition	4.9%
Cardiovascular disease	4.5%
Chronic respiratory disease	3.3%
Hematological conditions	2.5%
Surgery	2.4%
Nephro/urological disease	2.3%
Hepatobiliary disease	1.6%
Fever of unknown origin	1.3%
Neoplasm (malignant or benign)	0.9%
Gynaecological	0.8%
Diabtetes and other endocrinological di	0.8%
Mental health condition	0.6%
Neurology	0.6%
Other	4.8%

Reasons for obstetric referrals

Caeserean section 30%

Normal delivery 62%

Miscarriages and other early pregnancy complications 5%

Complications of labour and delivery 1%

Other pregnancy related conditions 2%
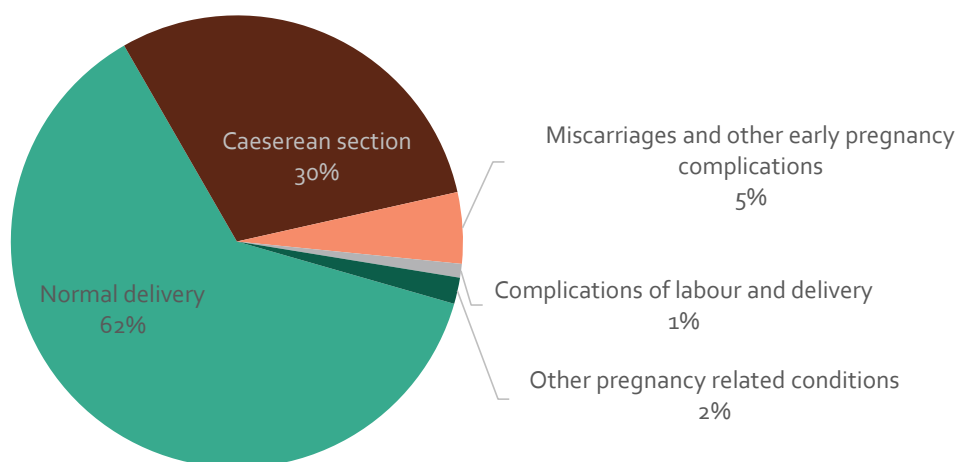
The top 5 reasons for referrals were: obstetric conditions 48%, respiratory infections (8%) gastrointestinal conditions (7%), trauma and other injuries (7%), and neonatal and congenital conditions (5%).

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 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

Beirut and Mt Lebanon **57.5%**

Bekaa **82.6%**

North **83.1%**

South **78.3%**
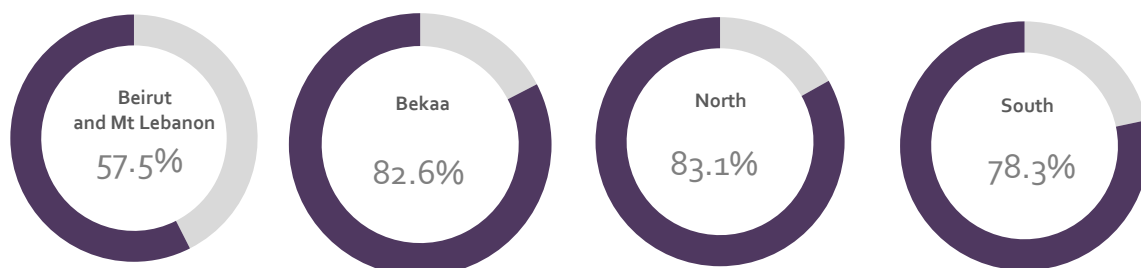
contracted hospitals list as per the "Guidelines for Referral Health Care in Lebanon, UNHCR 2014"

