



HeRAMS Report January - June 2015

(Public Hospitals in the Syrian Arab Republic)

This is to acknowledge that the data provided in this report is a product of joint collaboration between the World Health Organization, Ministry of Health, and Ministry of Higher Education in the Syrian Arab Republic. The report covers the months of January to June 2015.

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Abbreviations

CEmOC	Comprehensive Emergency Obstetric Care
CS	Caesarean Sections
DoH	Department of Health
ESKD	End Stage Kidney Disease
HeRAMS	Health Resources & Services Availability Mapping System
HIS	Health Information System
ICT	Information and Communication Technology
ICU/ CCU	Intensive Care Unit / Critical Care Unit
IDPs	Internally Displaced People
MoH	Ministry of Health
MoHE	Ministry of Higher Education
NCDs	Non-communicable Diseases
WHO	World Health Organization

Executive summary

Regular assessment to monitor the impact of the crisis on the health facilities functionality, accessibility, condition status, availability of resources and services, has been conducted using **HeRAMS** (Health Resources & services Availability Mapping System) tool. The report provides descriptive analysis for the public hospitals in all 14 governorates of Syria [including Ministry of Health (MoH) hospitals and Ministry of Higher Education (MoHE) hospitals (a total of 113 hospitals)].

Despite the challenging security situation and protracted crisis, in addition to the wide disruption of the Health System, implementation of HeRAMS has been successfully institutionalized and strengthened in public health facilities during 2014 and 2015. Key achievements include expansion of the system to cover MoHE hospitals; improved national HIS capacity through regular workshops and trainings; strengthened operational capacity of HIS units in all governorates, through supplying of ICTs means; developed database system and standardized reporting channel, tools and protocols.

Completeness of Hospitals' reporting remained 100%, where all 99 (MoH) hospitals and 14 (MoHE) hospitals reported to HeRAMS by the end of June 2015.

Functionality status of the public hospitals:

By the end of June 2015, and out of the **113** assessed public hospitals [MoH & MoHE], 41% (46) were reported fully functioning, 32% (36) hospitals were reported partially functioning, while 27% (31) were reported non-functioning. All public hospitals in Idleb were reported out of service.

Accessibility status:

By the end of June 2015, 59% (67) hospitals were reported accessible, 17% (19) hard-to-access, and 24% (27) were inaccessible

Infrastructure of public hospitals:

By the end of June 2015, 42% (48) hospitals' building were reported damaged [12% fully damaged and 30% partially damaged], 55% (62) of public hospitals were reported intact, while the infrastructure of three public hospitals were unknown.

Assessing the availability of **water sources** at functional public hospitals indicated that 40% (33) are using main pipelines, 6% (5) are mainly using wells, while 50% (41) are using both (main pipeline and well).

Electricity power is widely disrupted across the country and majority of public hospitals are dependent on generators' power. According to HeRAMS assessment 40% (33) of functional public hospitals across Syria are in need for electrical generators, mainly reported from 10 governorates: Quneitra, Aleppo, Deir-ez-Zor, Dar'a, Rural Damascus, Hama, Homs, Ar-Raqqa, Damascus and Latakia.

Human Resources:

The emergency physicians remain the lowest proportion of health staff in public hospitals (0.3%), followed by dentists (1%), pharmacists (2%), Midwives (5%), Laboratory personnel (7%), specialists (14%), resident doctors (19%), and nurses (52%).

Analysis of proportions of medical doctors [specialists, emergency doctors, resident doctors, dentists] working at MoHE hospitals versus MoH hospitals has shown that 32% of medical doctors work in MoHE, while 68% are in MoH hospitals.

Availability and Utilization of Health Services

Analysis of availability and utilization of health services was conducted across all functional public hospitals [MoH & MoHE]. As a result of disrupted healthcare delivery and non-functionality of hospitals, limited provision of health services was observed across governorates, even within functional hospitals. Detailed analysis on services' availability and utilization throughout the first half of 2015 by category (i.e., general clinical services, trauma care, nutrition, child health, NCDs, and mental health) is provided at governorate level.

Availability of Medical Equipment

Analysis of availability of essential and specialized equipment was measured across all functional public hospitals [MoH & MoHE], in terms of functional equipment out of the total available equipment in the hospital. The produced analysis provides good indication of the current readiness of the hospitals to provide the health services, and also to guide focused planning for procurement and distribution of equipment and machines, to fill-in identified gaps that were observe even within the functional public hospitals.

Availability of Medicines and Medical Supplies

Availability of medicines and medical supplies at hospitals' level was evaluated based on a standard list of identified priority medicines and medical supplies for duration of one month.

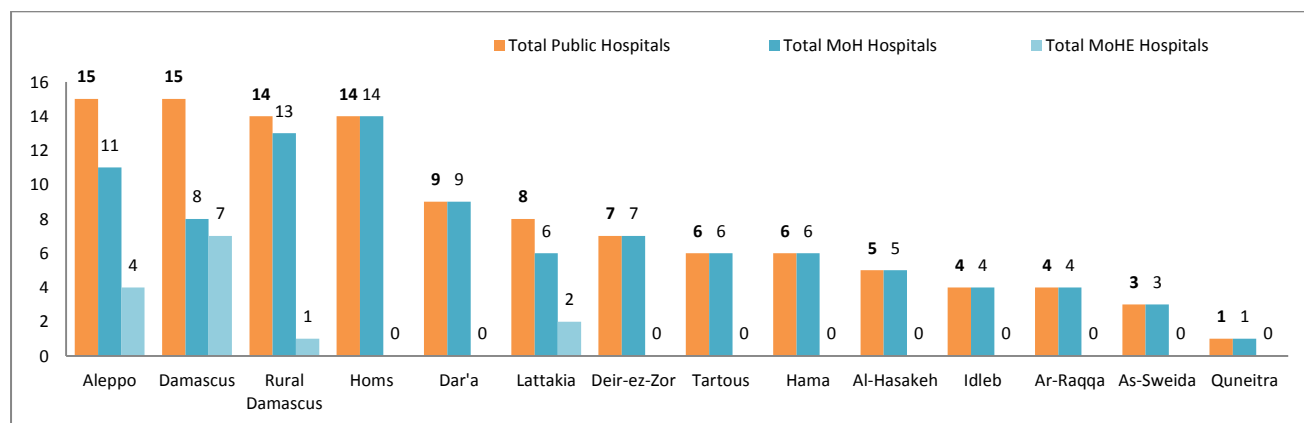
The key identified gaps of medicines and consumable at functional hospitals include the tetanus shots (87%), hepatitis vaccine (82%), affecting blood (62%), antidotes for poisoning (61%), dermatological preparation (59%), delivery related medicines (52%), dialysis consumable (50%) and antibiotics for multi-resistant bacteria (49%).

1. Completeness of Hospitals Reporting

The completeness of reporting from public hospitals across Syria remained at 100%, where all the 99 Ministry of Health (MoH) Hospitals and the 14 Ministry of Higher Education (MoHE) hospitals continued to report to HeRAMS in June 2015.

The distribution of public hospitals by affiliation [MoH & MoHE], per governorate is shown in Figure 1.

Figure 1: Distribution of public hospitals by affiliation, per governorate



The following sections provide descriptive and trend analysis on the functionality status, accessibility, and infrastructure of the public hospitals, availability of resources & services, and available equipment and medicines by the end of June 2015.

The provided analysis supports informed decision making, better planning and allocation of resources, and contributes to significant and focused humanitarian response by WHO and health sector partners.

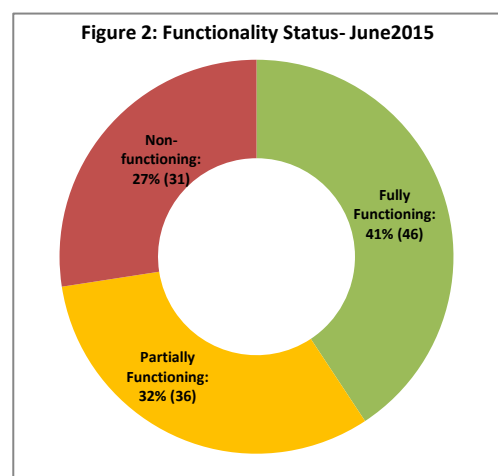
2. Functionality and accessibility of the Public Hospitals

The following sub-sections provide analysis on the functionality and accessibility status of the public hospitals at governorate level.

2.1 Functionality Status of the Public Hospitals

Functionality of the public hospitals was defined and assessed at three levels;

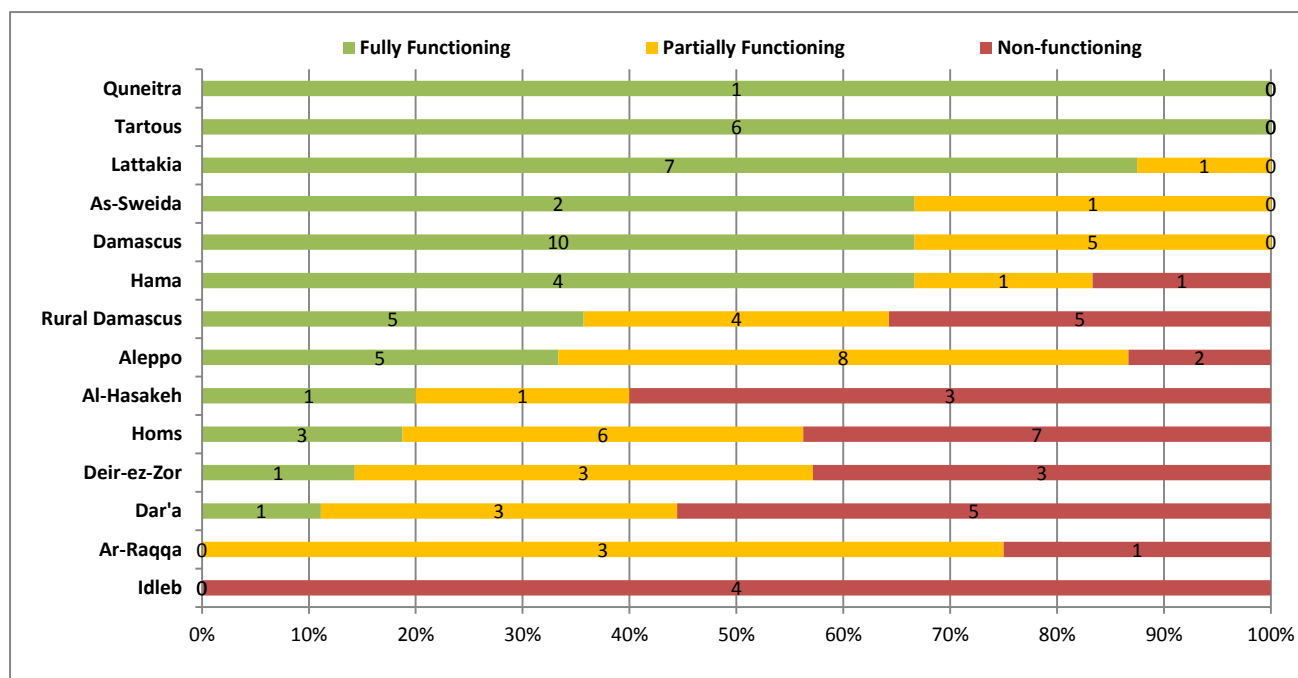
- ◆ **Fully Functioning:** a hospital is open, accessible, and provides healthcare services with full capacity (i.e., staffing, equipment, and infrastructure).
- ◆ **Partially functioning:** a hospital is open and provides healthcare services, but with partial capacity (i.e., either shortage of staffing, equipment, or damage in infrastructure).
- ◆ **Not functioning:** a hospital is out of service, because it is either fully damaged, inaccessible, no available staff, or no equipment.



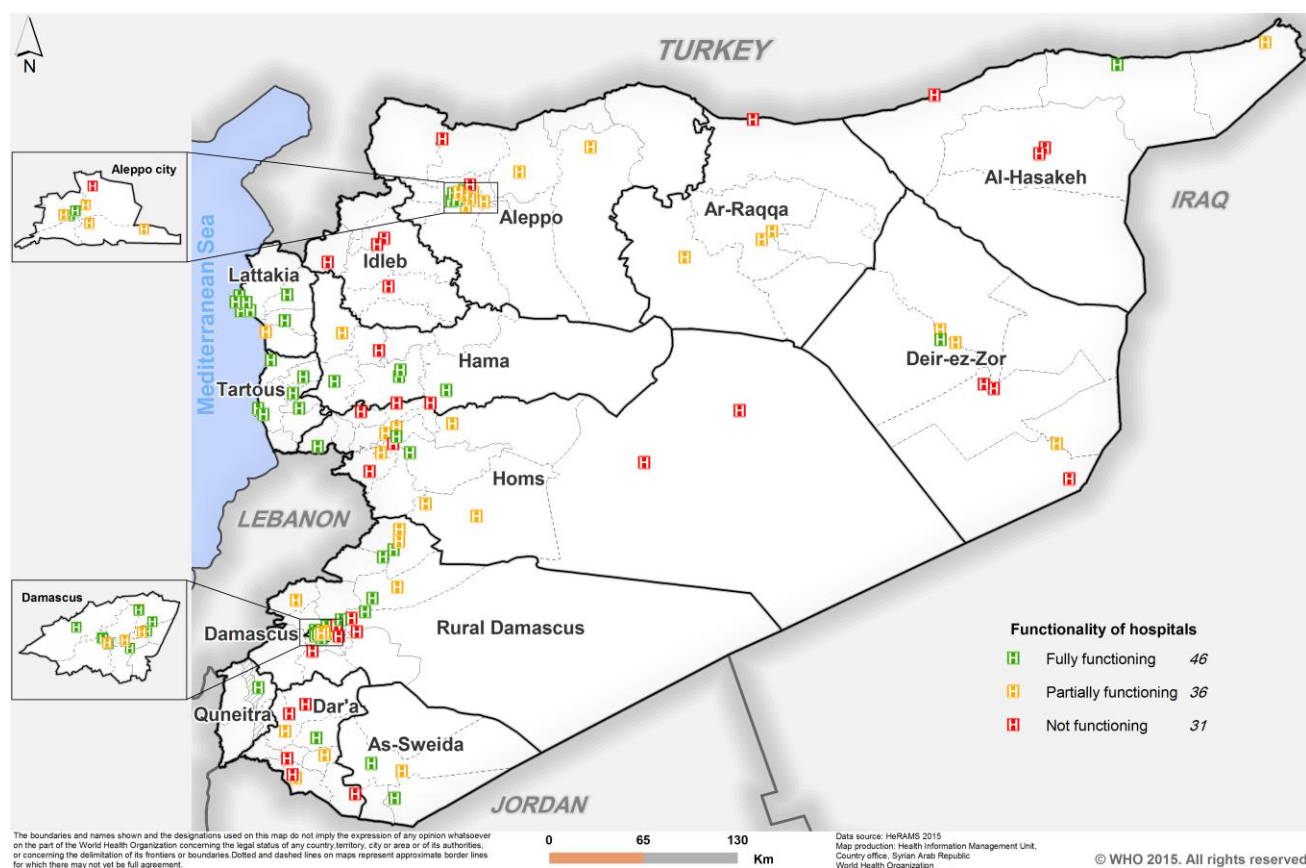
By the end of June 2015, and out of the **113** assessed public hospitals [MoH & MoHE], 41% (46) were reported fully functioning, 32% (36) hospitals were reported partially functioning, while 27% (31) were reported non-functioning [Figure 2].

The hospitals reported partially functioning or non-functioning are in 12 out of a total 14 governorates (86% of governorates). Detailed analysis on the functionality status of the MoH and MoHE hospitals at governorate level is presented in [Figure 3] and [Map 1]. All public hospitals in Idleb were reported out of service.

Figure 3: Number and percentage of fully functioning, partially functioning, and non-functioning public hospitals in Syria, June 2015



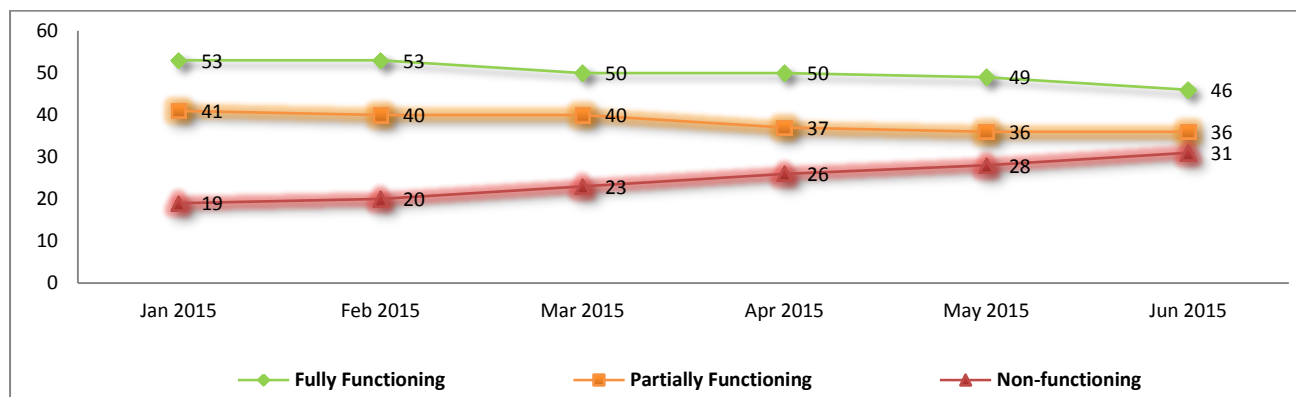
Map 1: Distribution and Functionality status of public Hospitals [MoH & MoHE], June 2015



Since beginning of the year, June 2015 was the worst month with regards to functionality of the hospitals, 31 hospitals were reported out of service compared to 19 in January 2015 [Figure 4].

The increase of the number of non-functioning hospitals in June 2015 is an indication for the direct impact of the deteriorating security situation in Ar-Raqqa governorate ([i.e., Tal Abyad hospital becomes non-functional], Al-Hasakeh governorate [i.e., two hospitals become non-functional: Al-Hasakeh national hospital, and the Children hospital, during the last 10 days of June].

Figure 4: Trend analysis of functionality status of public hospitals in Syria, January to June 2015



2.2 Accessibility to public hospitals

Accessibility to public hospitals is defined at three levels:

- ♦ **Accessible:** a hospital is easily accessible for patients and health staff.
- ♦ **Hard-to-reach:** a hospital is hardly reached, due to security situation or long distance.
- ♦ **Inaccessible:** a hospital is not accessible because of the security situation, or a hospital is accessible only to a small fraction of the population, or military people (inaccessible to civilians).

