

HeRAMS Public Hospitals' Report

2nd Quarter 2014

Availability of the Health Resources and Services in Public Hospitals [MoH and MoHE] 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 April to June 2014.

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Cover photos: from the left, Duma Hospital in Rural Damascus; Al-Kindi hospital in Aleppo.

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Executive summary

Regular assessments to monitor the impact of the crisis on the health facilities functionality, accessibility, condition status, availability of resources and services, have been conducted using **HeRAMS** (Health Resources & services Availability Mapping System) tool. The report provides descriptive analysis for the public hospitals from all 14 governorates of Syria [including Ministry of Health (MoH) hospitals (97) and Ministry of Higher Education (MoHE) hospitals (12 out of 14)].

Comprehensive **training sessions** have been conducted, to improve capacity of the national health professionals and statisticians, in terms of quality, timeliness and completeness of data. Some of the training sessions were conducted at governorate's levels [Damascus, Lattakia, Aleppo, Tartous, Al-Hassakeh, Deir-ez-Zor, and Idleb], while trainings for Rural Damascus, Quneitra and Dar'a health staff were conducted in Damascus for security reasons.

The **completeness of reporting** of the public Hospitals [MoH & MoHE], as of end of June 2014 was 98%.

Functionality status of the public hospitals:

By end of the 2nd Quarter 2014, and out of the **109** reported public hospitals [MoH and MoHE], 45% (49) were reported fully functioning, 33% (36) were reported partially functioning (i.e., shortage of staff, equipment, medicines and damage of the building in some cases), and 22% (24) were reported non-functioning (completely out of services).

The hospitals reported partially functioning or non-functioning are in 12 out of a total 14 governorates (86% of governorates), compared to 10 governorates on the 1st Quarter 2014.

All public hospitals in Tartous (6) and Quneitra (1) governorates were reported fully functioning.

Average of population per functioning public hospital [MoH & MoHE] has been analyzed; key identified gaps are in five governorates (Idleb, Aleppo, Al-Hasakeh, Rural Damascus, and Hama).

Accessibility status:

By end of the 2nd Quarter 2014, 73% (**80** out of the **109**) public hospitals [MoH and MoHE] were reported accessible to patients and health staff, while 27% (29) were inaccessible.

Infrastructure of public hospitals:

By end of the 2nd Quarter 2014, out of 109 reported public hospitals [MoH & MoHE], 43% (47) hospitals are damaged (11% fully damaged while 32% partially damaged), and 56% (61) are intact. The hospitals reported damaged (fully or partially), are in 11 out of a total 14 governorates.

Analysis of the number of actual beds (currently in use) per 10,000 population, has shown gaps in all governorates (i.e., all governorates are below the global norms), which is an indication for gaps in health staff and health services.

Main gaps on ambulances are reported in Homs, Rural Damascus, Al-Hasakeh, and Ar-Raqqa governorates.

Human Resources:

Analysis of the availability of health workers (medical doctors + nurses + midwife) per 10,000 population by governorate has shown that Eight governorates are below the global standards.

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

Out of a total 85 functioning public hospitals [MoH & MoHE], 53 (62%) are operating without an emergency physician, and 2 (2%) hospitals without a specialist.

Health Services

As a result of disrupted healthcare delivery and non-functionality of hospitals, gaps on provision of health services, even within the functioning hospitals were observed.

By end of the 2nd Quarter 2014, the availability blood bank services has slightly improved (75%) compared to 42% end of the 1st Quarter; imaging services (87%) compared to 63% end of 1st Quarter 2014. Provision of specialized healthcare services remained low (i.e., management of acute malnutrition, management of children diseases, cancer treatment, and mental healthcare), especially after destruction of many of the specialized MoH and MoHE hospitals.

Detailed analysis on utilization of the core health services is provided at governorates' level (e.g., in relatively safe governorates [Tartous, Quneitra, As-Sweida, Hama, and Lattakia] the reported number of emergency surgeries is high compared to the elective surgeries, because of the emergency cases received from surrounding in-secure areas

Availability of Medical Equipment

After three years of crisis and irrespective of governorate's security situation, hospitals are suffering of shortage 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 number of people in the area in addition to IDPs and patients /injured people from surrounding areas).