Total referrals for the top 20 hospitals

Number of referred cases

Legend: ■ Beirut and Mt Lebanon ■ Bekaa ■ North ■ South
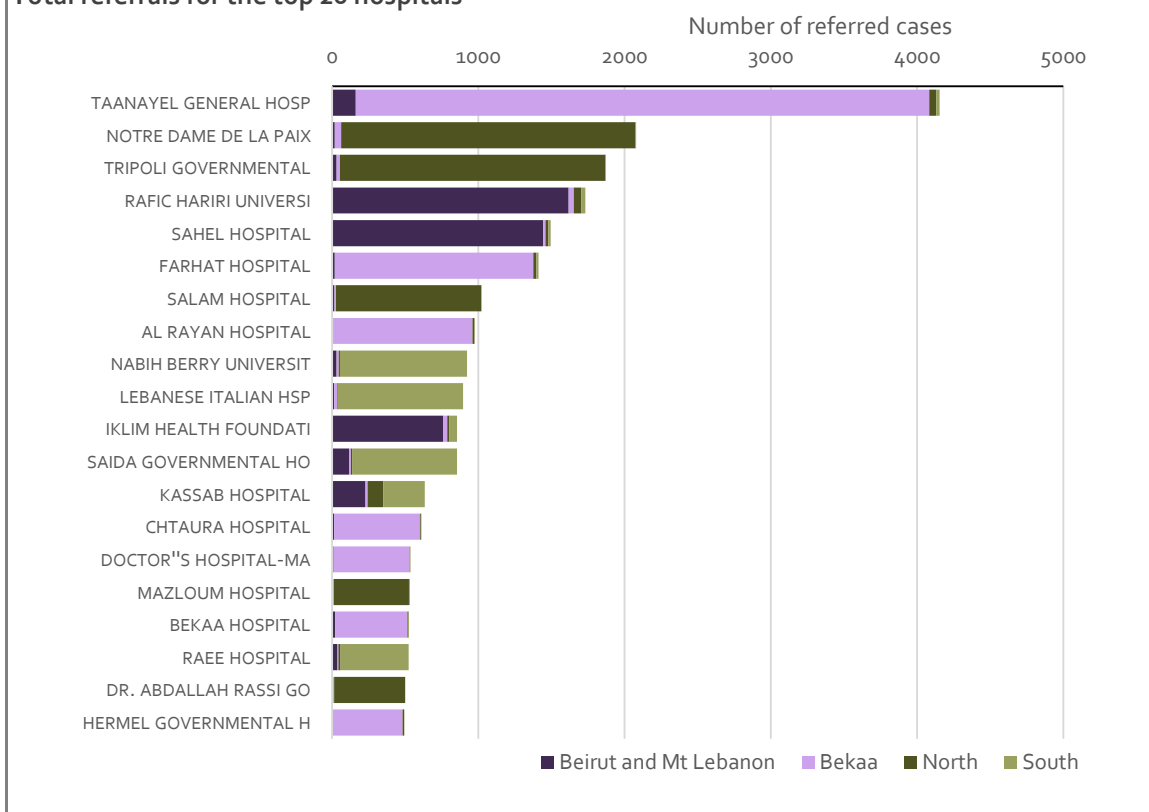
There were 99 hospitals across Lebanon that received Syrian refugee referrals. The number of hospitals receiving referrals by region were Beirut and Mt Lebanon 83 (84%), North Lebanon 68 (69%), Bekaa 65 (66%) and South Lebanon 64 (65%). The top five hospitals receiving referrals were Taanayel General 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

21,386,320
Total original claim

- 18,698,801 Referral accepted
- 123,656 Accepted after consultations with UNHCR
- 2,563,863 Declined

17,541,169
Total approved* claim

- 17,521,991 Referral accepted
- 19,178** Accepted after consultations with UNHCR
- 0 Declined