By the end of June 2015, 59% (67) hospitals were reported accessible, 17% (19) hard-to-access, and 24% (27) were inaccessible [Figure 5]. Distribution of public hospitals by accessibility status is presented in Map 2.

The number of inaccessible hospitals increased from 24 by end of May to 27 by end of June (those are Tal Abyad hospital in Ar-Raqqa governorate, Al-Hasakeh national hospital, and the Children hospital in Al-Hasakeh governorate).

Figure 5: Accessibility status- June 2015

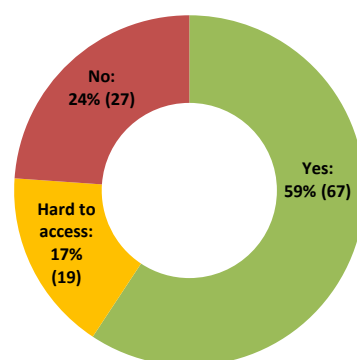
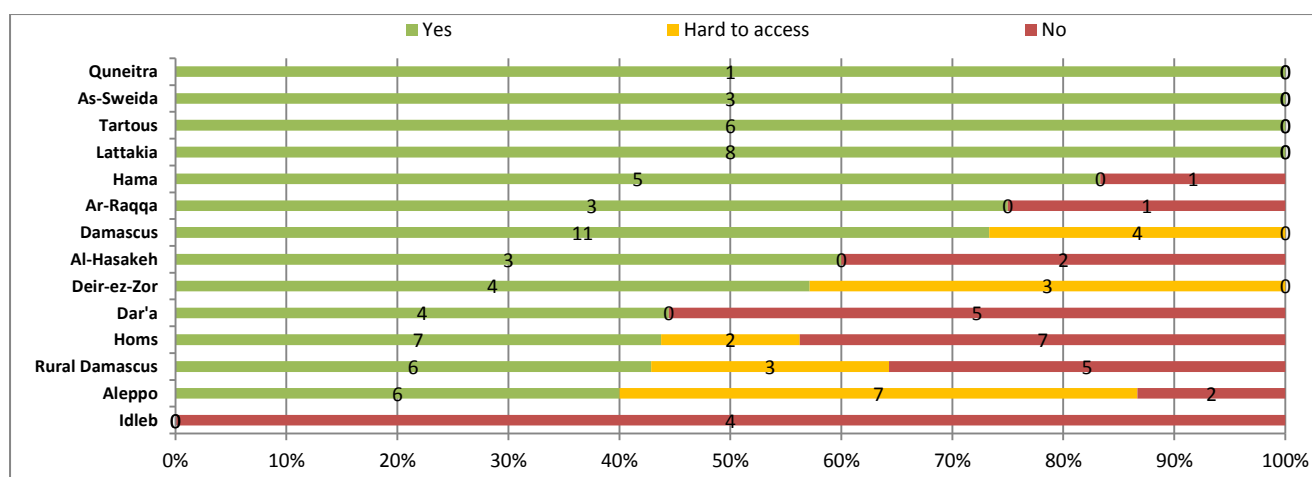
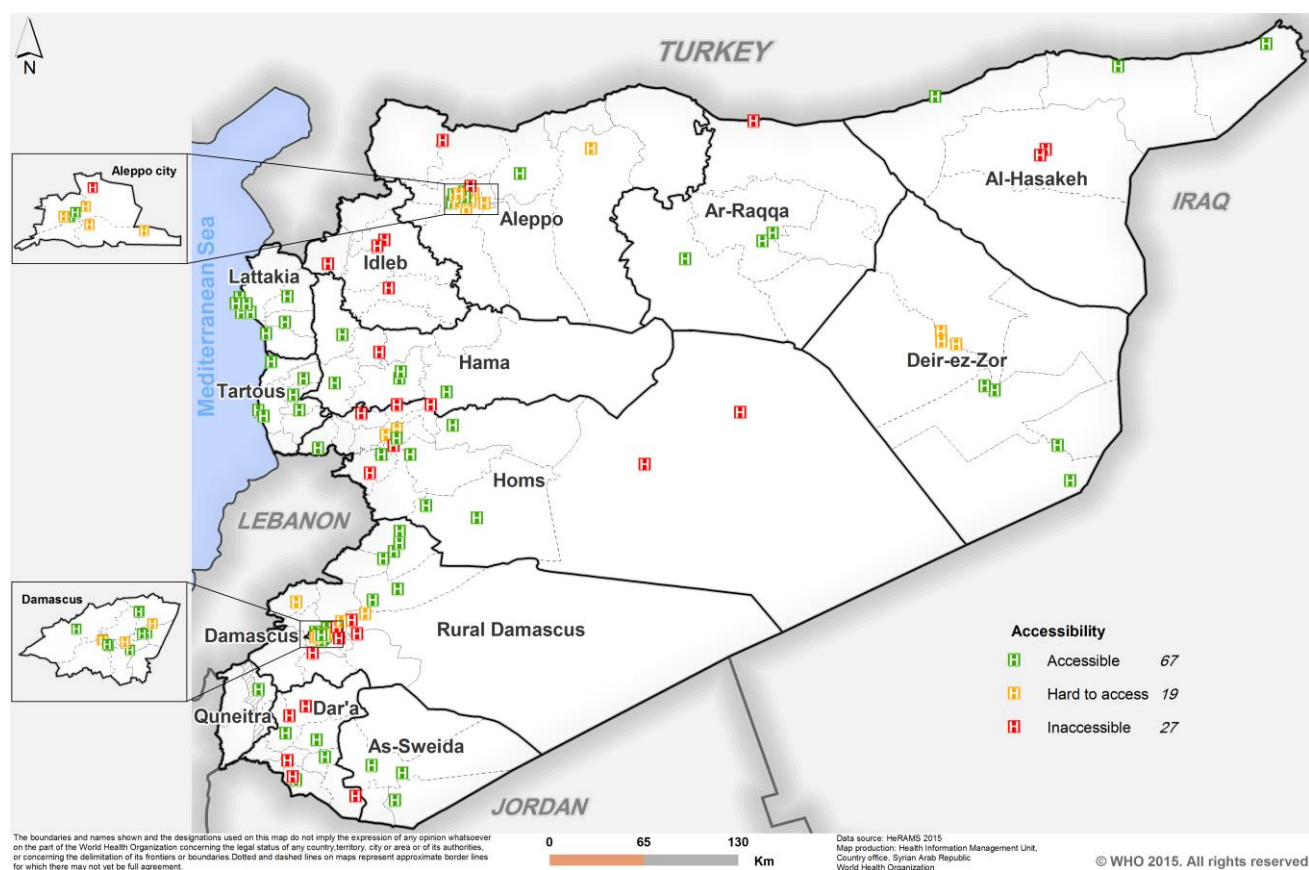


Figure 6: Accessibility status of the public hospitals [MoH & MoHE] per governorate, June 2015

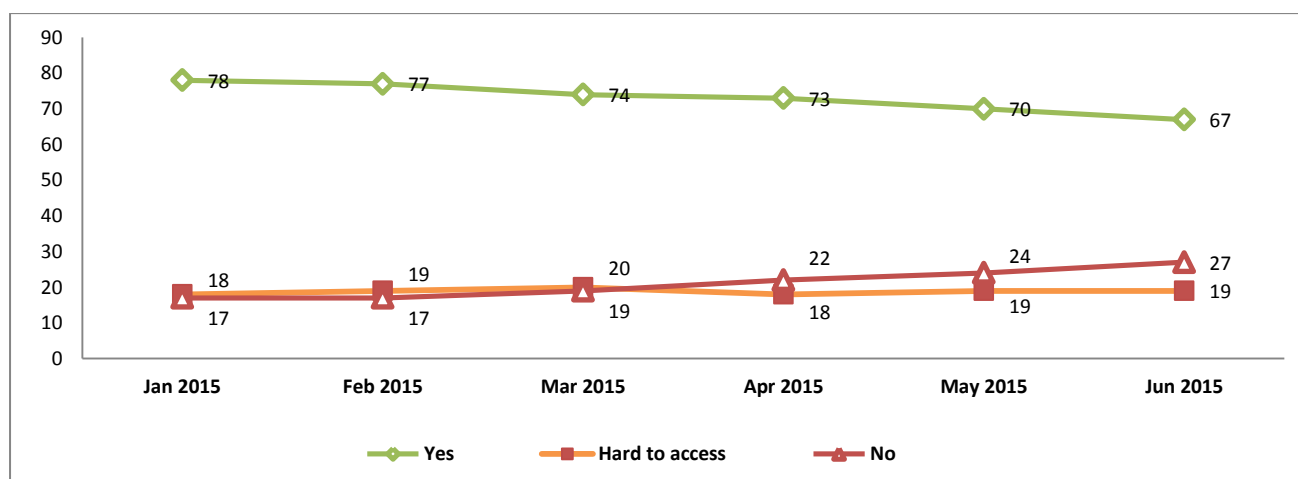


Map 2: Accessibility to public hospitals [MoH & MoHE], June 2015



Trend analysis on accessibility to public hospitals [MoH & MoHE] from January to June 2015, is presented in Figure 7.

Figure 7: Trend analysis on accessibility to public hospitals, January to June 2015



3. Infrastructure Patterns of the Public Hospitals

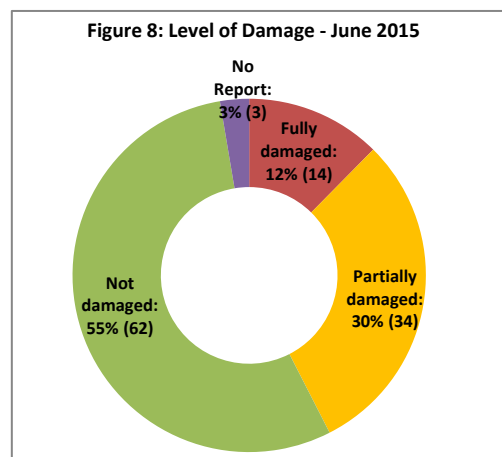
The following sub-sections provide analysis on the infrastructure patterns of the public hospitals, in terms of building condition, inpatient capacity, water sources, availability of ambulances, and electricity generators, all summarized at governorate level.

3.1 Level of Damage of the hospitals' buildings

The level of damage to hospital buildings was measured at three levels:

- ♦ Fully damaged: either, all the building is destroyed, about 75% or more of the building is destroyed, or damage of the essential services' buildings.
- ♦ Partially damaged: where part of the building is damaged.
- ♦ Intact: where there is no damage in the building.

Analysis of the level of damage provides good indication on the potential costs for reconstruction.

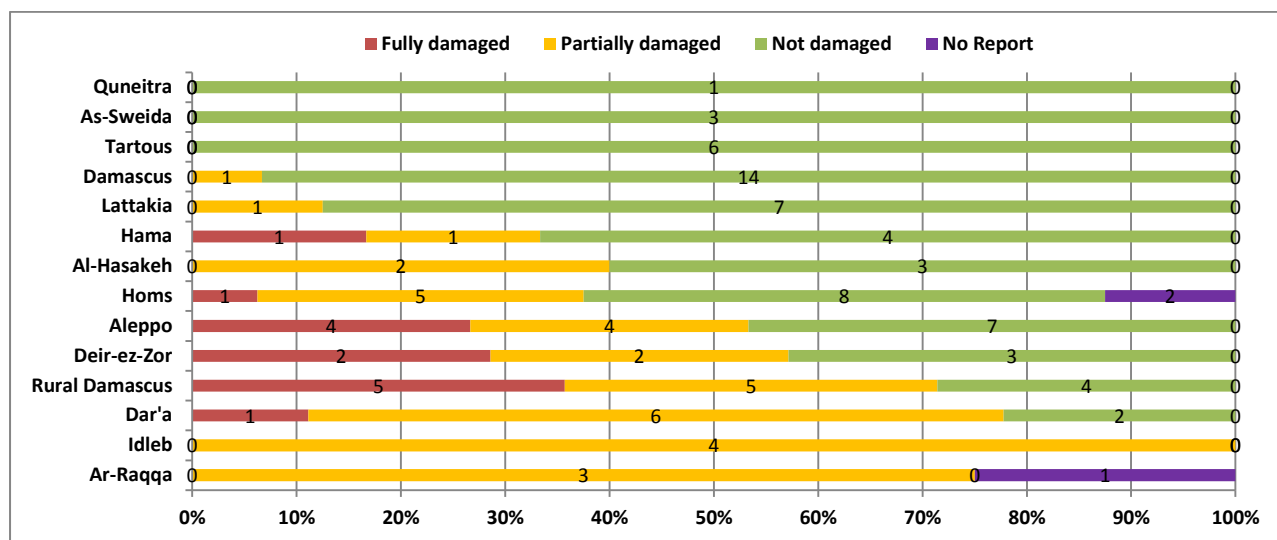


By the end of June 2015, 42% (48) hospitals were reported damaged [12% fully damaged and 30% partially damaged], while 55% (62) of public hospitals were reported intact. The level of damage of three hospitals was unconfirmed due to escalating security situation: Tal Abyad hospital in Ar-Raqqa governorate, Al-Bassel-Tadmor and Al-Bassel-Sokhneh hospitals in Homs governorate [Figure 8]. Distribution of public hospitals by level of damage is presented in Map 3.

It is essential to cross-analyze the infrastructural damage of the public hospitals in relation to the functionality status (i.e. provision of services). Some hospitals have resiliently continued to provide services regardless of the level of damage of the building and by optimizing intact parts of the building or in a few cases operating from other neighboring facilities. The national figures translate as follows:

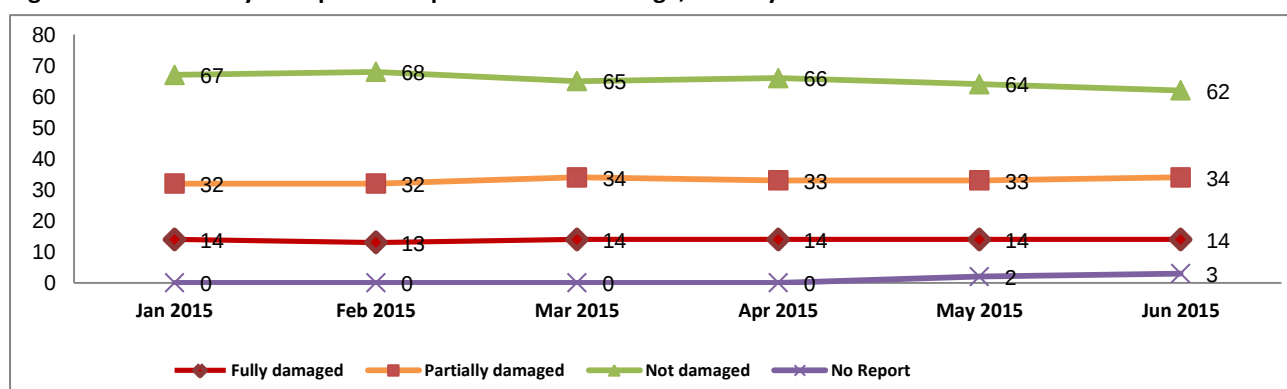
- Out of the **34 partially damaged hospitals**, 18 hospitals were reported partially functioning and 15 out of service (non-functioning), while one hospital (Yabroud, Rural Damascus) was reported to be fully functioning providing all services through salvaging medical equipment from the damaged section of the hospital with full staffing capacity.
- Out of the **14 fully damaged hospitals**, 10 were reported non-functioning while 4 hospitals have opted for innovative ways to continue providing health services to populations in need through partially functioning from other nearby temporary locations and provide health services with limited staff capacity and resources. *More details of the 4 hospitals are available in the HeRAMS database.*
- Then again, hospitals with **intact buildings (62 hospitals)** does not directly reflect full functionality, only 45 of the 62 intact hospitals are fully functioning, while 14 are partially functioning and 3 hospitals are not functioning all together, due to limited access of patients and health staff to the facilities resulting from the dire security situation as well as critical shortage of supplies.

Figure 9: Number and percentage of hospitals [MoH & MoHE] by level of damage, June 2015

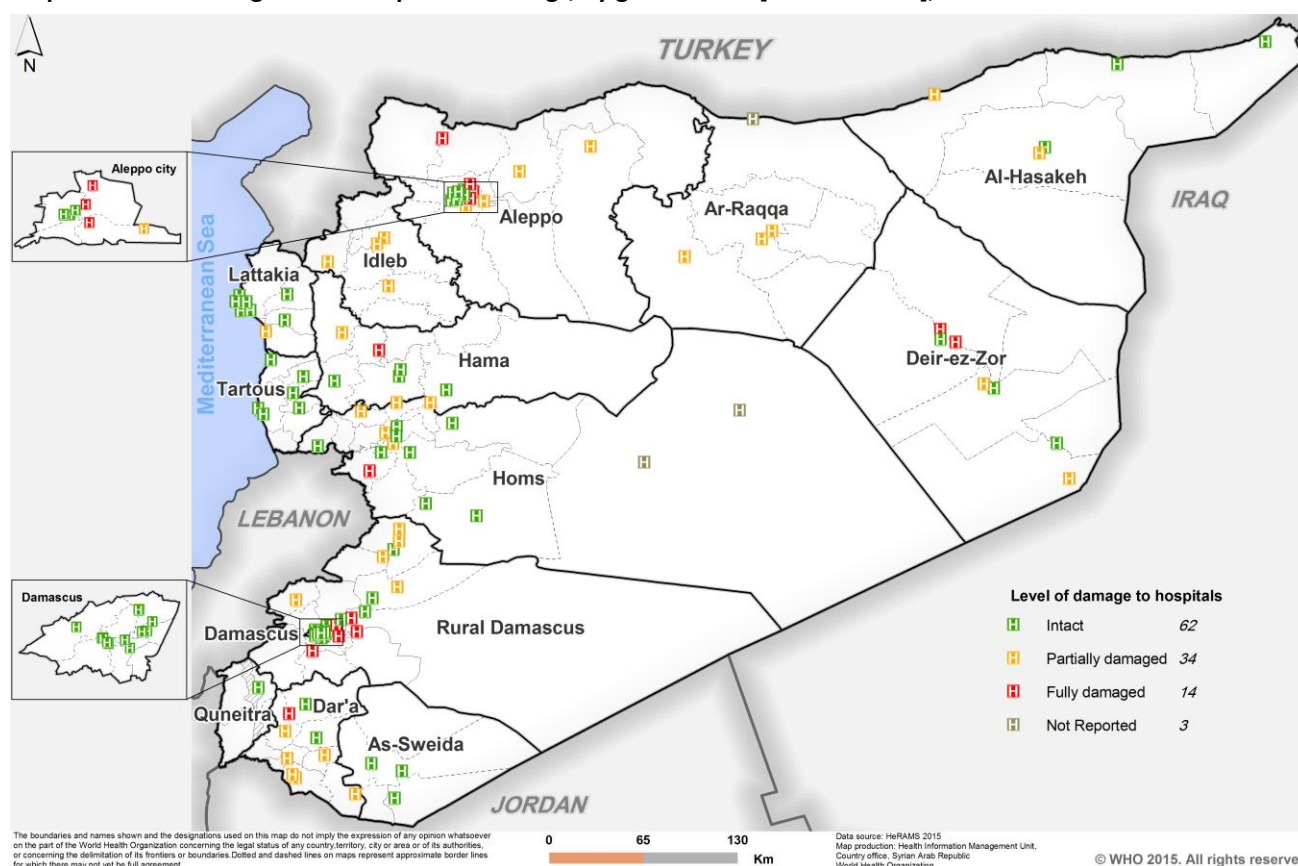


Trend analysis on condition of the public hospitals (level of damage of the building) from January to June 2015 is presented in Figure 10.