Gaps on availability of essential and specialized equipment were observed even within functioning public hospitals [MoH & MoHE] (89/109); such as gaps on Nebulizer (66%). Many governorates are reported urgent needs for specialized medical equipment; such as MRI machines (main gaps are in Aleppo, Dar'a, Deir-ez-Zor, and Hama), Cardio-topography (main gaps are in Deir-ez-Zor, Homs, Al-Hasakeh, Quneitra, and Damascus), Renal dialysis machines (main gaps are in Aleppo, Dar'a, Ar-Raqqa, Deir-ez-Zor, Al-Hasakeh, Idelb, and Hama), portable CT scanners (main gaps are in Rural Damascus, Idelb, Hama, Al-Hasakeh, Deir-ez-Zor, Ar-Raqqa, and Dar'a), and X-Ray machines (main gaps are in Aleppo, Rural Damascus, Idelb, Lattakia, and Ar-Raqqa).

Availability of Medicines

Availability of medicines and medical supplies at hospitals' level has been evaluated based on standard list of identified priority medicines and medical supplies available for duration of one month. Key gaps on medicines and medical supplies are dermatological preparation (70%), medicines affecting blood (65%), specific antibiotics for multi-resistant bacteria (58%), and Dialysis consumable (40%).

1. Introduction

Regular assessment of public health facilities have been continued during the 2nd Quarter of 2014, using HeRAMS (Health Resources & services Availability Mapping System), for monitoring of the health facilities situation and systematic identification of needs and gaps.

HeRAMS has been **expanded** to cover the MoHE (Ministry of Higher Education) hospitals [12 out of 14].

As part of the HeRAMS plan to improve the **national capacity** on HeRAMS reporting (in terms of quality, timeliness and completeness of data), comprehensive training sessions have been conducted at central and governorate’s levels, for the health professionals and statisticians in Damascus, Lattakia, Aleppo, Tartous, Al-Hassakeh, Deir-ez-Zor, Idleb].The workshops that could not be conducted at governorates’ level (Rural Damascus, Quneitra and Dar’a) were conducted in Damascus for security reasons.

The main **challenges** encountered throughout HeRAMS data collection, were accessibility and security situation, in addition to the frequent power cuts and disconnect of the network coverage in many governorates. The high turn-over and shortages of health staff were also representing key challenges for sustainable and timely reporting of health data.

The following sections provide analysis on the functionality status, accessibility, and infrastructure of the public hospitals, available resources & services, and available equipment and medicines. The provided analysis could support better planning and allocation of resources, and could also contribute on significant and focused humanitarian response by WHO and health sector partners.

2. Completeness of hospital reporting

In the 2nd Quarter 2014, all 14 governorates of Syria reported to HeRAMS compared to 12 governorates in 2013; newly reporting governorates in 2014 are Ar-Raqqa and Deir-ez-Zor.

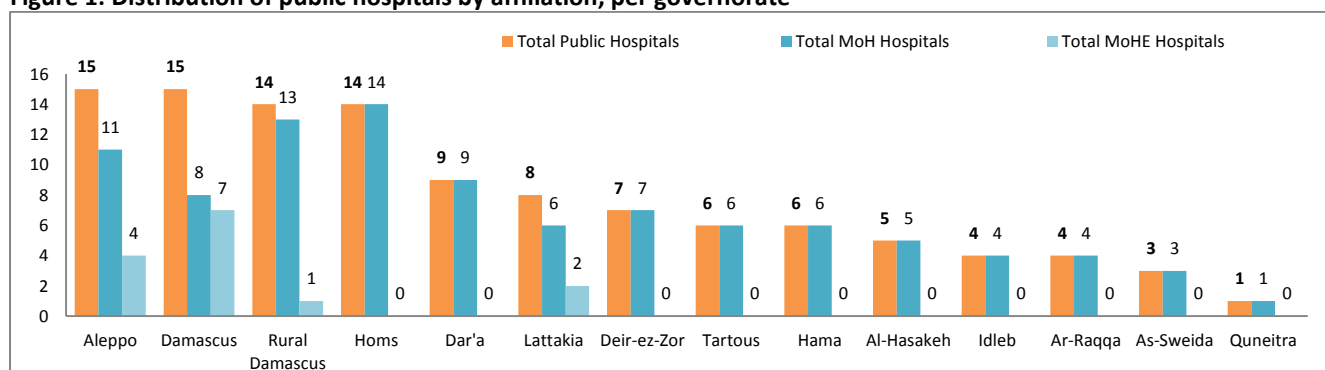
HeRAMS has been expanded during the 2nd Quarter 2014, to cover the MoHE (Ministry of Higher Education) hospitals, from which 12 out of 14 hospitals, across the country, have reported. Accordingly the total number of assessed Hospitals by HeRAMS has increased to reach 109 out of a total 111 public hospitals [MoH and MoHE]. Completes of reporting of all public hospitals is 98%, Table 1.