*accepted cost of referral. Includes patient share. Not all costs are final

**some costs may still be in review and are therefore not included.*

13,076,228
UNHCR share of cost

- 13,058,331 Accepted
- 17,897 Accepted after consultations with UNHCR

4,464,941
non-UNHCR* share of cost

- 4,463,660 Accepted
- 1,281 Accepted after consultations with UNHCR

5,966,505
Finalised bills as of 24 Jul 2014

- 5,966,505 Accepted
- 0 Accepted after consultations with UNHCR

non-UNHCR share is cost borne by patients, charities, NGOs, hospital etc

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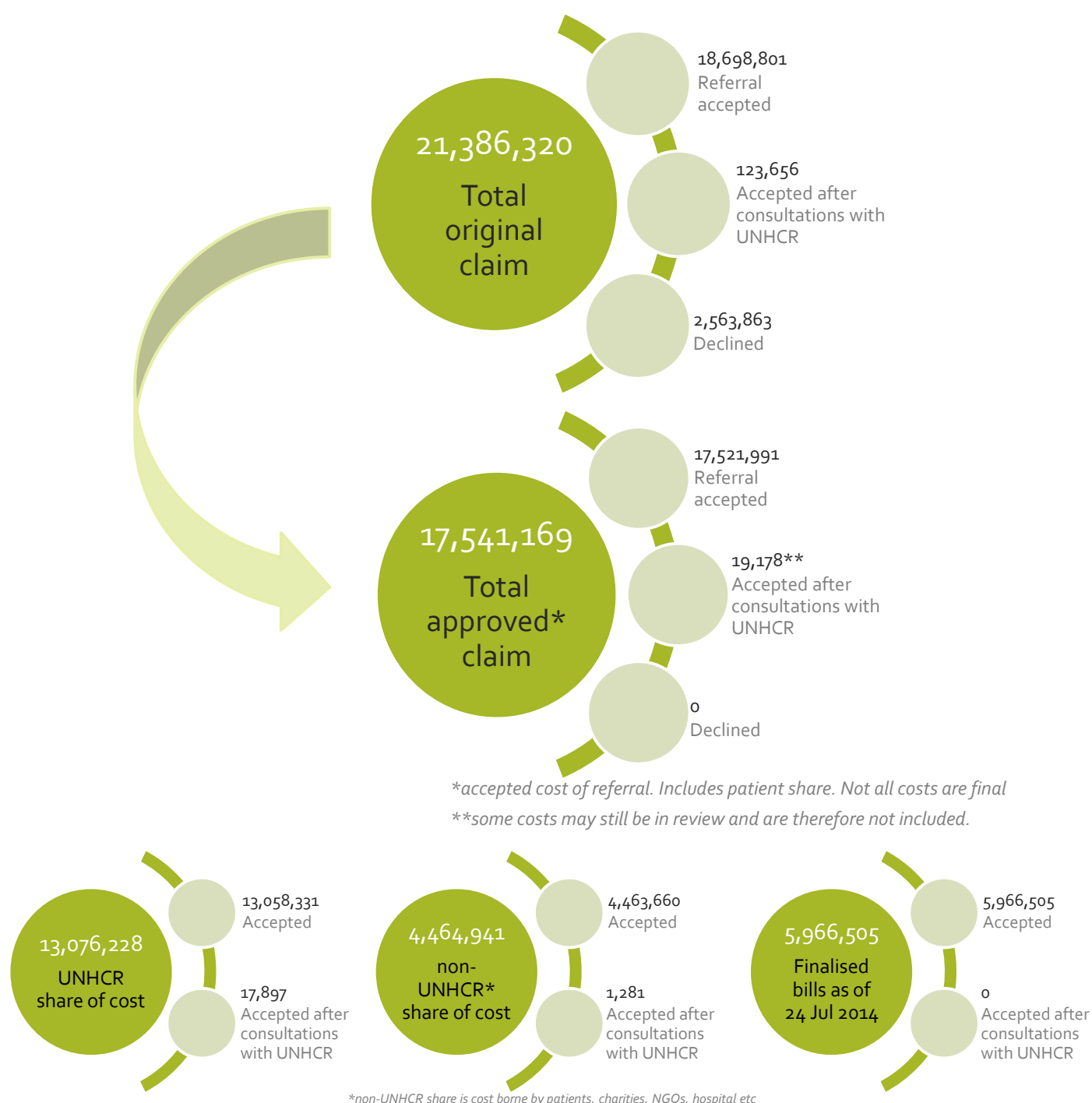 total original claim and the final approved was achieved primarily due to savings obtained from referrals that were not approved because they did not meet guidelines (USD 2.6 million) or a decrease in the amount billed for referrals that were accepted (USD 1.2 million). Of the USD 17.5 million approved, 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

RADIOLOGICAL OR LAB INVESTIGATION 7%

CONSULTATIONS 11%

PRESCRIPTIONS/TREATMENT 8%

INVASIVE PROCEDURES AND/OR SURGERY 13%

INTENSIVE CARE 12%

Finalised bills by service provided (USD 5,966,505)