Figure 10: Trend analysis of public hospitals' level of damage, January to June 2015



Map 3: Level of Damage of the Hospitals' buildings, by governorate [MoH & MoHE], June 2015



The tables below list the hospitals, which reported fully damaged (buildings), in addition to the list of hospitals that are operating from different location (s) given that the original building is fully damaged or partially damaged.

Table 1: The list of hospitals with reported fully damaged buildings:

#	Hospital Name	Province	District	Affiliation
1	Rural Damascus specialized hospital – Duma	Rural Damascus	Duma	MoH
2	Harasta general hospital	Rural Damascus	Harasta	MoH
3	Al-Mleha hospital	Rural Damascus	Harasta	MoH
4	An-Nashabeyeh hospital	Rural Damascus	An-Nashabeyeh	MoH
5	Darayya general hospital	Rural Damascus	Darayya	MoH
6	Zahi Azraq general hospital	Aleppo	The fourth	MoH
7	E'zaz national hospital	Aleppo	E'zaz	MoH
8	Children hospital	Aleppo	Third	MoH
9	Al-Qusayr general hospital	Homs	Al-Qusayr	MoH
10	Helfaya hospital	Hama	Muhardeh	MoH
11	Maternity and Paediatric specialized hospital	Deir-ez-Zor	Deir-ez-Zor	MoH
12	Alfurat general hospital	Deir-ez-Zor	Deir-ez-Zor	MoH
13	Jassem general hospital	Dar'a	Nawa	MoH
14	Al-Kindi university hospital	Aleppo	The fourth	MoHE

Table 2: Special cases of hospitals which reported fully damaged (buildings), and operating partially from other locations:

#	Hospital name	Province	District	Type	Condition	Affiliation	New location
1	Zahi Azraq general hospital	Aleppo	The fourth	General	Fully damaged	MoH	Al-Razi Hospital in Aleppo city
2	Children hospital	Aleppo	Third	Specialized	Fully damaged	MoH	Ar-Razi hospital and Maternity hospital
3	Maternity and Paediatric specialized hospital	Deir-ez-Zor	Deir-ez-Zor	Specialized	Fully damaged	MoH	Al-Assad autonomous hospital (MoH)
4	Alfurat general hospital	Deir-ez-Zor	Deir-ez-Zor	Specialized	Fully damaged	MoH	Al-Assad autonomous hospital (MoH)

Table 3: Special cases of hospitals which reported partially damaged (buildings), and operating partially (limited provided health services) from other locations:

#	Hospital name	Province	District	Type	Condition	Affiliation	New location
1	Martyr Basil al-Assad in Deir Atia/Qalamoun Autonomous hospital	Rural Damascus	Al-Nabak	General	Partially damaged	MoH	Deir- Atia Health Centre
2	Qaara/ Qalamoun Autonomous hospital	Rural Damascus	Al-Nabak	General	Partially damaged	MoH	One floor in Qara Municipal (they moved the functional medical equipment to the new location)
3	Ebn Khaldon	Aleppo	The third	Specialized	Partially damaged	MoH	The administrative departments and outpatient clinics are operating in Al-Furqan area, while inpatient units are in the main location of the hospital in Dweireena area (recently rehabilitated partially [ongoing project])
4	Ophthalmology hospital	Aleppo	Third	Specialized	Partially damaged	MoH	Part of the hospital operating from Al-Razi hospital, while the other from the Obs. & Gyn. Hospital in Aleppo

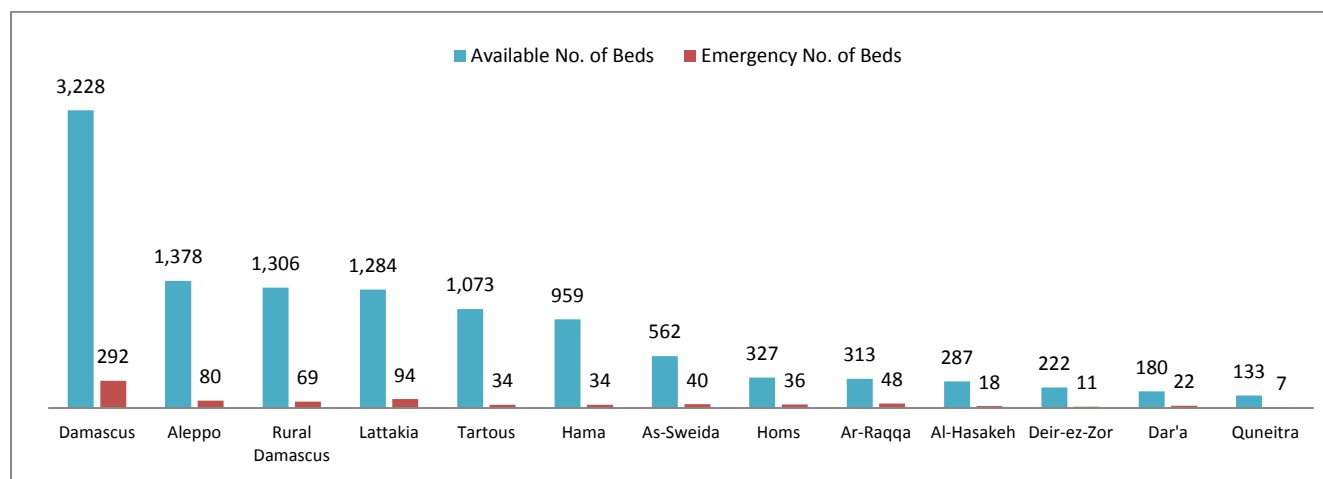
The information above could guide focused rehabilitation activities for hospitals' infrastructure, which could improve functionality status of hospitals to reach fully functional level, especially for partially functional hospitals that need small scale of rehabilitation.

3.2 Analysis of the inpatient capacity

The inpatient capacity was analyzed in terms of the total number of beds within the functional hospitals (82) and the proportion assigned as emergency beds¹.

The number of beds assigned for emergency cases vs, total number of beds by governorate is illustrated below [Figure 11].

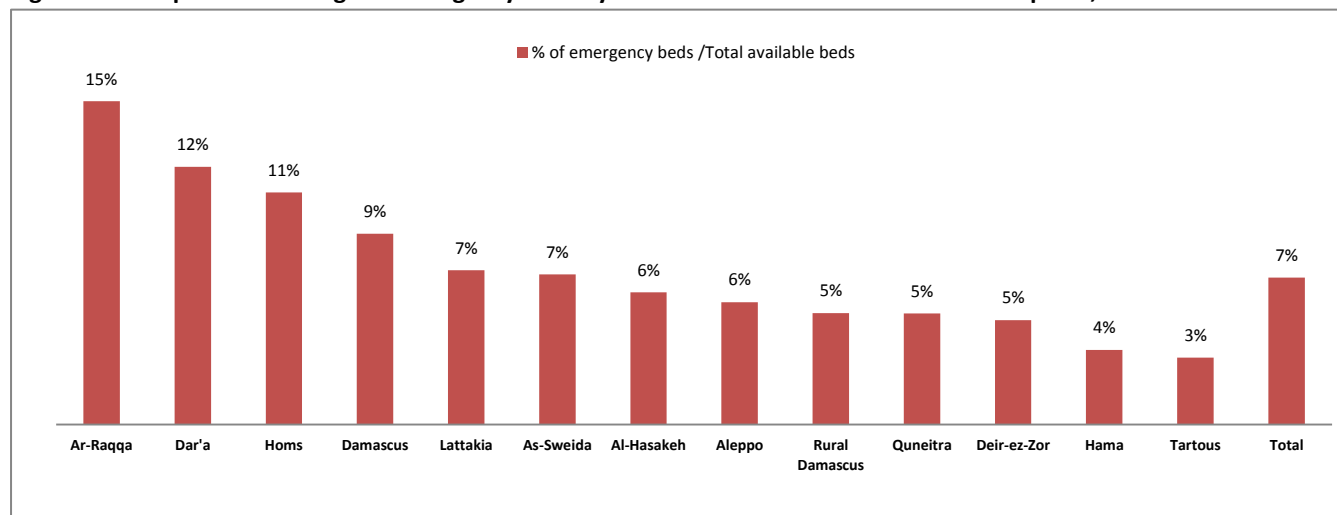
Figure 11: The number of emergency beds vs., total number of beds in functional hospitals [MoH & MoHE], per governorate, June 2015



The inpatient capacity has been improved in certain hospitals, as in impact of beds donations by WHO and other partners in certain governorates (i.e., Damascus, Aleppo, Rural Damascus, Hama, As-Sweida).

The highest percent of emergency beds (out of total available beds) is reported in Ar-Raqqa, Dar'a, Homs Damascus, Lattakia and As-Sweida governorate [Figure 12].

Figure 12: The percent of assigned emergency beds by total number of bed at functional hospitals, June 2015



¹ The beds assigned for emergency is part of the total number of beds in the hospital

3.3 Water sources and functionality status

Availability of water sources at public hospitals was assessed using a standard checklist of main types of water sources (i.e., main pipeline, well, or both (main pipeline and well)).

By the end of June 2015 and out of 82 functional public hospitals, 40% (33) are using main pipelines, 6% (5) are mainly using wells, while 50% (41) are using both (main pipeline and well) [Figure 13].

Detailed analysis on distribution of water sources at functional public hospitals is presented at governorate level on [Figure 14].

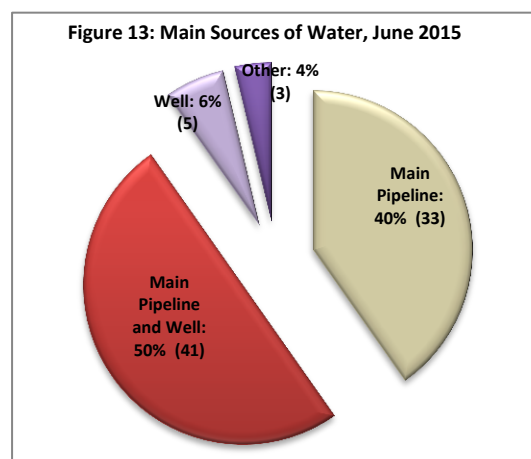
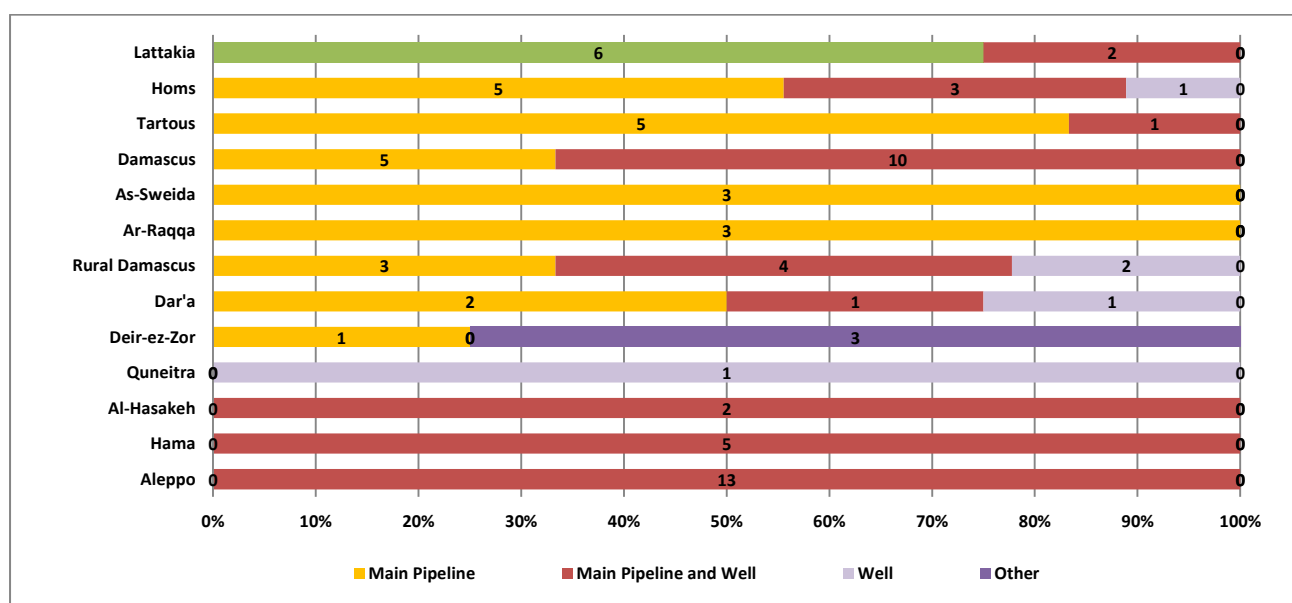
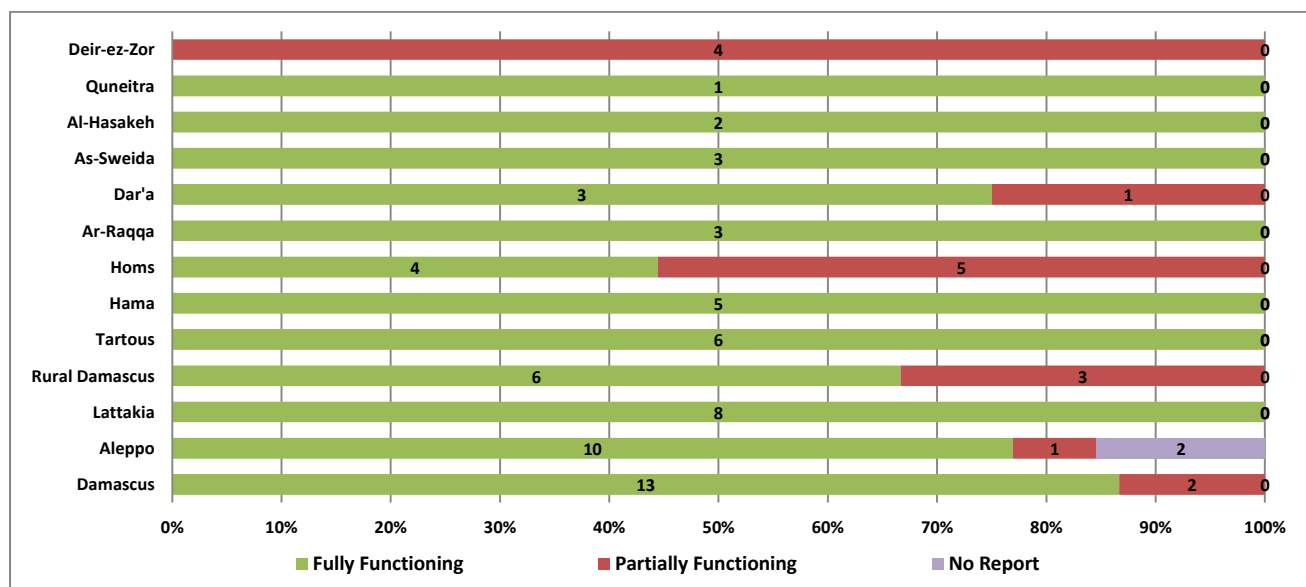


Figure 14: Distribution of water sources/ types at functional public hospitals, per governorate, June 2015



Functionality status of the water sources was measured at three levels; fully functional, partially functional, and not functional. Figure 15, provides details on functionality status of water sources at functional hospitals, (82/113) per governorate.

Figure 15: Functionality status of the water sources at functional public hospitals, June 2015

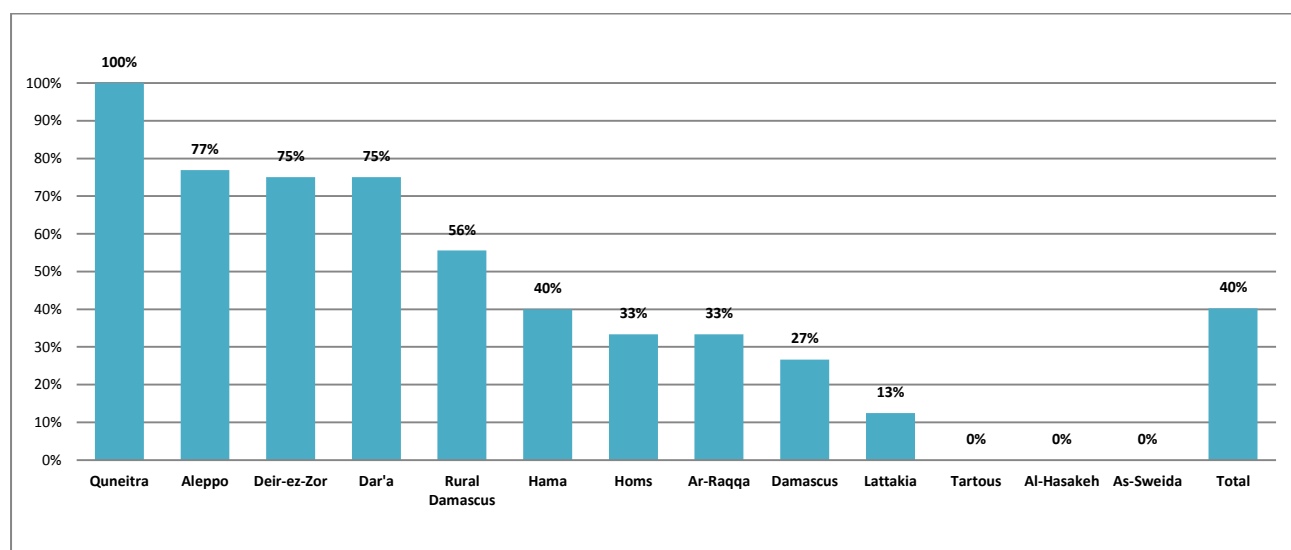


3.4 Availability of electricity generators

Availability of electricity generators continued to be highly demanded with the current situation, where electricity power is widely disrupted and majority of public hospitals are dependent on generators' power. Availability of electrical generators at functional hospitals was measured by assessing the functional out of the total existing generators in the hospital. The percent of hospitals in need for electricity generators out of the total functional hospital is summarized at governorate level [Figure 16].