Table 1: The total number of public hospitals across Syria(2nd Quarter 2014)

	Total Public Hospitals	Total reported hospitals	% of completeness of reporting
Grand Total of public hospitals	111	109	98%
MoH hospitals	97	97	100%
MoHE hospitals	14	12	86%

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



3. Functionality and accessibility of the Public Hospitals

The following sub-sections provide analysis on the functionality status of the hospitals and average number of people covered by functioning hospitals at governorate level, condition of the hospital buildings and inpatient capacity of the hospitals.

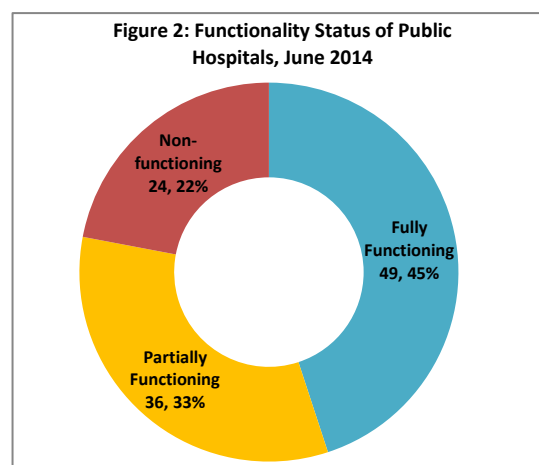
3.1 Functionality Status of the Public Hospitals

Functionality of the public hospitals has been 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.

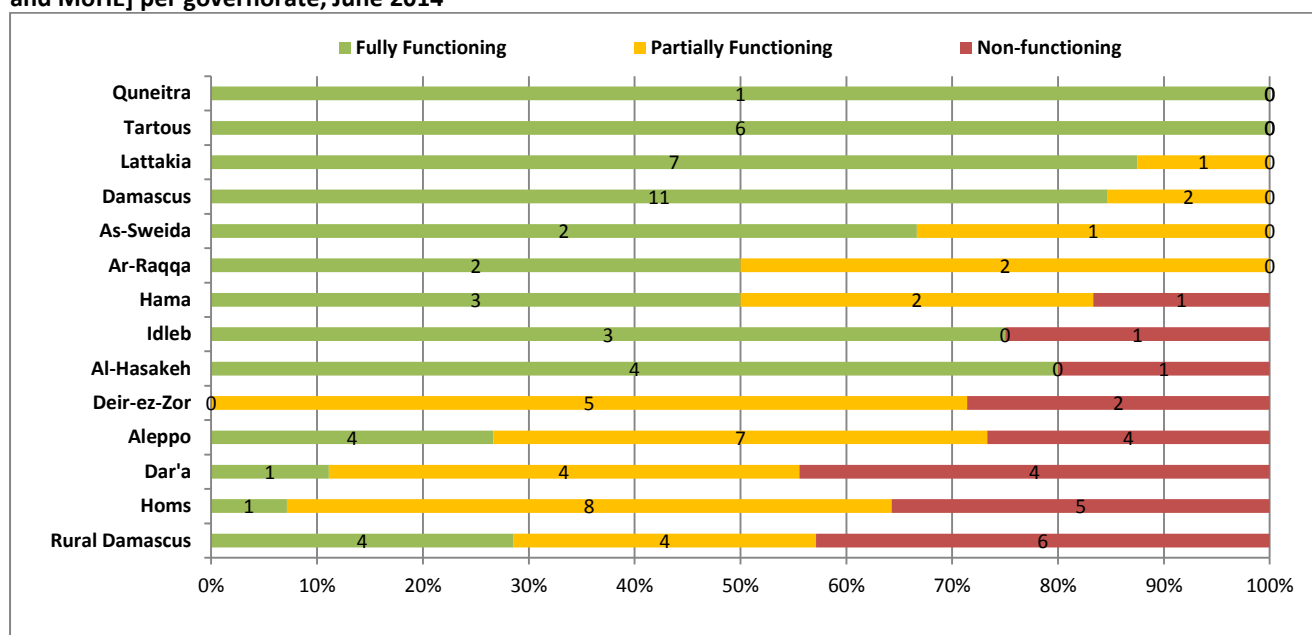
By end of the 2nd Quarter 2014, and out of the **109** reported public hospitals [MoH and MoHE], 45% (49) were reported fully functioning, 33% (36) were reported partially functioning (i.e., shortage of staff, equipment, medicines and damage of the building in some cases), and 22% (24) were reported non-functioning (completely out of services) [Figure 2].