GENERAL HOSPITALIZATION COSTS 49%

BEIRUT AND MT LEBANON
9%, 52%, 13%, 12%, 7%, 7%

BEKAA
10%, 48%, 13%, 14%, 9%, 7%

NORTH
13%, 51%, 11%, 11%, 8%, 6%

SOUTH
11%, 47%, 14%, 14%, 7%, 7%

- CONSULTATIONS
- GENERAL HOSPITALIZATION COSTS
- INTENSIVE CARE
- INVASIVE PROCEDURES AND/OR SURGERY
- PRESCRIPTIONS/TREATMENT
- RADIOLOGICAL OR LAB INVESTIGATION

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

CARDIOVASCULAR DISEASE (USD 686,226)

- Consultations: 47.9%
- General hospitalization cost: 4.9%
- Intensive care: 18.5%
- Invasive procedures and/or surgery: 6.9%
- Prescriptions/treatment: 11.7%
- Radiological or lab investigation: 10.1%

CHRONIC RESPIRATORY DISEASE (USD 218,462)

- Consultations: 11.6%
- General hospitalization cost: 11.8%
- Intensive care: 24.9%
- Invasive procedures and/or surgery: 15.4%
- Prescriptions/treatment: 22.1%
- Radiological or lab investigation: 14.2%

DIABTETES AND OTHER ENDOCRINOLOGICAL DISEASES (USD 52,026)

- Consultations: 12.2%
- General hospitalization cost: 15.6%
- Intensive care: 15.9%
- Invasive procedures and/or surgery: 19.6%
- Prescriptions/treatment: 19.4%
- Radiological or lab investigation: 17.4%

FEVER OF UNKNOWN ORIGIN (USD 25,598)

- Consultations: 16.2%
- General hospitalization cost: 30.0%
- Intensive care: 2.4%
- Invasive procedures and/or surgery: 0.9%
- Prescriptions/treatment: 19.5%
- Radiological or lab investigation: 31.1%

GASTROINTESTINAL CONDITION (USD 365,673)

- Consultations: 9.9%
- General hospitalization cost: 21.0%
- Intensive care: 2.9%
- Invasive procedures and/or surgery: 38.2%
- Prescriptions/treatment: 12.3%
- Radiological or lab investigation: 15.8%

HEMATOLOGICAL CONDITIONS (USD 98,752)

- Consultations: 25.5%
- General hospitalization cost: 17.6%
- Intensive care: 5.2%
- Invasive procedures and/or surgery: 4.1%
- Prescriptions/treatment: 13.4%
- Radiological or lab investigation: 34.3%

HEPATOBILIARY DISEASE (USD 122,075)

- Consultations: 6.3%
- General hospitalization cost: 12.5%
- Intensive care: 3.8%
- Invasive procedures and/or surgery: 58.7%
- Prescriptions/treatment: 8.1%
- Radiological or lab investigation: 10.5%

MENTAL HEALTH CONDITION (USD 45,390)

- Consultations: 13.8%
- General hospitalization cost: 19.0%
- Intensive care: 19.7%
- Invasive procedures and/or surgery: 6.6%
- Prescriptions/treatment: 18.3%
- Radiological or lab investigation: 22.6%

NEONATAL OR CONGENITAL CONDITION (USD 1,031,900)

- Consultations: 18.0%
- General hospitalization cost: 4.6%
- Intensive care: 51.8%
- Invasive procedures and/or surgery: 9.4%
- Prescriptions/treatment: 10.1%
- Radiological or lab investigation: 6.2%

NEOPLASM (MALIGNANT OR BENIGN) (USD 48,252)

- Consultations: 5.9%
- General hospitalization cost: 9.8%
- Intensive care: 1.3%
- Invasive procedures and/or surgery: 60.0%
- Prescriptions/treatment: 9.9%
- Radiological or lab investigation: 13.1%

NEPHRO/UROLOGICAL DISEASE (USD 139,229)

- Consultations: 9.9%
- General hospitalization cost: 16.6%
- Intensive care: 4.0%
- Invasive procedures and/or surgery: 27.3%
- Prescriptions/treatment: 23.6%
- Radiological or lab investigation: 18.7%