40% (33) of functional public hospitals across Syria are in need for electrical generators, mainly reported from 10 governorates: Quneitra, Aleppo, Deir-ez-Zor, Dar'a, Rural Damascus, Hama, Homs, Ar-Raqqa, Damascus and Lattakia [Figure 16].

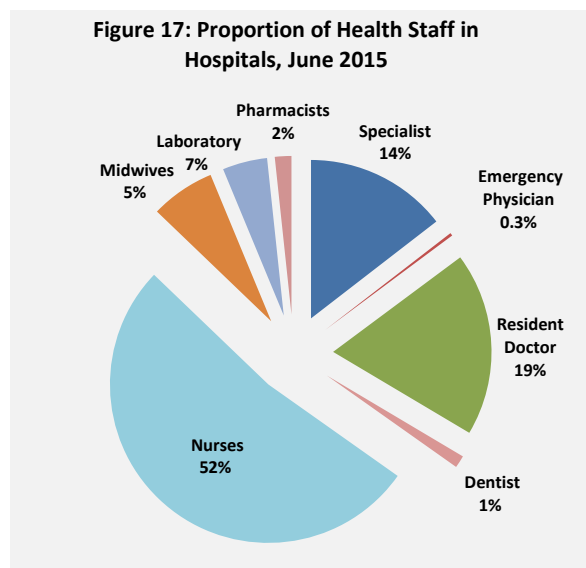
Figure 16: Percent of hospitals in need for generators out of total functional hospitals [MoH & MoHE], June 2015



4. Availability of Health Human Resources

Availability of health human resources was analyzed across all public hospitals [MoH& MoHE] considering the following scopes:

- ◆ **Analysis of proportions** of medical-related staff (doctors, nurses, midwives, and pharmacists)
- ◆ **Analysis of proportions** of available health human resources; MoH vs., MoHE hospitals
- ◆ **Analysis** of available human resources by **gender**, per governorate
- ◆ **Trend analysis** of distribution of **medical doctors** (Specialists, Emergency Physicians, Resident doctors, and Dentists), per governorate

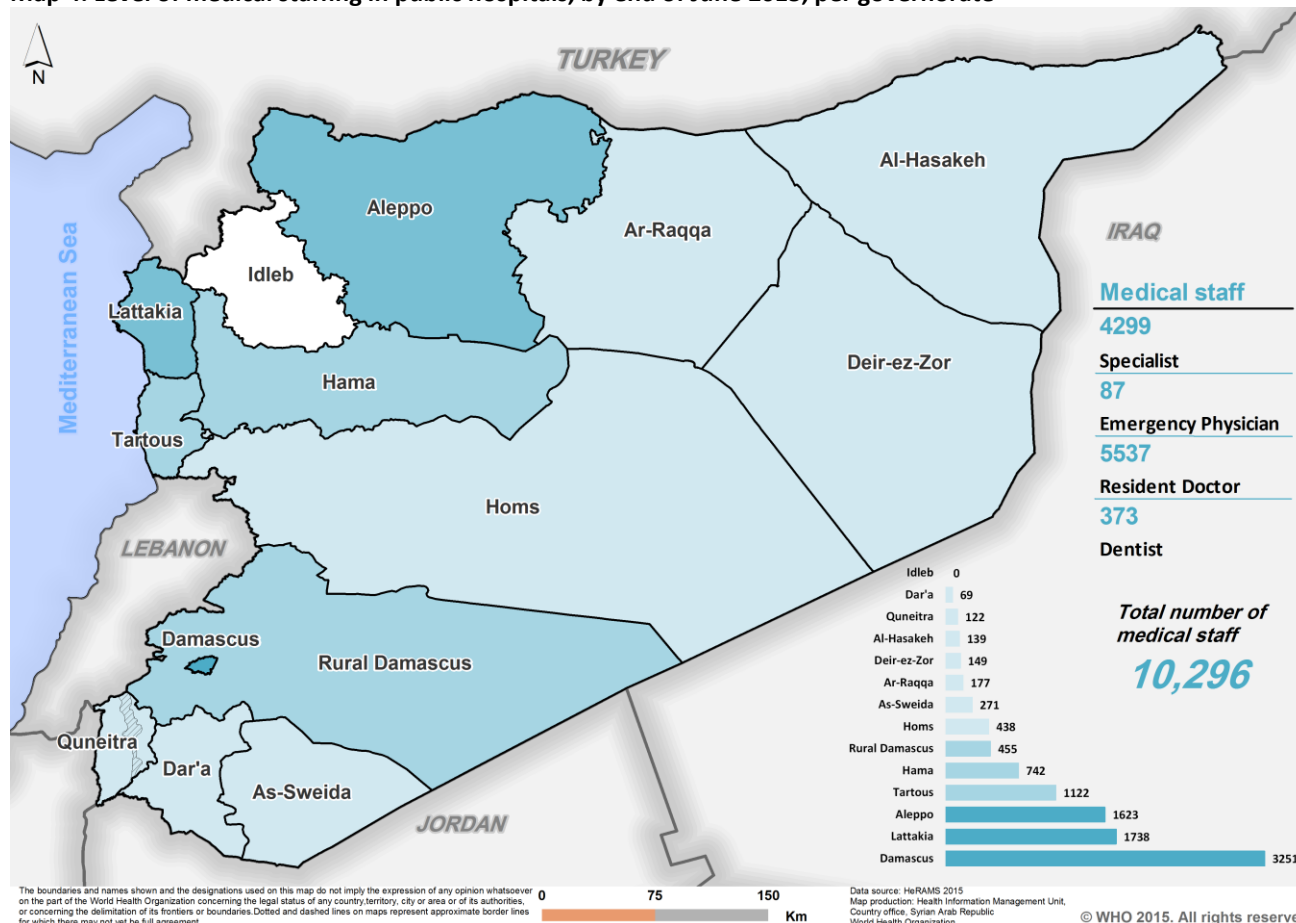


Analysis of proportions of medical-related staff (doctors, nurses, midwives, and pharmacists):

The **proportion** between different categories of health staff, among the total functional (fully and partially) MoH and MoHE hospitals (82/113), by the end of June 2015, is as follows: the emergency physicians remain the lowest proportion of health staff (0.3%), followed by dentists (1%), pharmacists (2%), Midwives (5%), Laboratory personnel (7%), specialists (14%), resident doctors (19%), and nurses (52%); [Figure 17].

The availability and level of medical staffing in public hospitals is summarized at governorate's level, as shown in Map 4. The categories of medical staff included in the map are: specialists, emergency physicians, resident doctors, and dentists.

Map 4: Level of medical staffing in public hospitals, by end of June 2015, per governorate



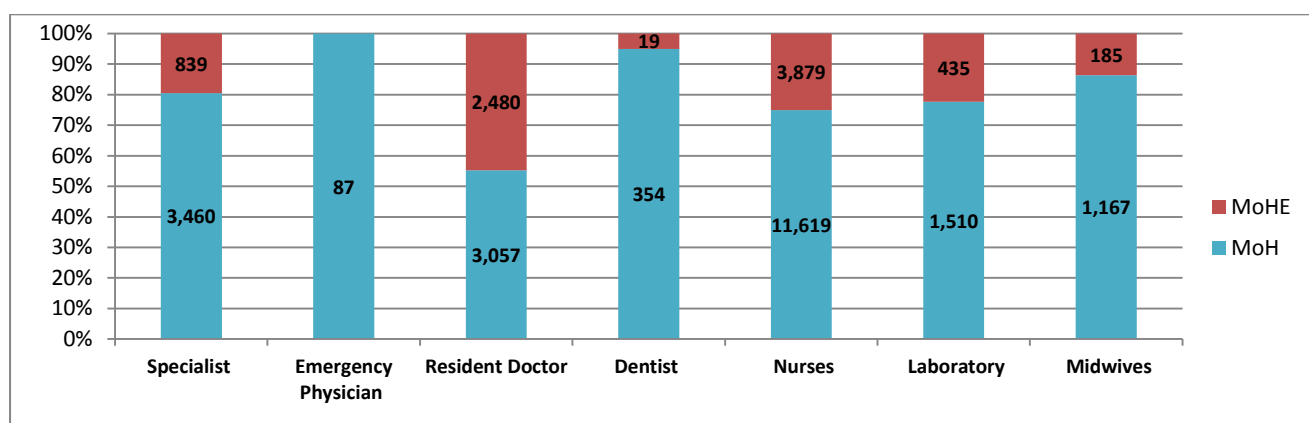
Analysis of proportions of available health human resources; MoH vs., MoHE hospitals:

Analysis of **proportions of medical doctors** [specialists, Emergency doctors, resident doctors, dentists] working at MoHE hospitals versus MoH hospitals has shown that **32%** (3,338) of medical doctors (specialists and resident doctors) work in MoHE, while **68%** (6,958) are in MoH hospitals (percentage is calculated out of total medical doctors in MoH & MoHE).

Details on proportions and numbers of key staff work in MoH vs., MoHE hospitals, by *end of June 2015*, are presented in [Figure 18].

The drop of the reported health staff by end of June is a direct impact of increased number of non-functional hospitals since end of 2014, which is due to the security situation (i.e., 89 functional by end of 2014 vs., 82 by end of June 2015). Health staff in many affected areas have been displaced, relocated / reassigned to DoHs, or missing in certain cases.

Figure 18: Proportions and numbers of key staff work in MoH vs., MoHE hospitals, June 2015

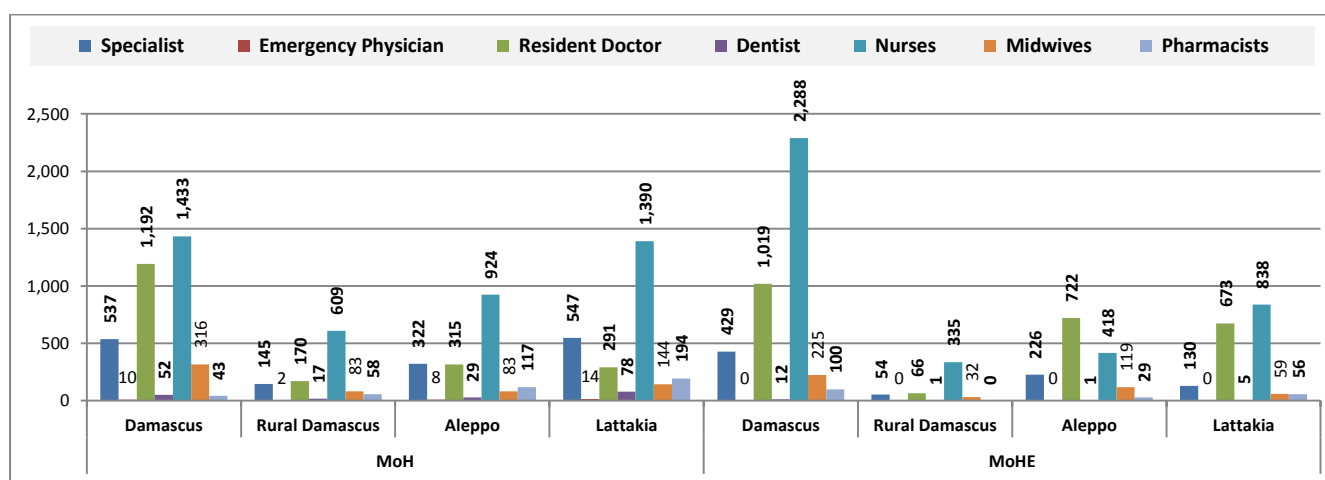


Out of a total Specialists work in public hospitals (**4,299**), **20%** (**839**) are in MoHE hospitals, out of a total **5,537** resident doctors **45%** (**2,480**) are in MoHE hospitals, and out of a total **16,850** nurses & midwives, **24%** (**4,064**) are in MoHE hospitals.

Fleeing of specialized medical staff out of the country because of the crisis situation has been a major concern. Comparison of the availability of medical staff by end of June 2015 versus end of December 2014, for the common functional public hospitals during both periods (a total of 77 hospitals), has shown drop of the number of specialists from 4,316 by end of December 2014 to 4,198 by end of June 2015.

However, MoHE hospitals are located in four governorates (Damascus, Rural Damascus, Aleppo, and Lattakia), they serve the whole country. A **comparison** between the total available medical-related staff in MoH vs., MoHE hospitals is shown in [Figure 19].

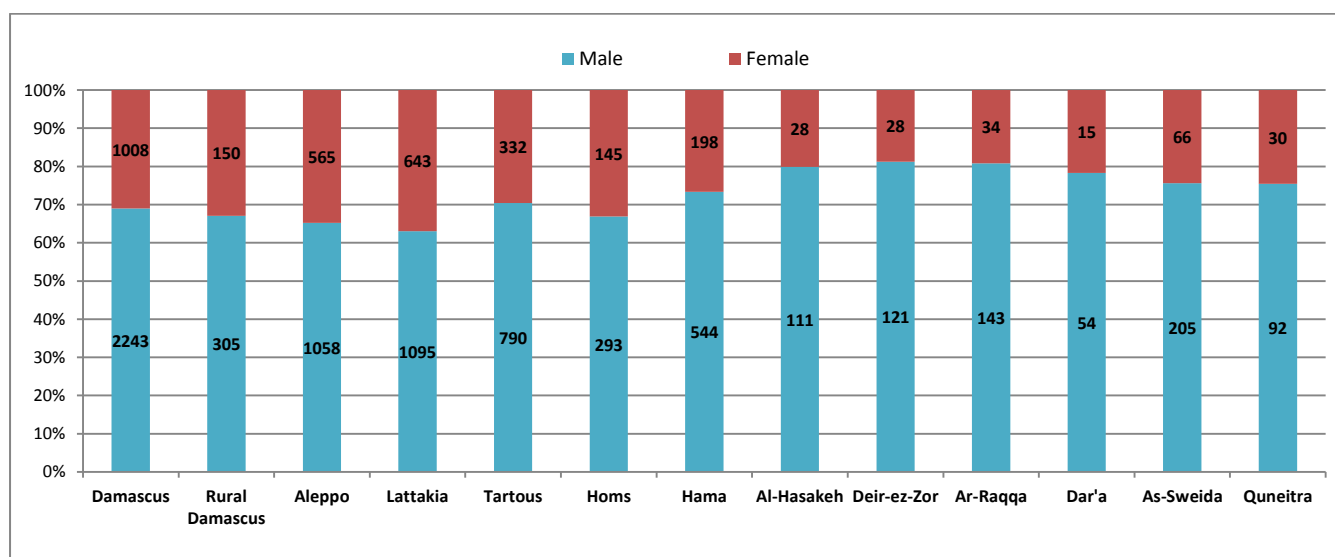
Figure 19: Comparison of the medical staff of MoH vs., MoHE hospitals, June 2015



Analysis of available human resources by gender, per governorate:

By analyzing the proportion of male to female doctors (a total of: Specialists, Emergency Physicians, Resident Doctors, Dentists), lowest proportions are seen in Al-Hasakeh, Deir-ez-Zor and Ar-Raqqa governorates, [Figure 20].

Figure 20: Proportion of Doctors (a total of Specialists, Emergency Physicians, Resident Doctors, Dentists), by gender, per governorate, [MoH & MoHE], June 2015

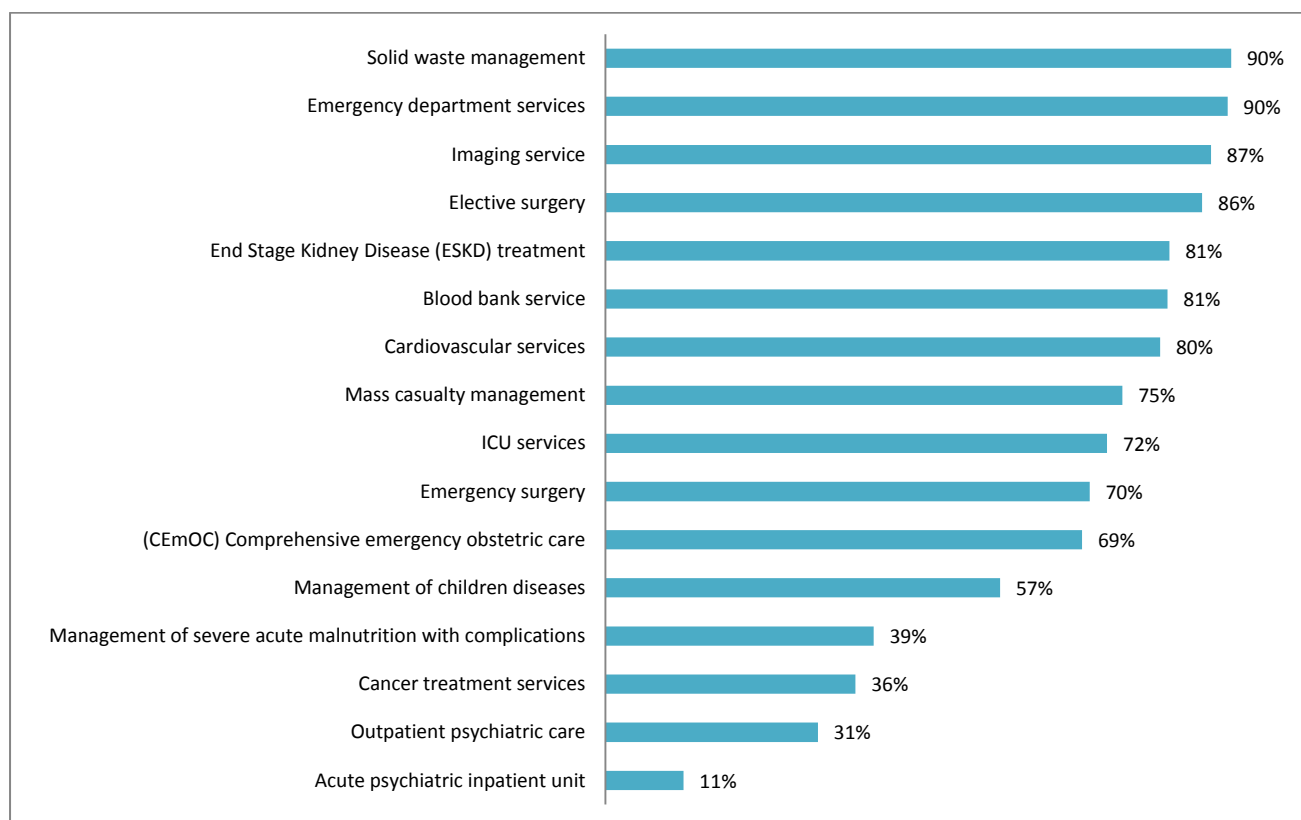


5. Availability and Utilization of the Health Services

The availability of core healthcare services is monitored through HeRAMS at hospital's level, considering a standard list of health services (including: General Clinical Services, Surgical and Trauma care, Child Health, Nutrition, Maternal & Newborn Health, Non-communicable Diseases, and Mental Health).