The hospitals reported partially functioning or non-functioning are in 12 out of a total 14 governorates (86% of governorates), compared to 10 governorates on the 1st Quarter 2014.

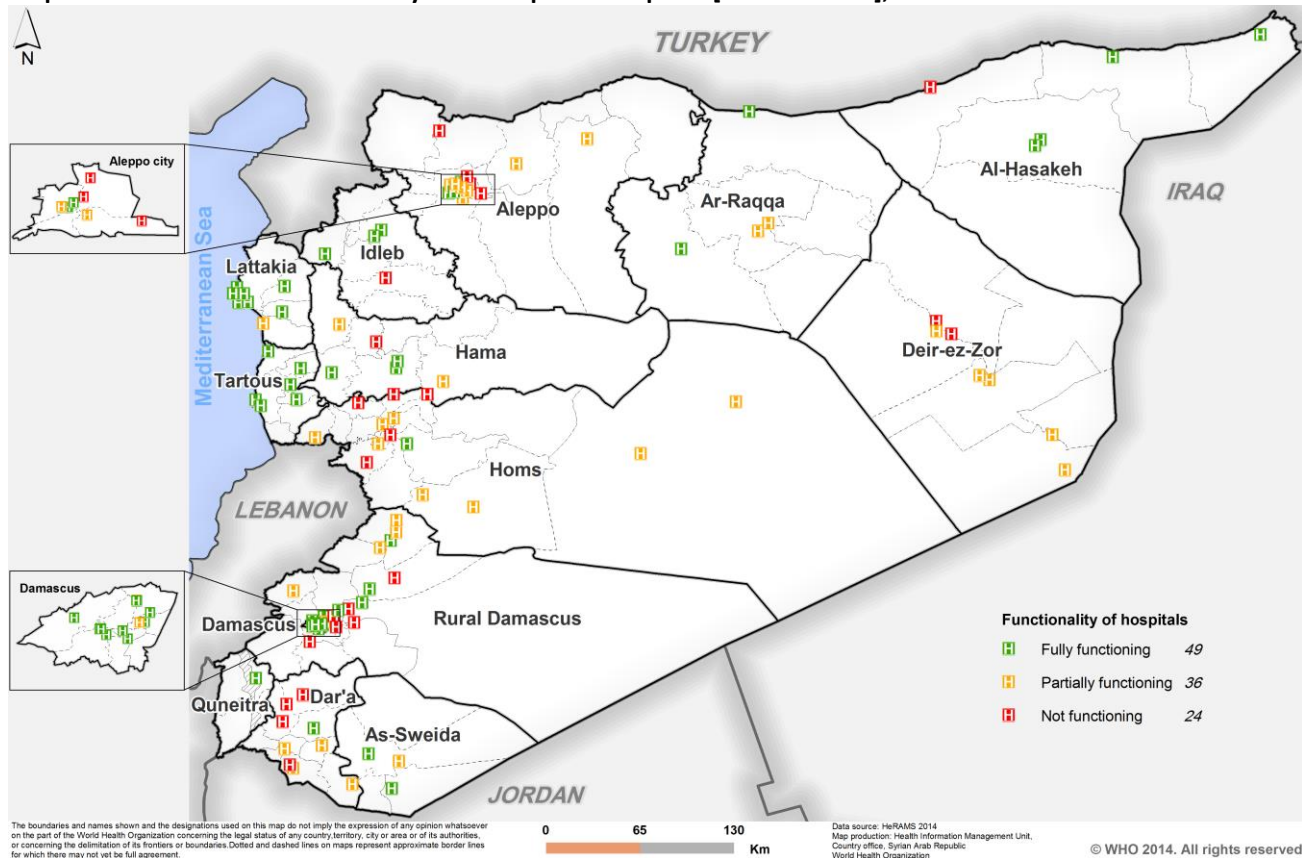


Detailed analysis on the functionality status of the MoH and MoHE hospitals at governorate level is presented in [Figure 3] and [Map 1].