NEUROLOGY (USD 67,019)

- Consultations: 10.4%
- General hospitalization cost: 10.1%
- Intensive care: 26.9%
- Invasive procedures and/or surgery: 19.3%
- Prescriptions/treatment: 19.2%
- Radiological or lab investigation: 14.1%

OBSTETRIC (USD 3,453,787)

- Consultations: 0.3%
- General hospitalization cost: 97.9%
- Intensive care: 0.1%
- Invasive procedures and/or surgery: 0.6%
- Prescriptions/treatment: 0.6%
- Radiological or lab investigation: 0.5%

RESPIRATORY INFECTIONS (USD 779,698)

- Consultations: 14.8%
- General hospitalization cost: 26.4%
- Intensive care: 18.1%
- Invasive procedures and/or surgery: 4.0%
- Prescriptions/treatment: 20.9%
- Radiological or lab investigation: 15.8%

SURGERY (USD 155,997)

- Consultations: 1.0%
- General hospitalization cost: 0.7%
- Intensive care: 0.1%
- Invasive procedures and/or surgery: 96.7%
- Prescriptions/treatment: 0.3%
- Radiological or lab investigation: 1.1%

TRAUMA AND OTHER INJURIES (USD 379,726)

- Consultations: 8.0%
- General hospitalization cost: 3.8%
- Intensive care: 5.3%
- Invasive procedures and/or surgery: 69.9%
- Prescriptions/treatment: 5.3%
- Radiological or lab investigation: 7.7%

Legend:
- CONSULTATIONS
- GENERAL HOSPITALIZATION COST
- INTENSIVE CARE
- INVASIVE PROCEDURES AND/OR SURGERY
- PRESCRIPTIONS/TREATMENT
- RADIOLOGICAL OR LAB INVESTIGATION

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
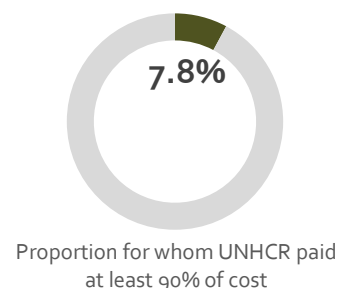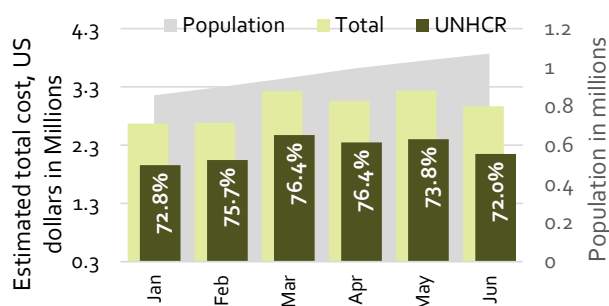
6.2 Average costs

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
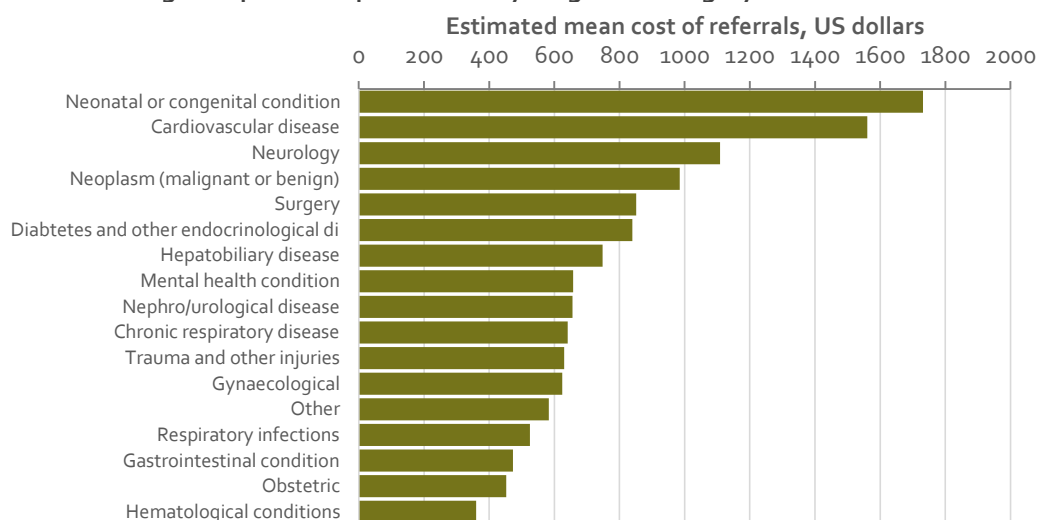
655
Average cost in USD for caeserian section