Analysis of availability of health services has been conducted across all functional public hospitals [MoH & MoHE]: (82/113). As a result of disrupted healthcare delivery and non-functionality of hospitals, limited provision of health services was observed across governorates, even within functional hospitals [Figure 21].

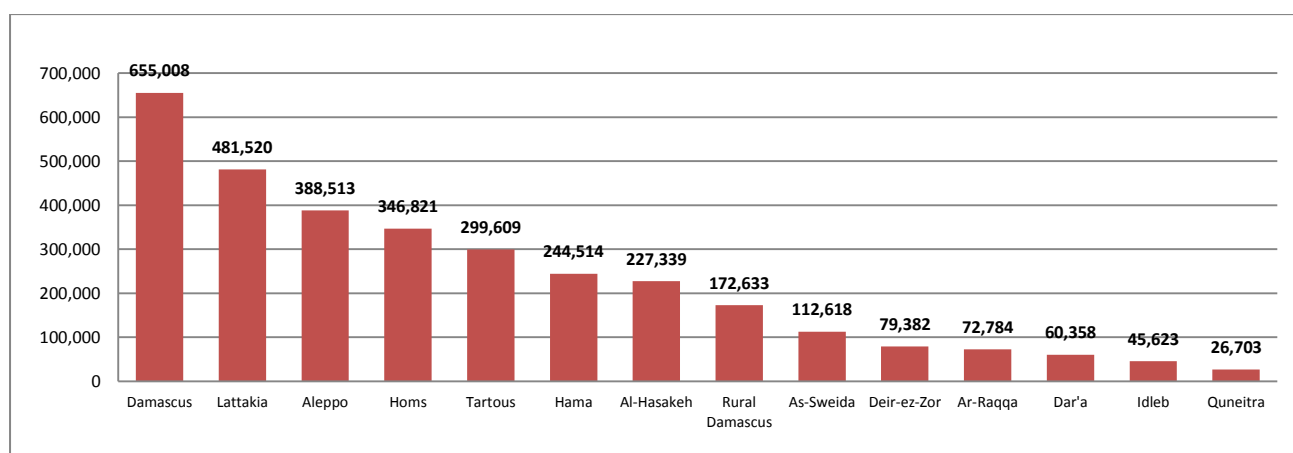
Figure 21: Availability of Health Services in the functional Public Hospitals [MoH & MoHE], June 2015



****Detailed information on availability of services per governorate is available in the HeRAMS Database.**

The workload and utilization of the health services were analyzed in terms of the total estimated serviced people in all functional public hospitals during January and June 2015 [Figure 22].

Figure 22: Estimated workload of functional public hospitals (outpatient consultations and emergency cases), January to June 2015



The proportion of workload of functional hospitals per governorate is provided on Figure 23.

Detailed analysis on utilization of the core health services is provided on the following sub-sections, including:

1. General Clinical Services (Outpatient, Inpatient, Laboratory, Blood bank services, Imaging services)
2. Surgical and Trauma care
3. Maternal health services [normal deliveries, caesarean sections, and CEmOC]
4. Nutrition
5. Child Health
6. Non-communicable diseases
7. Mental Health

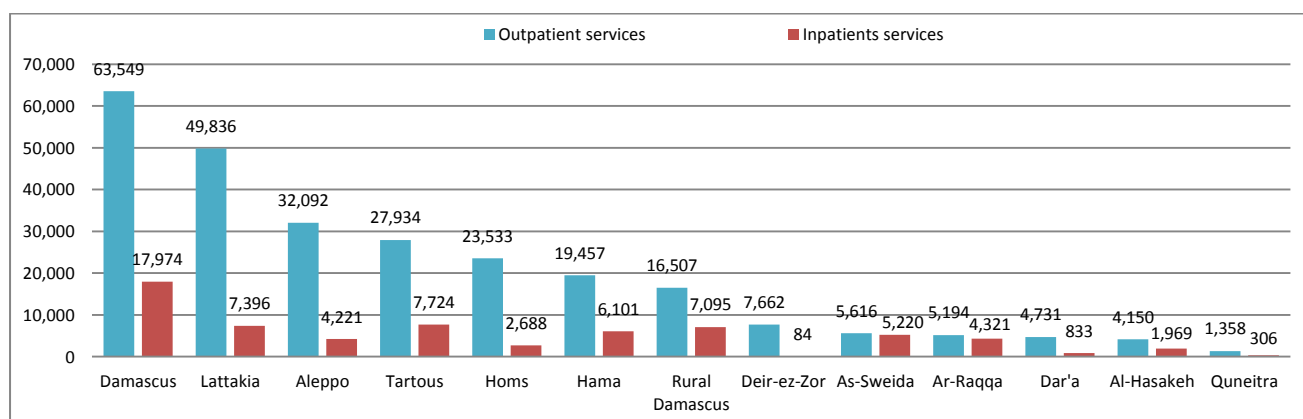
5.1 General Clinical services

The following sections provide analysis on the utilization of health services in functional public hospitals at governorate level.

i. Outpatient and inpatient:

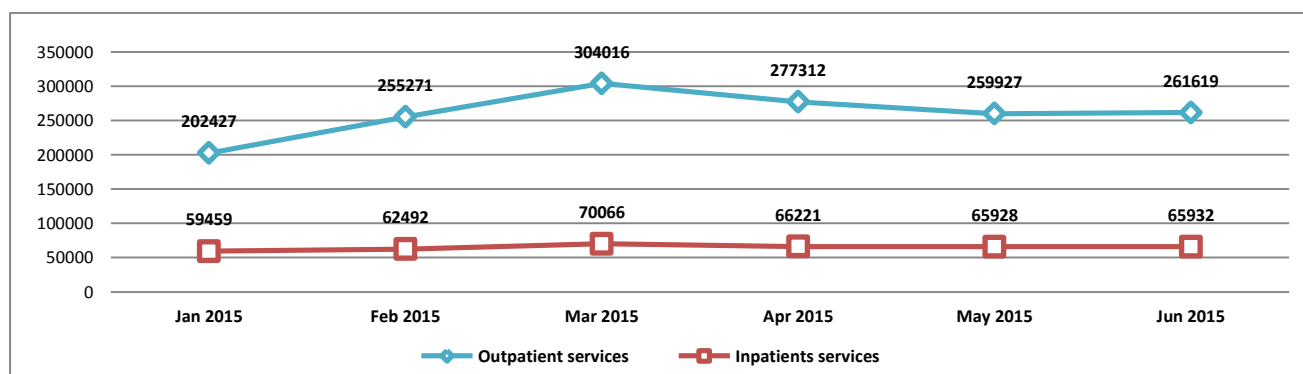
The number of outpatients to inpatients was assessed at a hospital level, and the total numbers reported in June 2015 were summarized and analyzed at governorate level [Figure 24].

Figure 24: The number of Outpatient and Inpatient in public hospitals [MoH & MoHE], June 2015



Trend analysis of total reported numbers of Outpatient and Inpatient from functional public hospitals [MoH & MoHE], for six months (January to June 2015), is presented in [Figure 25].

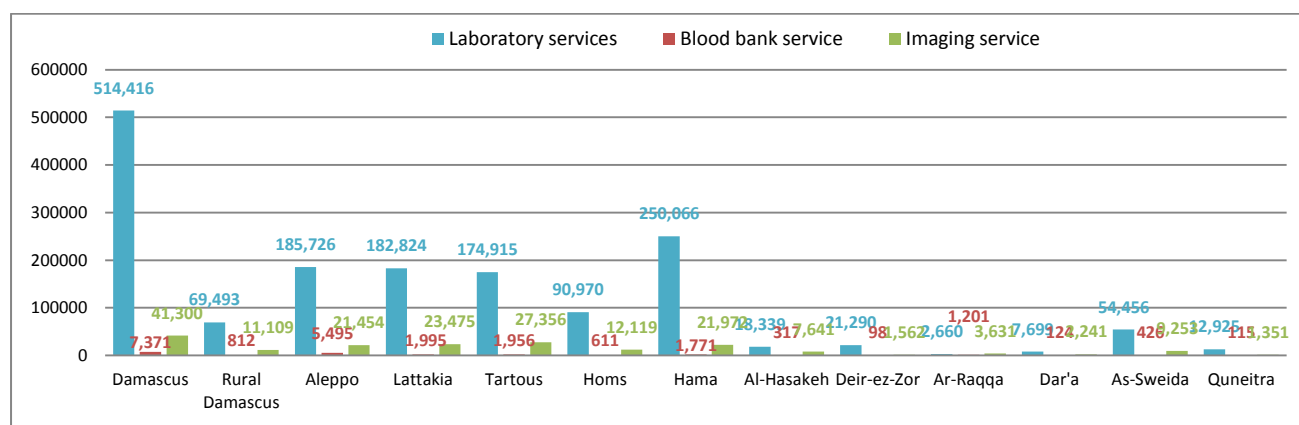
Figure 25: Trend analysis of Outpatient and Inpatient in public hospitals [MoH & MoHE], January to June 2015



ii. Laboratories, blood bank, and imaging services

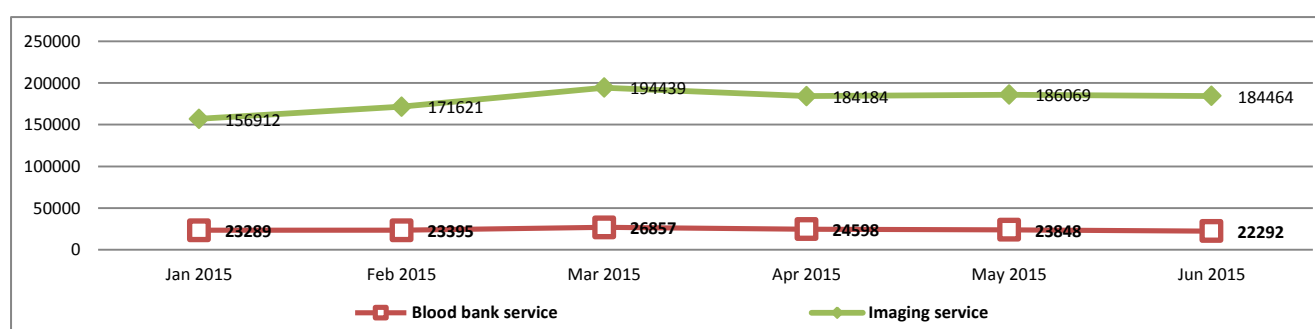
The number of patients received services in hospitals' laboratories, blood bank, and imaging departments was assessed at a hospital level, and the total number of cases from January to June 2015 analyzed at governorate level [Figure 26].

Figure 26: The number of patients received services in laboratories, blood bank, and imaging services, in public hospitals [MoH & MoHE], June 2015



Trend analysis of number of patients received services in hospitals' blood banks and imaging departments, from January to June 2015, is presented in [Figure 27].

Figure 27: Trend analysis of number of patients received services in blood banks and imaging services, in public hospitals [MoH & MoHE], January to June 2015



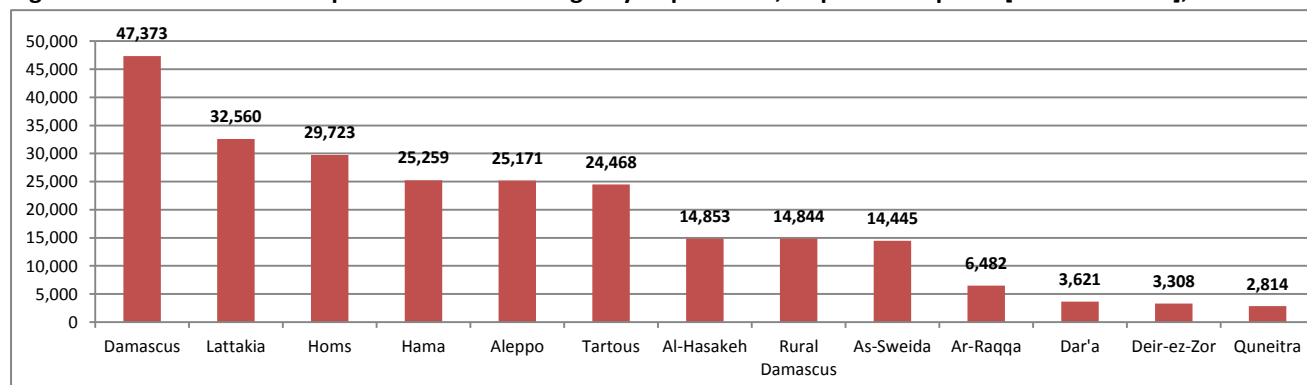
5.2 Surgical and Trauma care

The surgical and trauma care services is assessed at hospitals' level. Descriptive analysis is conducted at governorate's level for the number of reported emergency cases, mass casualties, and surgeries (elective and emergency).

iii. Emergency cases reported in emergency departments

Figure 28 presents the total number of cases in emergency departments, reported during June 2015 from functional public hospitals at governorate level.

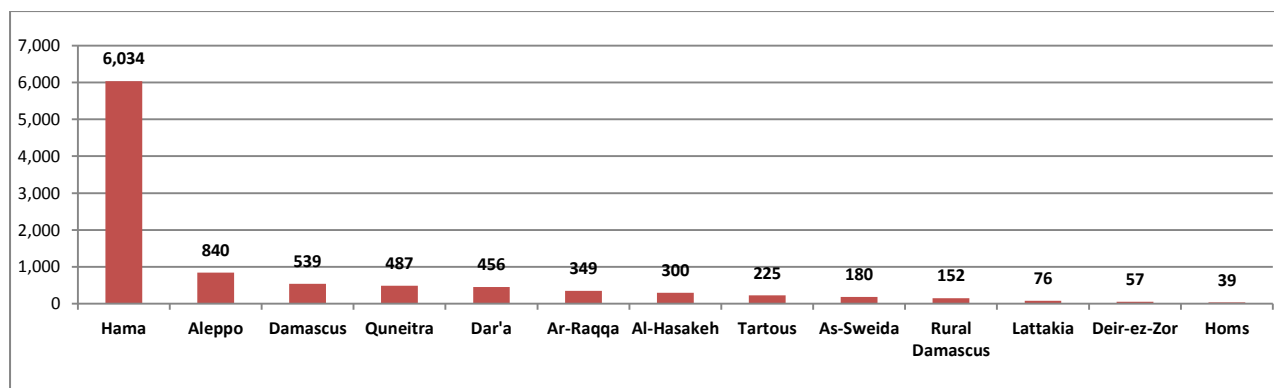
Figure 28: The number of reported cases in emergency department, in public hospitals [MoH & MoHE], June 2015



iv. Mass casualties

Figure 29 presents the total number of mass causality cases, reported during June 2015 from functional public hospitals at governorate level.

Figure 29: The number of reported cases of mass casualties, in public hospitals [MoH & MoHE], June 2015



v. Emergency and Elective surgeries:

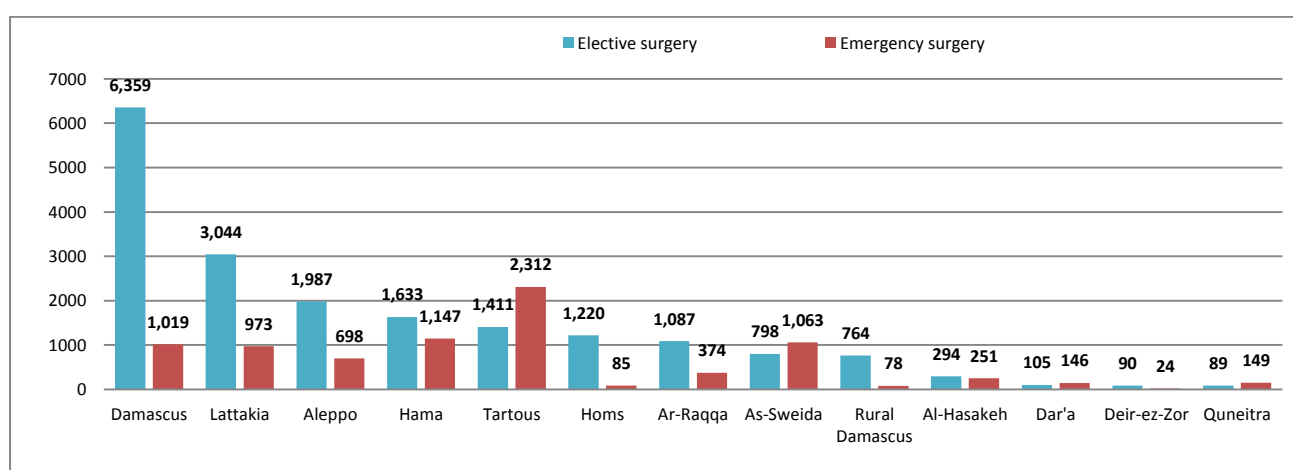
The number of emergency surgeries to elective surgeries was assessed at a hospital level, and total numbers were summarized and analyzed at governorate level [Figure 30].

During June 2015, the highest workload of elective surgeries is reported from Al-Assad university hospital/ Lattakia (1,304 surgeries), followed by Damascus MoH Hospital (Al-Mojtahid: 1,124 surgeries), Al-Bassel Heart Institute in Damascus (920), Al-Assad university hospital in Damascus (919 surgeries), Ar-Razi MoH hospital in Aleppo (864), and Al-Mouwasat university hospital (847).