Figure 3: Number and percentage of fully functioning, partially functioning, and non-functioning hospitals [MoH and MoHE] per governorate, June 2014



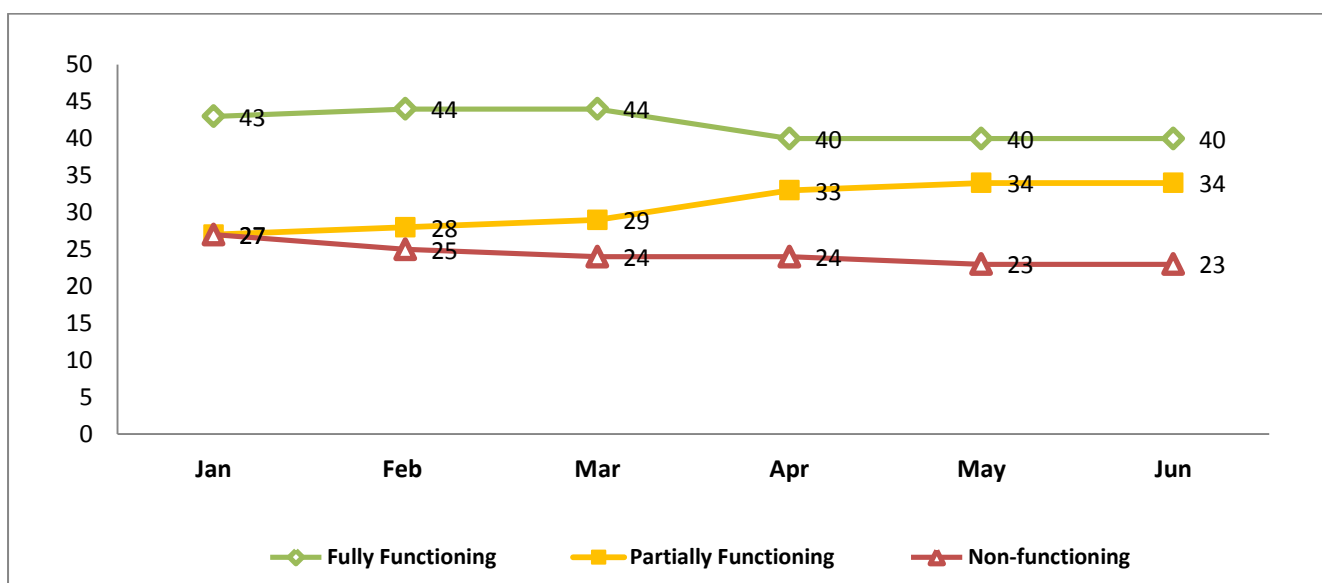
Map 1: Distribution and Functionality status of public Hospitals [MoH & MoHE], June 2014



Trend analysis of the functionality status of hospitals has been considered only for the MoH hospitals, because of the availability of data since beginning of 2014, while the MoHE hospitals have joined the HeRAMS by 2nd Quarter 2014

Trend analysis of the MoH hospitals during the 1st half of 2014 is presented in [Figure 4].

Figure 4: Trend analysis of functionality status of MoH hospitals during the 1st half of 2014