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

Legend: Population, Total, UNHCR

Monthly proportions:
Jan 72.8%, Feb 75.7%, Mar 76.4%, Apr 76.4%, May 73.8%, Jun 72.0%

7.8%
Proportion for whom UNHCR paid at least 90% of cost

Percent of hospital costs above USD 1500 by approval status

7% Approved directly or by ECC

43% Approved after consultations with UNHCR

5% Not approved
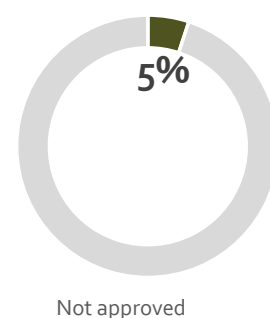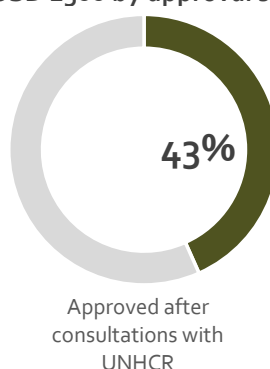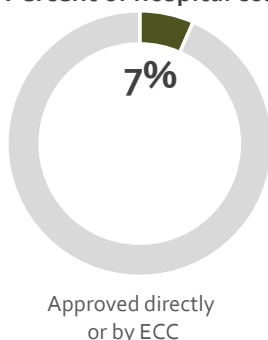
Estimated average hospital cost per referral by diagnosis category

Estimated mean cost of referrals, US dollars

- Neonatal or congenital condition
- Cardiovascular disease
- Neurology
- Neoplasm (malignant or benign)
- Surgery
- Diabtetes and other endocrinological di
- Hepatobiliary disease
- Mental health condition
- Nephro/urological disease
- Chronic respiratory disease
- Trauma and other injuries
- Gynaecological
- Other
- Respiratory infections
- Gastrointestinal condition
- Obstetric
- Hematological conditions

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 caeserean 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
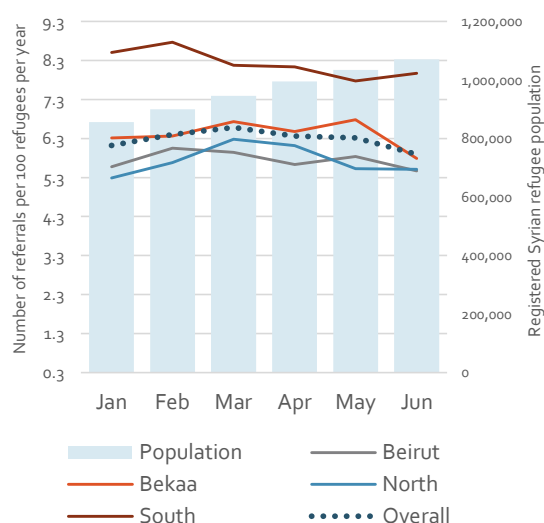estimated annualised per capita hospital cost for South