While the highest workload of emergency surgeries is reported from Al-Bassel hospital in Tartous (2,083), followed by Zaid Ash-Shariti hospital in As-Sweida (1,011) due to security reasons, then Al-Mouwasat MoHE hospital (546), Lattakia National hospital in Lattakia (525), and Ar-Razi MoH hospital in Aleppo (412),

***Of note**, the highest number of functional public hospitals is in Damascus, of which 14 out of 15 hospitals provide elective surgeries, except Ibn-Roshd hospital for Mental Health.

Figure 30: The number of emergency surgeries vs., elective surgeries in public hospitals [MoH & MoHE], June 2015



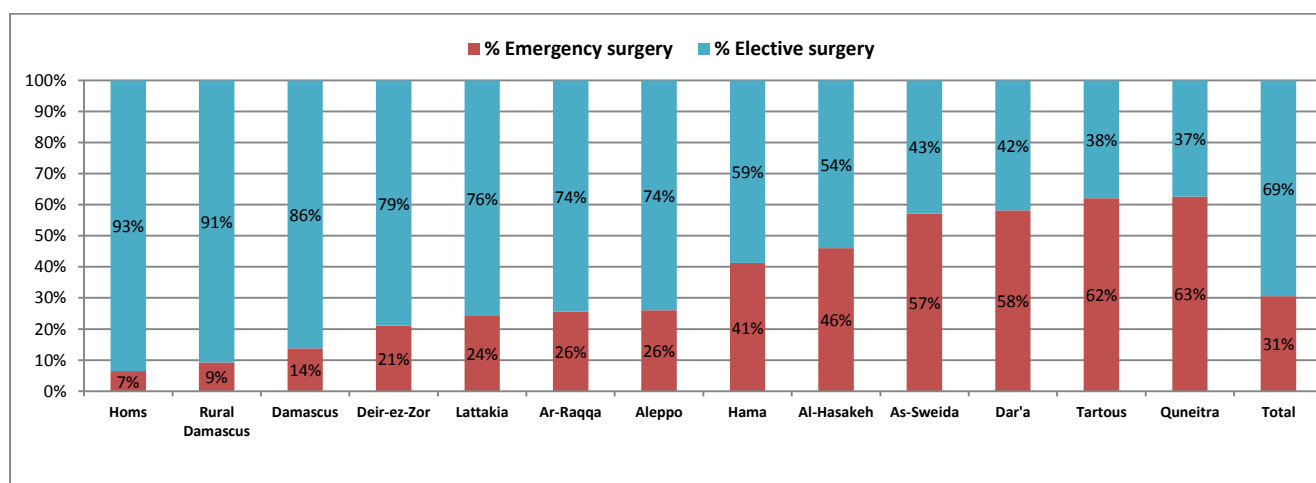
By analyzing the percent of total emergency surgeries to elective surgeries during June 2015, the highest percent of emergency surgeries across different governorates is reported in Tartous, As-Sweida, Dar'a, and Quneitra governorates. Across all reported functional public hospitals, 31% of surgeries are emergency while 69% are elective [Figure 31].

In **Tartous**, the highest figures are reported from Al-Basil surgical hospital, which is the biggest hospital in Tartous, located in the south eastern part of the governorate and adjacent to Hama and Homs. The location of this hospital is also very close to the highway, and majority of the road incidents are received there.

In **As-Sweida**, the number of emergency surgeries is relatively high because of emergency cases received from surrounding in-secure areas.

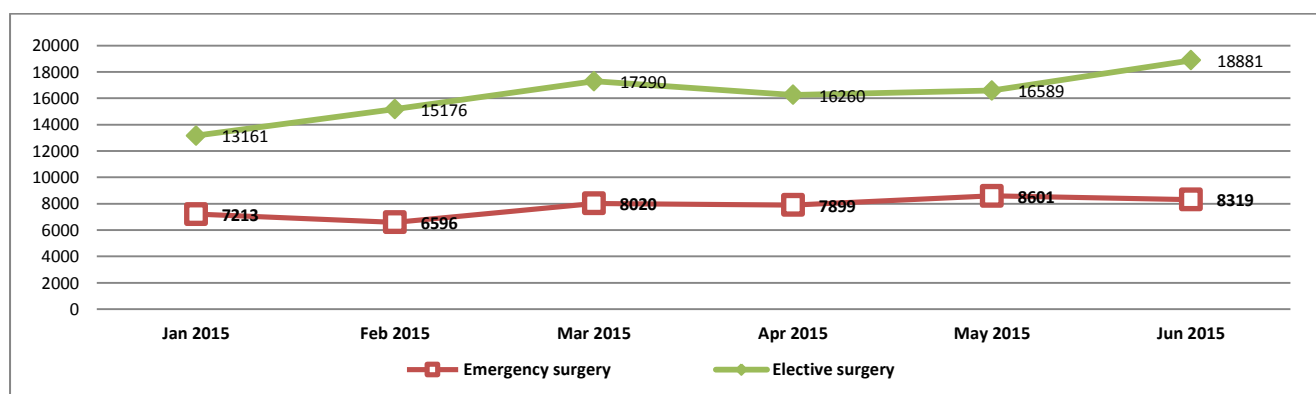
In **Dar'a** and **Quneitra**, the high percent of emergency surgeries is due to the escalating security situation; emergency surgeries are given higher priority than cold surgeries.

Figure 31: Percentage of total emergency surgeries to elective surgeries in public hospitals [MoH & MoHE] per governorate, June 2015



Trend analysis of total number of elective and emergency surgeries reported in functional public hospitals [MoH & MoHE], from January to June 2015 is presented in Figure 32.

Figure 32: Trend analysis of number of patients received services in blood banks and imaging services, in public hospitals [MoH & MoHE], January to June 2015



5.3 Maternal health services

Analysis of availability and utilization of maternal health services was conducted considering three scopes:

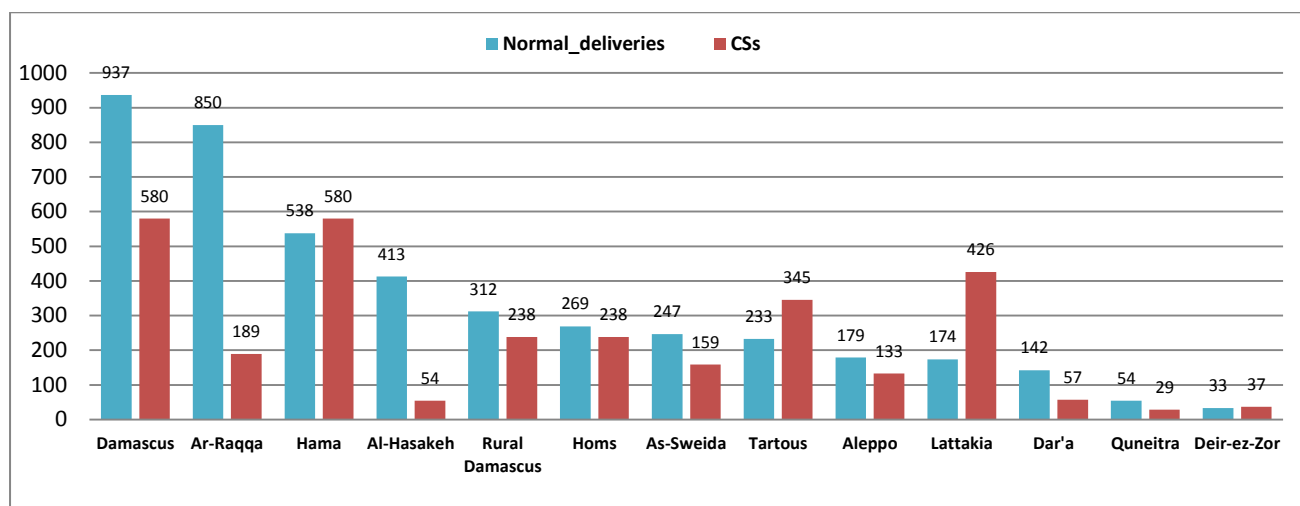
- Utilization of service (caesarean sections (CS) vs., normal deliveries); June 2015 summary figures by governorate
- Percentage of CSs to normal deliveries, of June 2015
- Trend analysis of the monthly normal deliveries vs., caesarean sections, January to June 2015

i. Utilization of service (caesarean sections vs., normal deliveries)

The numbers of caesarean sections performed at public hospitals (in June 2015) versus the normal deliveries have been analyzed at governorates' level [Figure 33].

The highest numbers are reported from Damascus hospitals (i.e., Obs. and Gyn. MoHE Hospital [normal deliveries are 574 while CSs are 472] followed by Al-Zahrawi MoH Hospital [normal deliveries 363 while the CSs are 108 case]).

Figure 33: The No. of normal deliveries and caesarean sections (CSs) performed at public hospitals [MoH & MoHE], June 2015



ii. Percentage of CS to normal deliveries

The global norm for the percentage of CS to normal deliveries is 5% to 15%. Based on [Figure 34], 12 governorates are above the threshold.

The highest reported figures of caesarian sections are in Lattakia and Tartous, which are due to cultural preferences, where the pregnant women opt for cesarean sections for several reasons, such as:

- Reducing the pain associated with childbirth
- Choosing a fixed date for delivery, in relation to other social occasions

Similar reasons for high CSs are in Hama governorate, in addition to security constraints in certain areas.

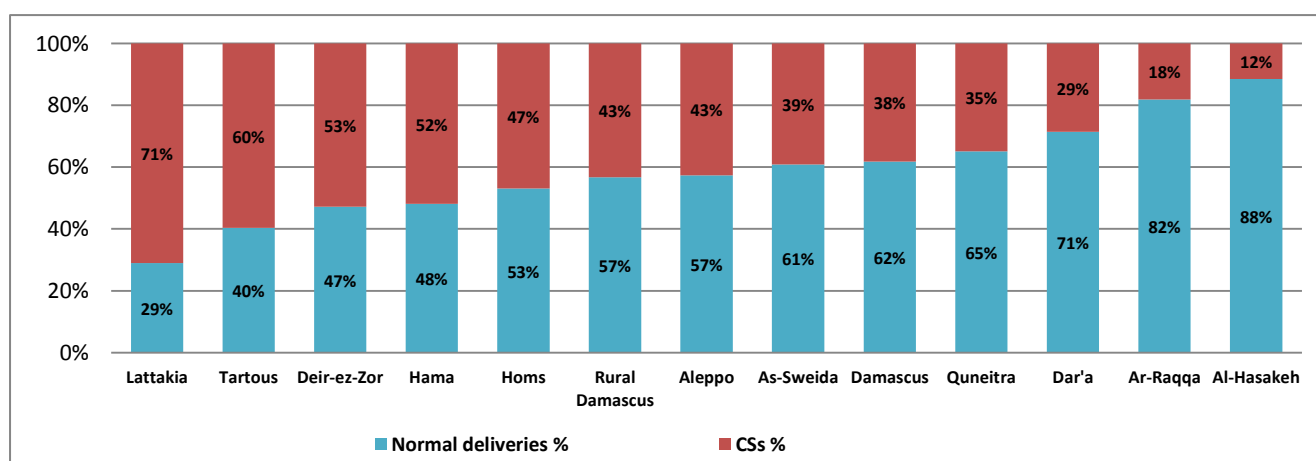
In Aleppo and Rural Damascus the high numbers of CSs are due to the fact that majority of the pregnant women prefer to do caesarean sections, because of the security situation and hassles they could go through if they opted for normal delivery.

In **Aleppo**, the high figures of CSs were reported from Obstetrics and Gynecology hospital of MoHE (87) and Maternity hospital of MoH (46) in Aleppo city.

In **Rural Damascus**, the high figures of CSs were reported from Al-Qutayfeh hospital MoH (104), Al-Qalamun hospital MoH (93), and Al-Bassel-Yabroud hospital MoH (41).

Across all reported functional hospitals, 41% of deliveries are CSs while 59% are normal deliveries. Details on percent of CSs to normal deliveries per governorate in June 2015, is provided in [Figure 34].

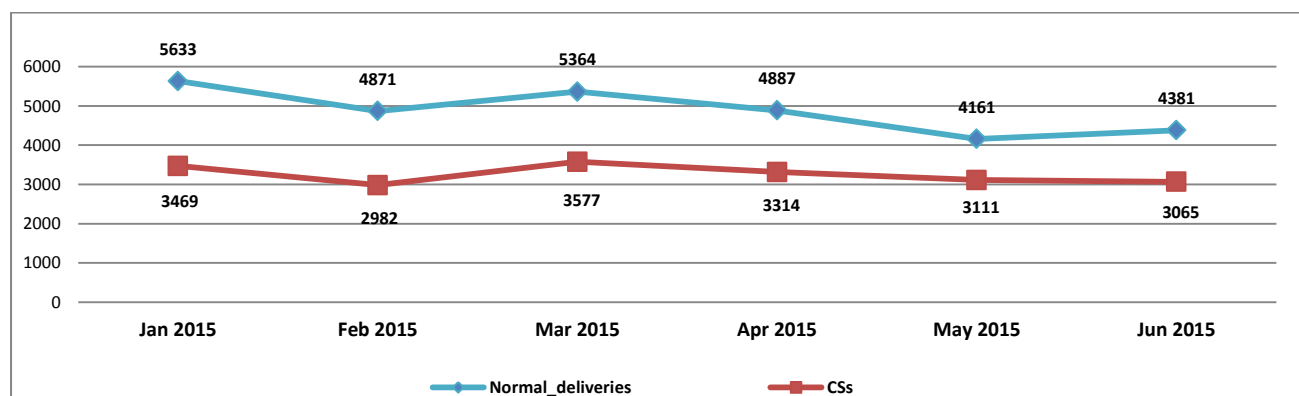
Figure 34: percentage of caesarean sections to normal deliveries, all public hospitals [MoH & MoHE], June 2015



iii. Trend analysis of the monthly numbers of normal deliveries vs., caesarean sections

Trend analysis of the monthly numbers of normal deliveries vs., caesarean sections reported from the MoH & MoHE hospitals, from January to June 2015 is shown in Figure 35.

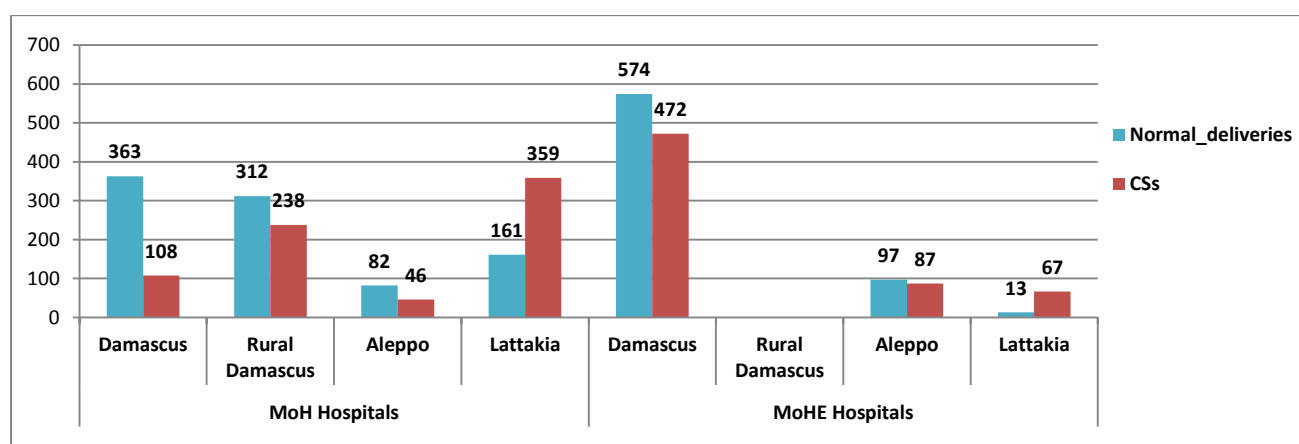
Figure 35: Trend analysis of the monthly numbers of normal deliveries vs., caesarean sections, public hospitals [MoH & MoHE], January to June 2015



iv. Comparison of MoH and MoHE hospitals workload of Normal Deliveries vs., CSs:

Comparison analysis between MoH and MoHE hospitals that provide Obstetrics & Gynecology services across four governorates, has shown higher workload for the MoHE Hospitals mainly in Damascus governorate (Al-Tawleed [Obstetrics and Gynecology] hospital for MoHE); [Figure 36].

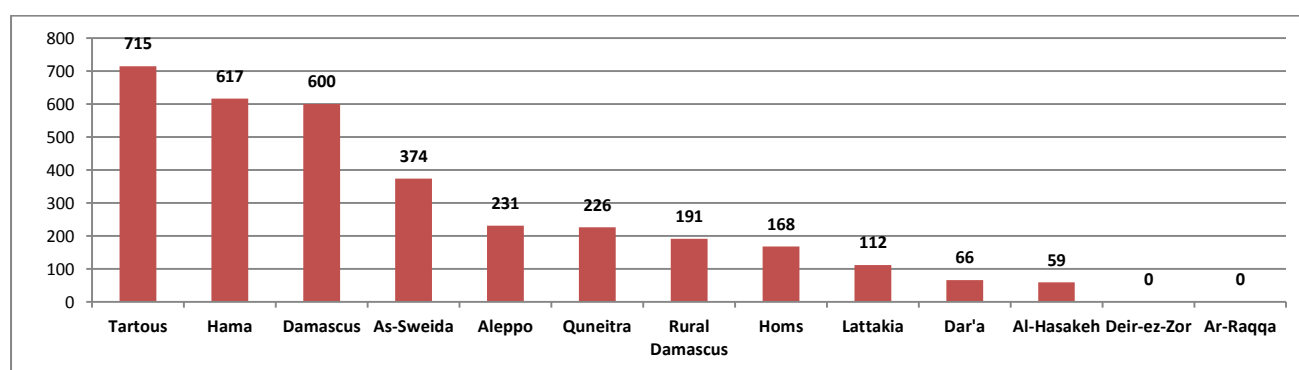
Figure 36: Comparison of MoH & MoHE hospitals workload of normal deliveries vs., CSs, June 2015



5.4 Child Health

Management of severe children diseases (such as acute respiratory diseases, Meningitis, blood diseases cancer, etc) are assessed at hospitals level. Figure 37 shows the distribution of total reported cases of children with severe diseases by governorate.