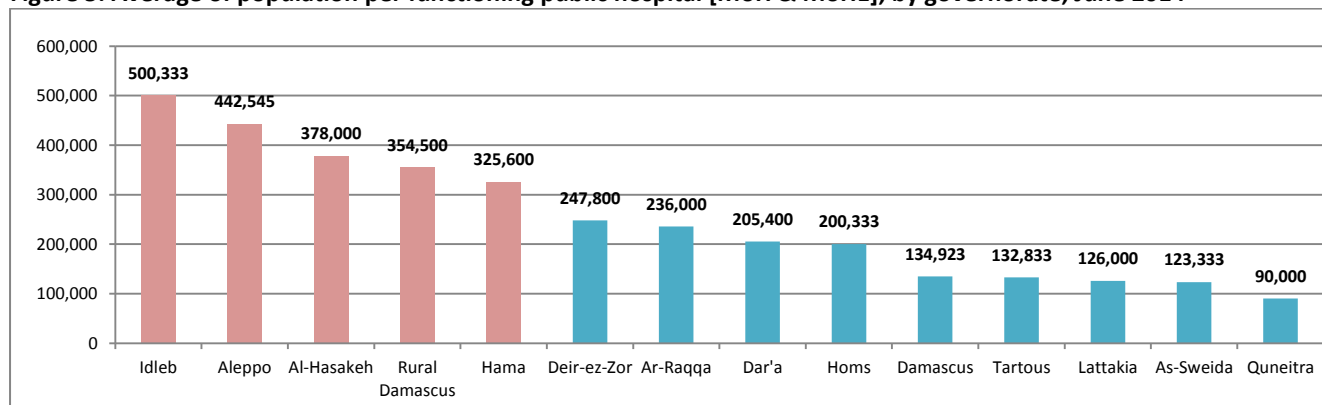


3.2 Coverage of Public hospitals by population

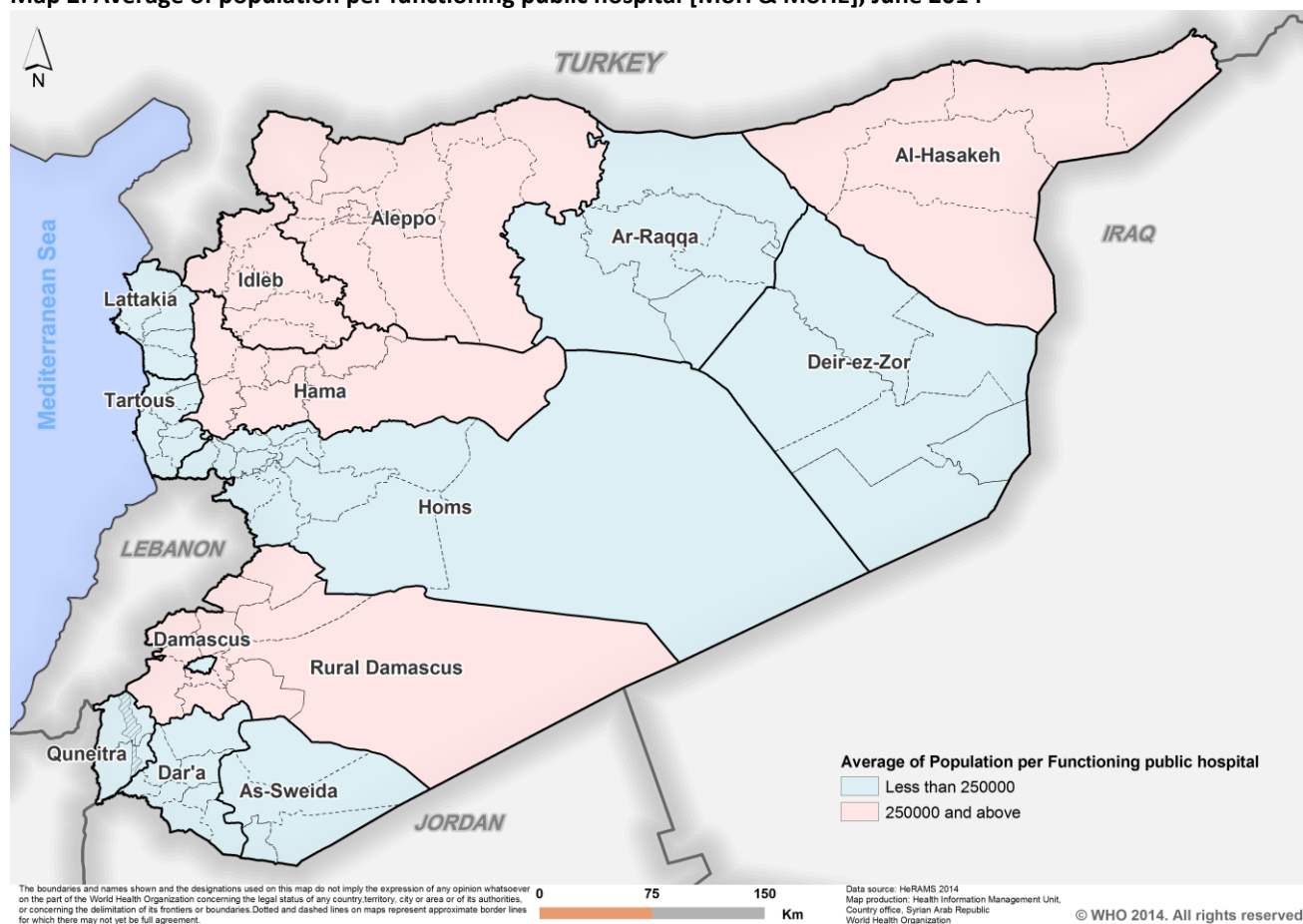
Analysis of the average population¹ covered by a functional public hospital could be used as Proxy indicator of geographical accessibility and of equity in availability of public hospitals across different governorates.