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
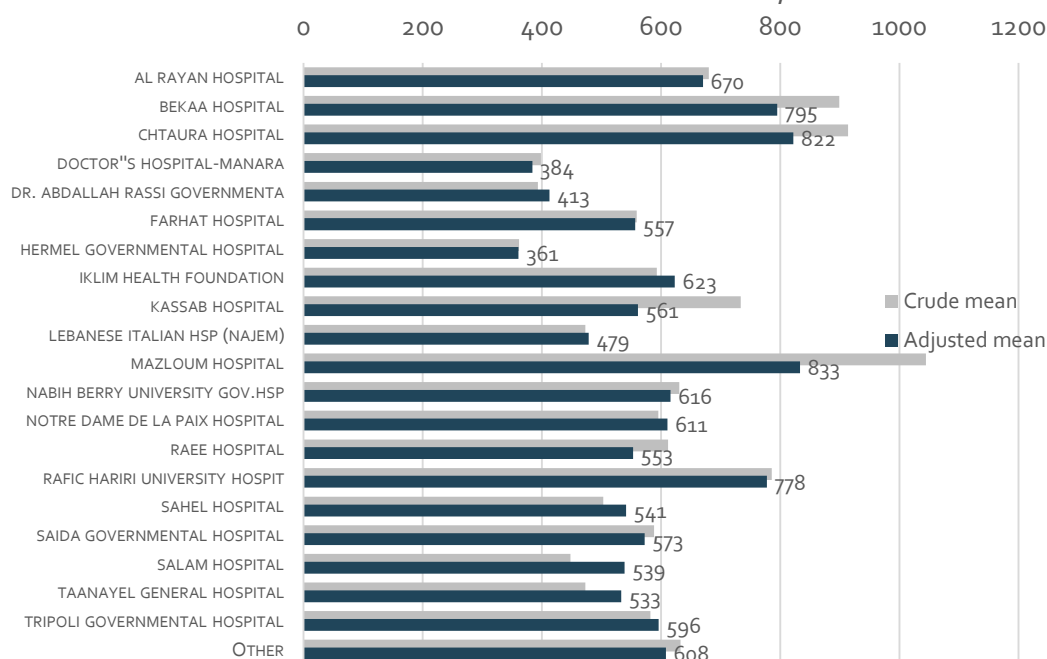
Trends of referrals by region since January 2014

Legend: Population, Beirut, Bekaa, North, South, Overall

Trends of per capita hospital cost by region since January 2014

Legend: Beirut, Bekaa, North, South, Overall
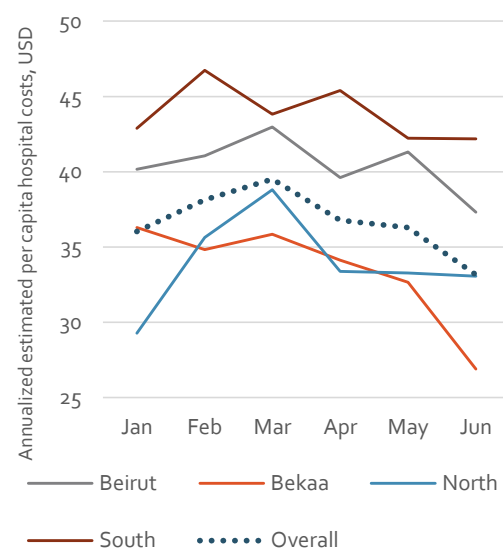
Average costs by hospital (adjusted for disease category, gender, and age)

Estimated mean cost of referrals, US dollars

Hospital	Adjusted mean
AL RAYAN HOSPITAL	670
BEKAA HOSPITAL	795
CHTAURA HOSPITAL	822
DOCTOR''S HOSPITAL-MANARA	384
DR. ABDALLAH RASSI GOVERNMENTA	413
FARHAT HOSPITAL	557
HERMEL GOVERNMENTAL HOSPITAL	361
IKLIM HEALTH FOUNDATION	623
KASSAB HOSPITAL	561
LEBANESE ITALIAN HSP (NAJEM)	479
MAZLOUM HOSPITAL	833
NABIH BERRY UNIVERSITY GOV.HSP	616
NOTRE DAME DE LA PAIX HOSPITAL	611
RAEE HOSPITAL	553
RAFIC HARIRI UNIVERSITY HOSPIT	778
SAHEL HOSPITAL	541
SAIDA GOVERNMENTAL HOSPITAL	573
SALAM HOSPITAL	539
TAANAYEL GENERAL HOSPITAL	533
TRIPOLI GOVERNMENTAL HOSPITAL	596
Other	608

Legend: Crude mean, Adjusted mean

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 Mazloum hospital (USD 833) and lowest in Hermel hospital (USD 361).