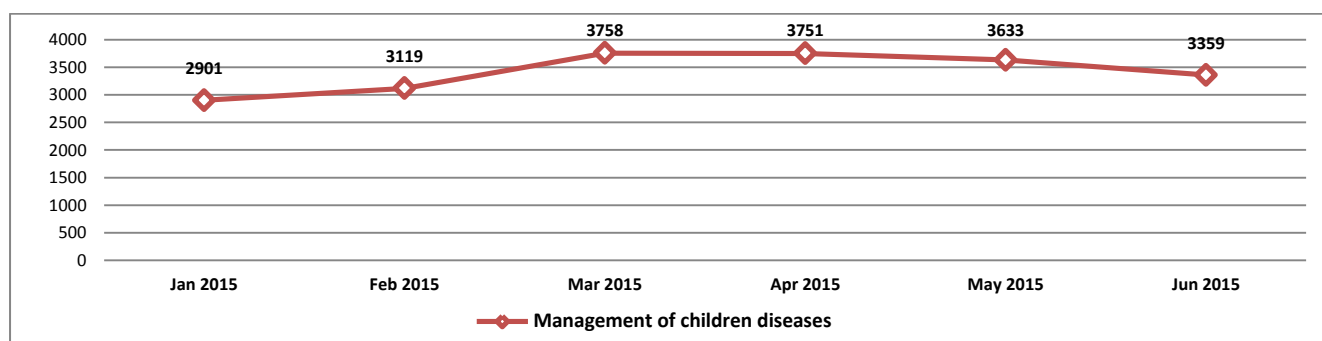
Figure 37: Number of children with severe diseases in public hospitals [MoH & MoHE], June 2015



The high reported figures in Tartous, Hama, Damascus, and As-Sweida are due to the high numbers of IDPs, and also availability of MoHE referral hospitals for children in some of these areas.

Trend analysis of reported cases of severe children diseases from January to June 2015, is presented in [Figure 38] below.

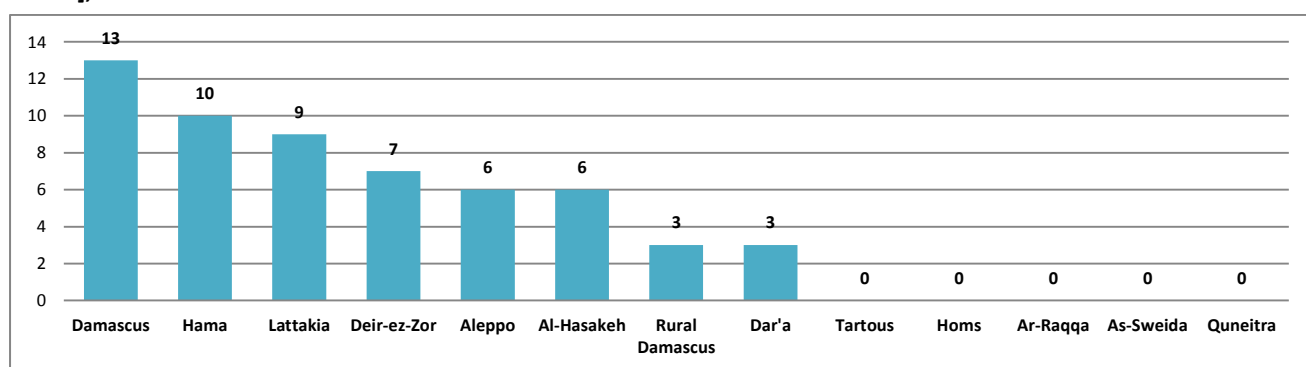
Figure 38: Trend analysis of reported cases of severe children diseases in public hospitals [MoH & MoHE], January to June 2015



5.5 Nutrition

Monitoring of cases of severe acute malnutrition with complications is systematically conducted at public hospitals level; Figure 39 demonstrates the number of cases reported in June 2015, at governorate level.

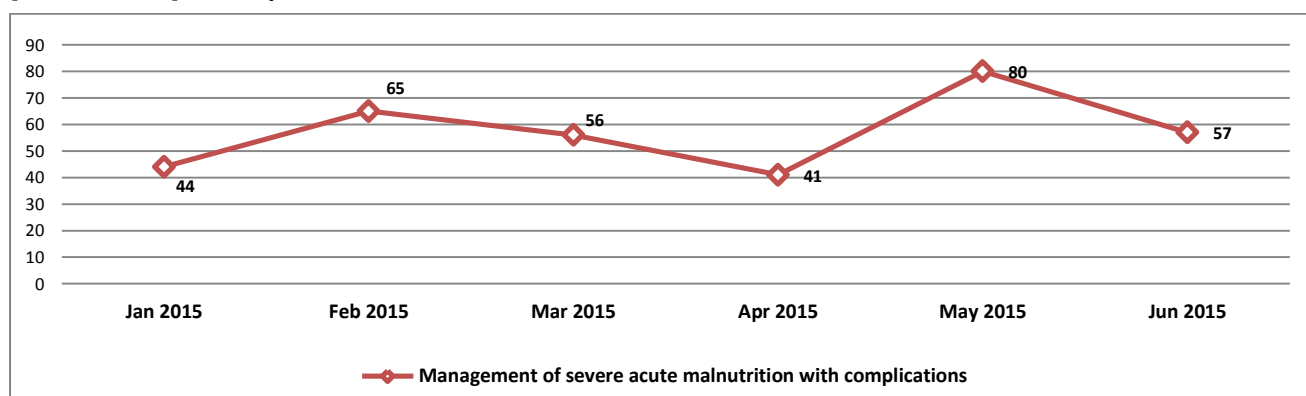
Figure 39: The number of children with severe acute malnutrition with complications in public hospitals [MoH & MoHE], June 2015



The high reported figures in Damascus, Hama, and Lattakia are due to the high numbers of IDPs.

Trend analysis of reported cases of severe acute malnutrition from January to June 2015, is presented in [Figure 40] below.

Figure 40: Trend analysis of number of children with severe acute malnutrition with complications in public hospitals [MoH & MoHE], January to June 2015



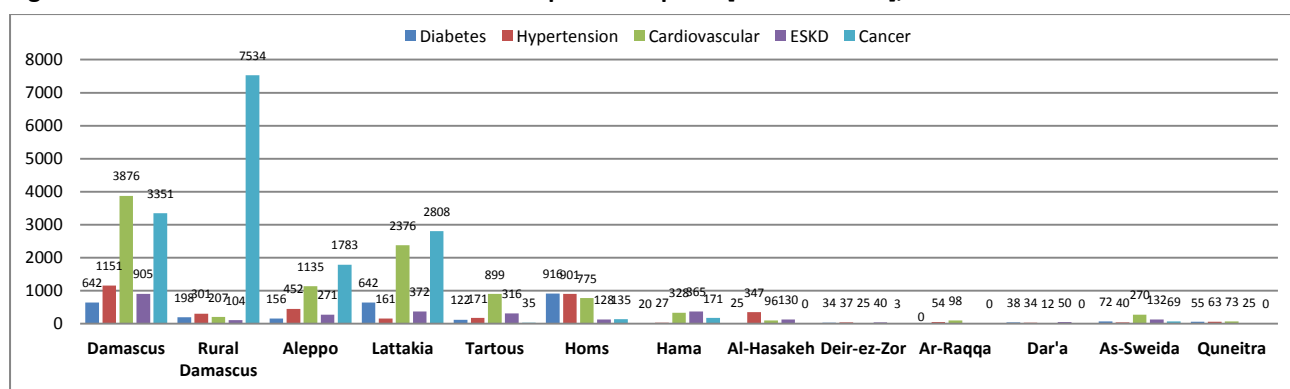
5.6 NCDs (non-communicable diseases)

NCDs were assessed through HeRAMS by checking the availability and utilization of services at hospitals level. The majority of high reported figures of NCDs (Diabetes, Hypertension, Cardiovascular, Kidney and Cancer diseases) are from Damascus hospitals.

Among all NCDs, Cancer patients' consultations are the highest reported figures, mainly in Damascus, Rural Damascus (has one cancer specialized hospital), and Lattakia (has one cancer specialized hospital) public hospitals, where cancer referral hospitals are located. It worth mentioning that cancer is treated at secondary and tertiary levels only, while other NCDs (diabetes and hypertension, etc...) usually managed at primary and secondary care levels, unless patients develop complications.

Cardiovascular consultations were high in Damascus (has two cardiovascular specialized hospitals), Lattakia (has one cardiovascular specialized hospital), Aleppo (has two cardiovascular specialized hospitals), Tartous, and Homs in June 2015 [Figure 41].

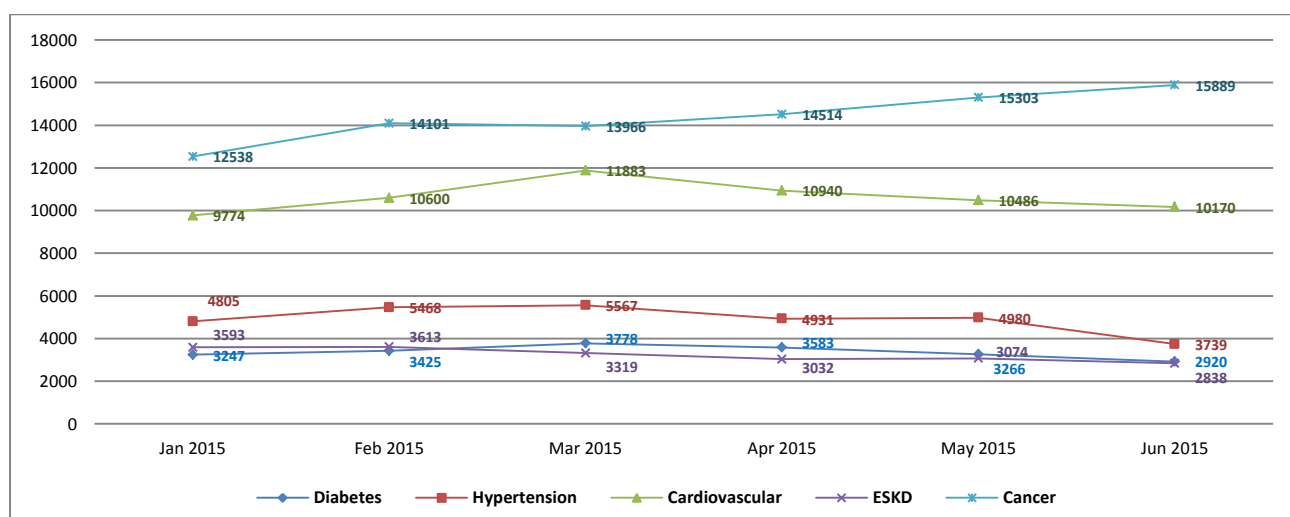
Figure 41: The number of NCDs' consultations in public hospitals [MoH & MoHE], June 2015



*ESKD: End Stage Kidney Disease

The monthly trend of reported NCDs' consultations at functional public hospitals from January to June 2015 is shown in [Figure 42].

Figure 42: Trend analysis of total monthly number of NCDs' consultations reported in public hospitals [MoH & MoHE], January to June 2015



The numbers of cancer's consultations has been increased noticeably from 12,538 in January to 15,889 in June 2015. The high numbers were reported mainly from Al-Bairouni MoHE hospital in Rural Damascus (7,534), which is the biggest cancer specialized hospital.

5.7 Mental Health

Availability and utilization of mental health services were assessed through HeRAMS by checking the outpatient and inpatient services at hospitals level and the number of patients. Summary of the total reported consultations (outpatient) and inpatients at public hospitals, per governorate level is shown in [Figure 43].

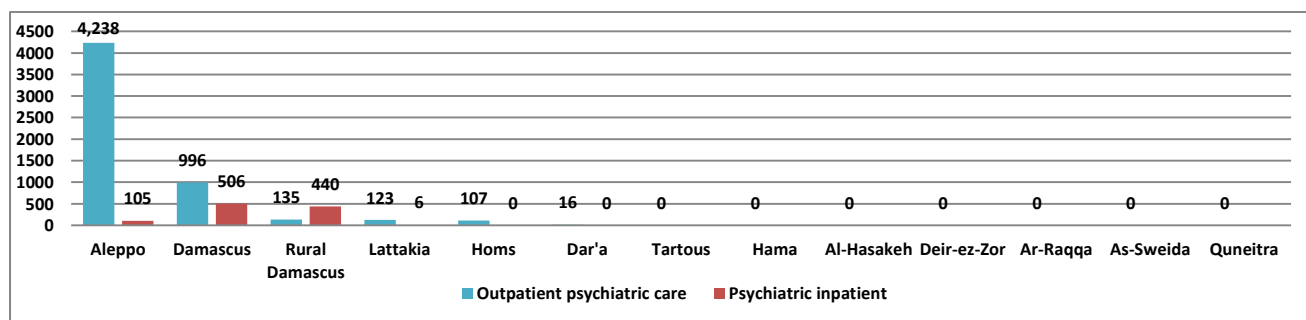
The reported figures of **outpatients** are disaggregated as follow:

- Aleppo: Ibn-Khaldoun mental health specialized hospital/ MoH (4,228 cases), Zahi Azraq MoH hospital (10 cases)
- Damascus: Ibn-Roshod mental health specialized hospital/ MoH (491 cases), followed by Al-Mojtahid [Damascus MoH Hospital] (255 cases), Al-Mouwasat MoHE hospital (231 cases), and Children MoHE hospital (19 cases).
- Rural Damascus: Al-Bairuni MoH hospital (53 cases), Ibn-Sina Psychiatric MoH hospital (33 cases) which is a mental health specialized hospital, Al-Qalamoun MoH hospital (26 cases), and Yabroub MoH hospital (23 cases).
- Lattakia: national MoH hospital (103 cases), Al-Assad MoHE hospital (20 cases)
- Homs: Karm Allouz MoH hospital (75 cases), Al-Basil MoH hospital [Al-Zahra'] (20 cases) and MoH Mobile hospital (12 cases).
- Dar'a: Ezraa hospital (16 cases)

The reported figures of **inpatients** are disaggregated as follow:

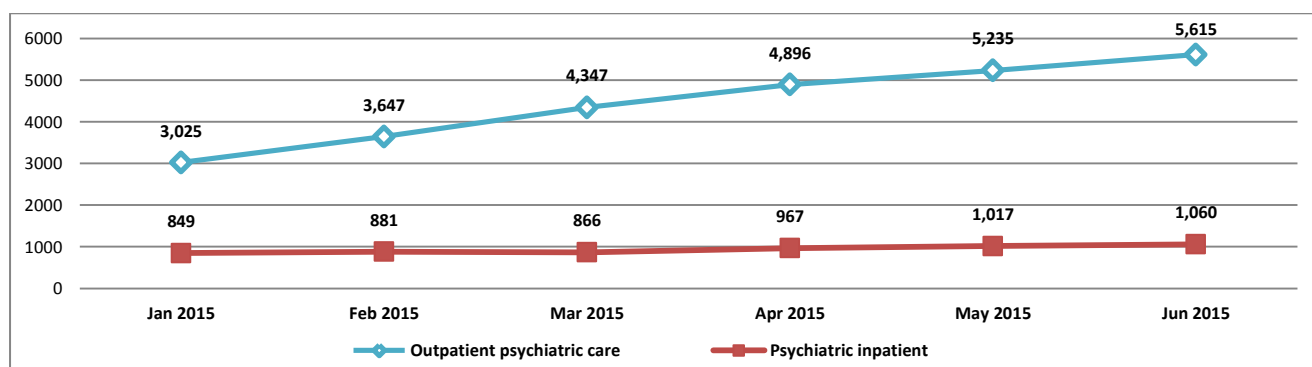
- Aleppo: Ibn-Khaldoun MoH hospital (105 cases).
- Damascus: Ibn-Roshod hospital (491 cases), followed by Al-Mouwasat MoHE hospital (15 cases).
- Rural Damascus: Ibn-Sina Psychiatric MoH hospital (440 cases).
- Lattakia: national MoH hospital (6 cases).

Figure 43: The number of outpatient psychiatric cases vs., the number of inpatients in public hospitals [MoH & MoHE], June 2015



Trend analysis of monthly reported number of outpatient psychiatric cases vs., the number of inpatients in public hospitals [MoH & MoHE] from January to June 2015 is shown in [Figure 44] below.

Figure 44: Trend analysis of number of outpatient psychiatric cases vs., the number of inpatients in public hospitals [MoH & MoHE], January to June 2015



6. Availability of Medical Equipment

The availability of different types of essential and specialized equipment and supplies was assessed at hospital level, based on a standard checklist².

In its fifth year of crisis, Syria's hospitals are still suffering from shortages and/or malfunction of medical devices/ equipment to provide secondary care services. In insecure governorates, medical devices are either destroyed, burned, or malfunctioned, while in safe areas the medical devices are overburdened by increased numbers of people (actual numbers of people in the area, in addition to IDPs and patients /injured people from surrounding areas).

Maintenance of malfunctioned devices remains a concern, due to non-availability of spare parts, accredited agent to provide maintenance support, or difficulty of accessibility in many cases.

Analysis of availability of essential and specialized equipment was measured across all functional public hospitals [MoH & MoHE] (82/113), in terms of functional equipment out of the total available equipment in the hospital. The produced analysis provides good indication of the current readiness of the hospitals to provide the health services, and also to guide focused planning for procurement of equipment and machines, to fill-in identified gaps.

Gaps on essential and specialized equipment and machines were observed, even within the functional public hospitals. Further details are provided on [Figure 45] and [Figure 46].

Figure 45: Percentage of functional essential equipment/ total available equipment in functional public hospitals [MoH & MoHE], June 2015

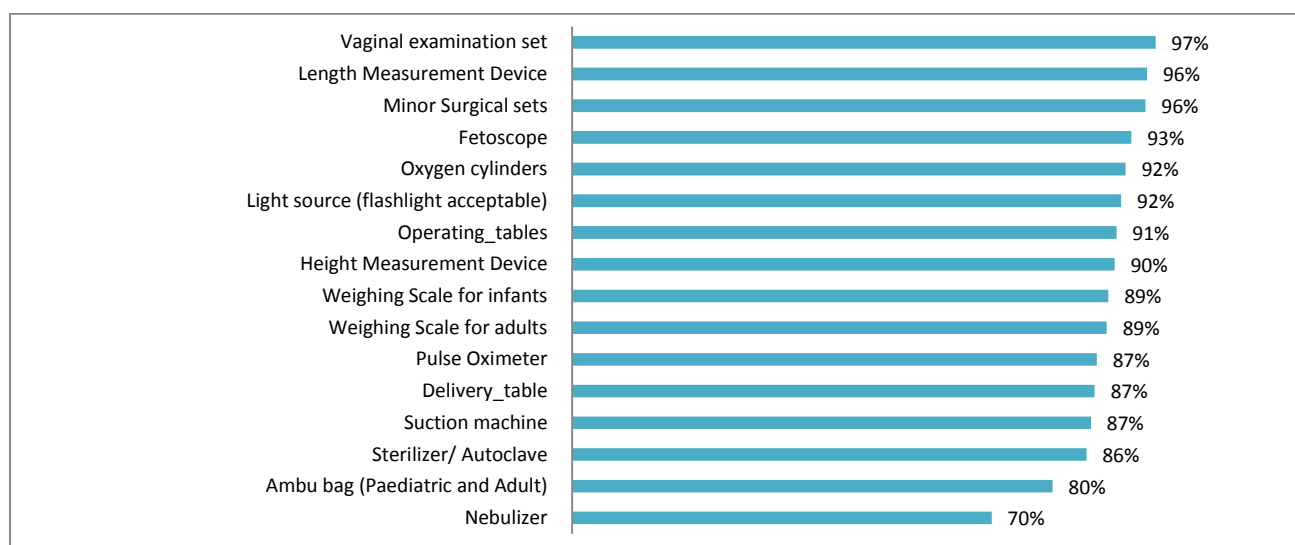
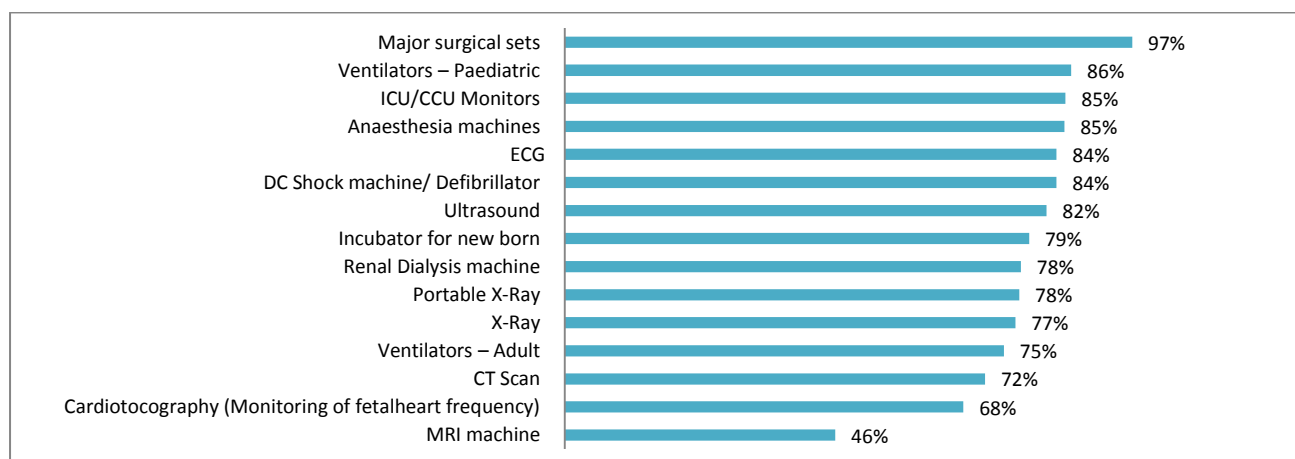


Figure 46: Percentage of functional specialized equipment/ total available equipment in the functional public hospitals [MoH & MoHE], June 2015

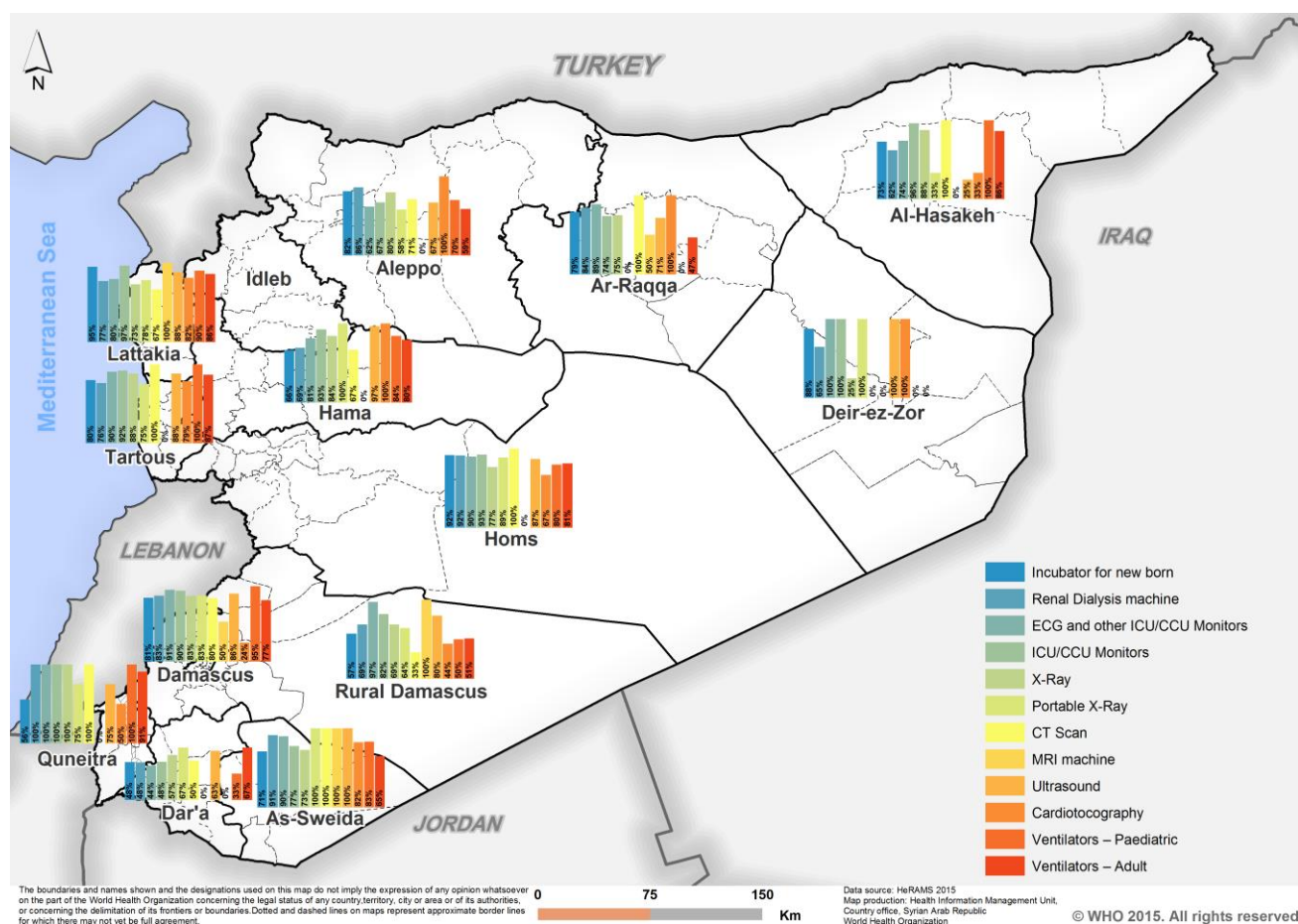


² A more detailed list of essential equipment is available upon request.

Analysis of availability of specialized equipment [Figure 46] has highlighted many gaps and urgent needs for equipment and machines at different governorates; such as:

- ◆ MRI machines: main gaps are in Damascus, Aleppo, Lattakia, Tartous, Homs, Hama, Al-Hasakeh, Deir-ez-Zor, Ar-Raqqa, Dar'a, As-Sweida, Quneitra hospitals.
- ◆ Cardio-topography (Monitoring of fetal-heart frequency); main gaps are in Damascus, Rural Damascus, Al-Hasakeh, Dar'a, Quneitra hospitals.
- ◆ CT scanners: main gaps are in Rural Damascus, Deir-ez-Zor, Dar'a hospitals.
- ◆ Ventilators for adults: main gaps are Rural Damascus, Deir-ez-Zor, Ar-Raqqa hospitals.
- ◆ X-Ray machines: main gaps are in Deir-ez-Zor and Dar'a hospitals.
- ◆ Portable X-Ray: main gaps are in Aleppo, Al-Hasakeh, Ar-Raqqa hospitals.
- ◆ Renal dialysis machines: main gaps are in Dar'a and Al-Hasakeh hospitals.
- ◆ Incubator for new born: main gaps are Rural Damascus, Dar'a, Quneitra hospitals.

Map 5: Percent of functional specialized equipment/ total available equipment in functional public hospitals [MoH & MoHE], June 2015

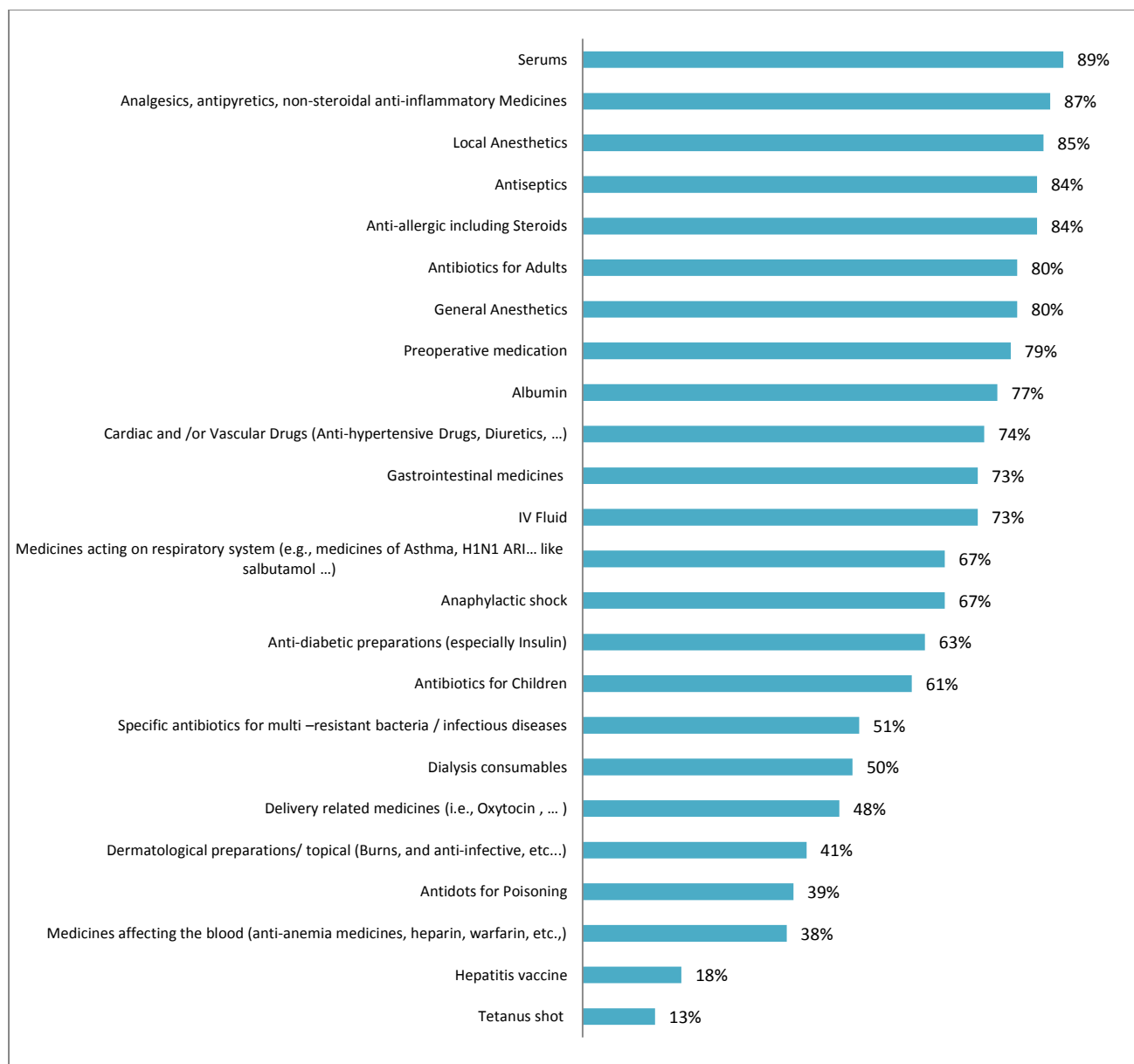


7. Availability of Medicines & Medical supplies

Availability of medicines and medical supplies at hospitals' level was evaluated based on a standard list of identified priority medicines (driven from the national Essential Medicine List), and medical supplies for duration of one month [Figure 47].

The key identified gaps of medicines and consumable at functional hospitals include the tetanus shots (87%), hepatitis vaccine (82%), affecting blood (62%), antidotes for poisoning (61%), dermatological preparation (59%), delivery related medicines (52%), dialysis consumable (50% and antibiotics for multi-resistant bacteria (49%).

Figure 47: Availability of medicines and medical supplies for one month in the functional public hospitals [MoH & MoHE], June 2015

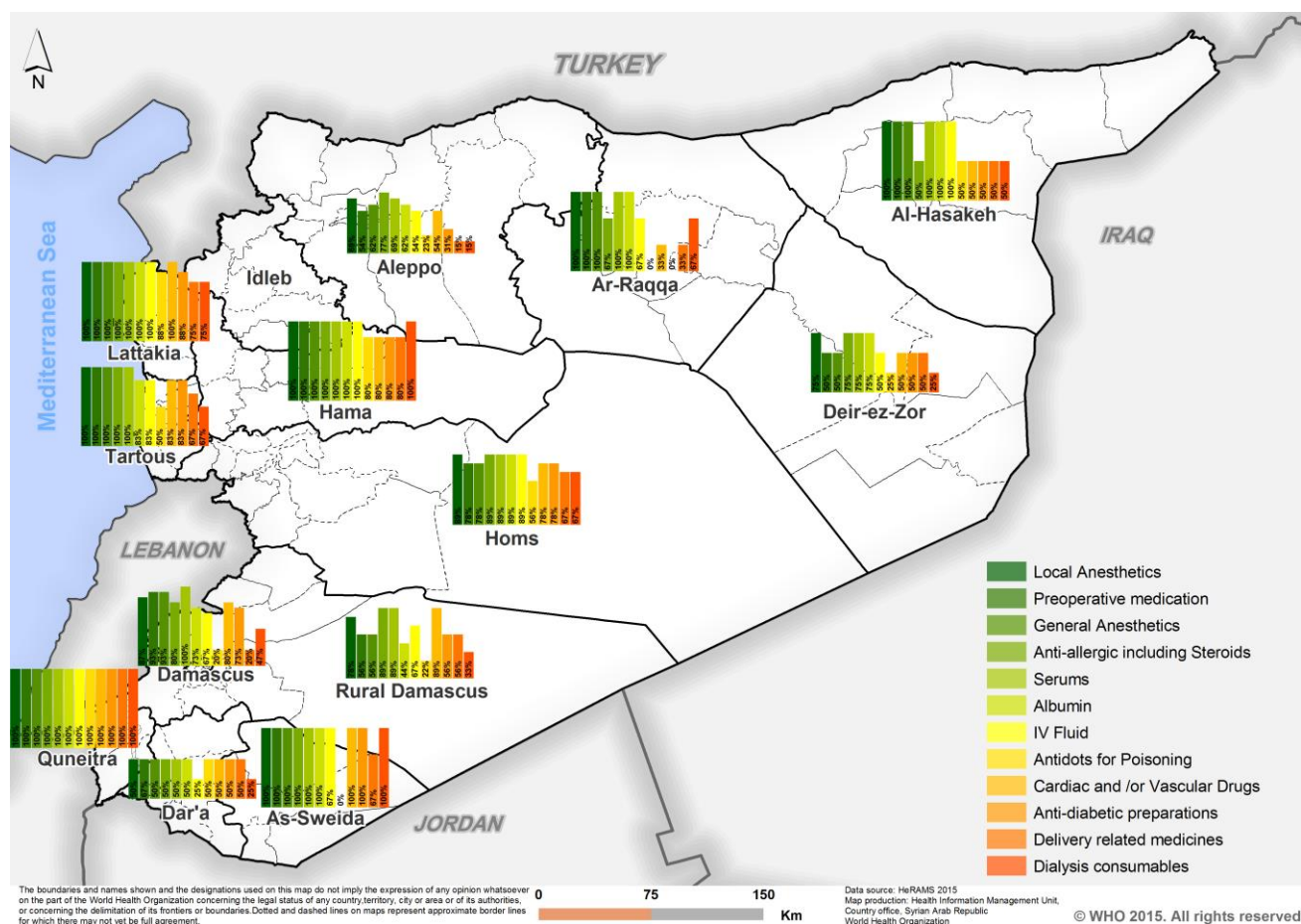


Based on the priority medicines list agreed by MoH and WHO, WHO has managed to address the gaps of medicines identified at all levels of care. One example is the increased availability of serums and IV fluids on the hospitals level after WHO continuous efforts to provide this item on a larger scale during last year.

Percent of available medicines in functional public hospitals, by governorates, are visualized in Map 6.

More details on availability of medicines and medical supplies at governorate level are available in HeRAMS Database.

Map 6: Percentage of available medicines in functional public hospitals [MoH & MoHE], June 2015



8. Conclusions and Recommendations

- ◆ Rehabilitation of the damaged hospitals' infrastructure is highly needed to improve functionality of hospitals and availability of essential health services at secondary care level.
- ◆ Provision or maintenance of electricity generators for hospitals in need (identified in the HeRAMS database) could result in significant improvement of availability of services
- ◆ Increasing provision of NCD medicines (especially for cancer treatment), as it was observed that cancer consultations are the highest among other NCDs.
- ◆ Increasing provision of specialized medical equipment and machines, in addition to spare parts (in certain cases) will improve readiness of hospitals' secondary and tertiary levels of care, and accordingly fill-in the highlighted gaps and urgent needs reported at different governorates.
- ◆ Conducting a qualitative survey on provision of health services to measure the impact of the crisis on the population across the country, using HeRAMS data as a baseline.
- ◆ Increasing supply of **ICTs** means for health districts and reporting facilities especially in hard-to-reach and inaccessible areas, to improve timeliness & completeness of reporting, quality of data, and flow of information.

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