Based on the global standards², the key identified gaps are in five governorates (Idleb, Aleppo, Al-Hasakeh, Rural Damascus, and Hama); Figure 5 & Map 2.

Figure 5: Average of population per functioning public hospital [MoH & MoHE], by governorate, June 2014



Map 2: Average of population per functioning public hospital [MoH & MoHE], June 2014



¹ Source of population figures is OCHA

² IASC, Global Health Cluster core indicators

3.3 Accessibility to public hospitals

Accessibility to public hospitals is defined at two levels:

- ◆ **Accessible:** a hospital is easily accessible for patients and health staff.
- ◆ **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 end of the 2nd Quarter 2014, 73% (**80** out of the **109**) public hospitals [MoH and MoHE] were reported accessible to patients and health staff, while 27% (29) were inaccessible [Figure 6]. Details at governorate level are provided in Figure 7.

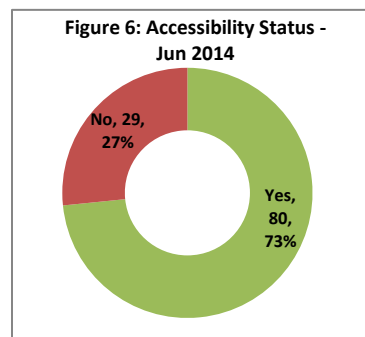
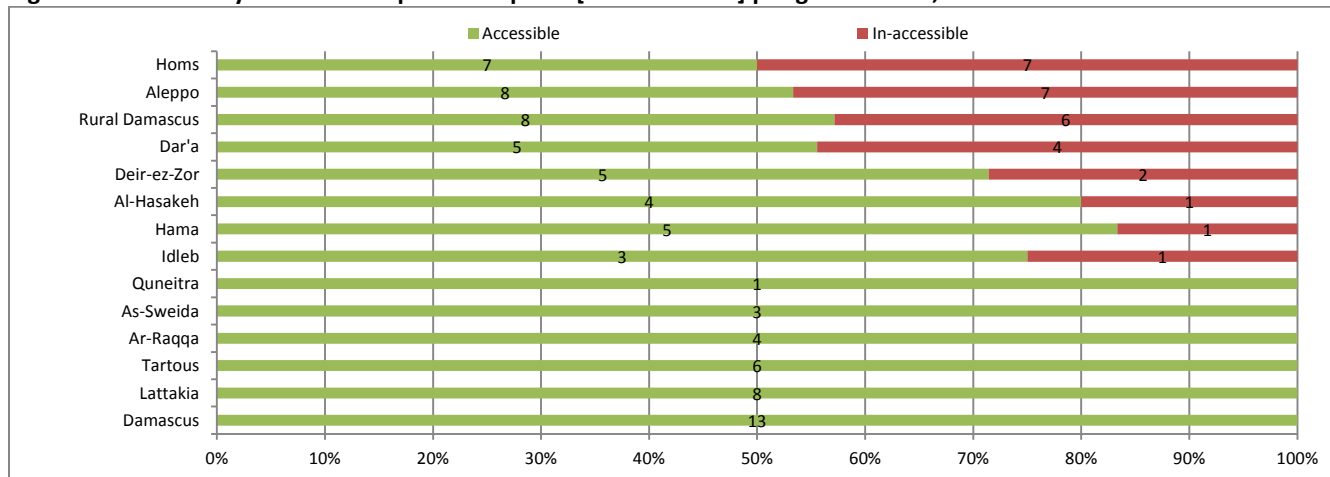
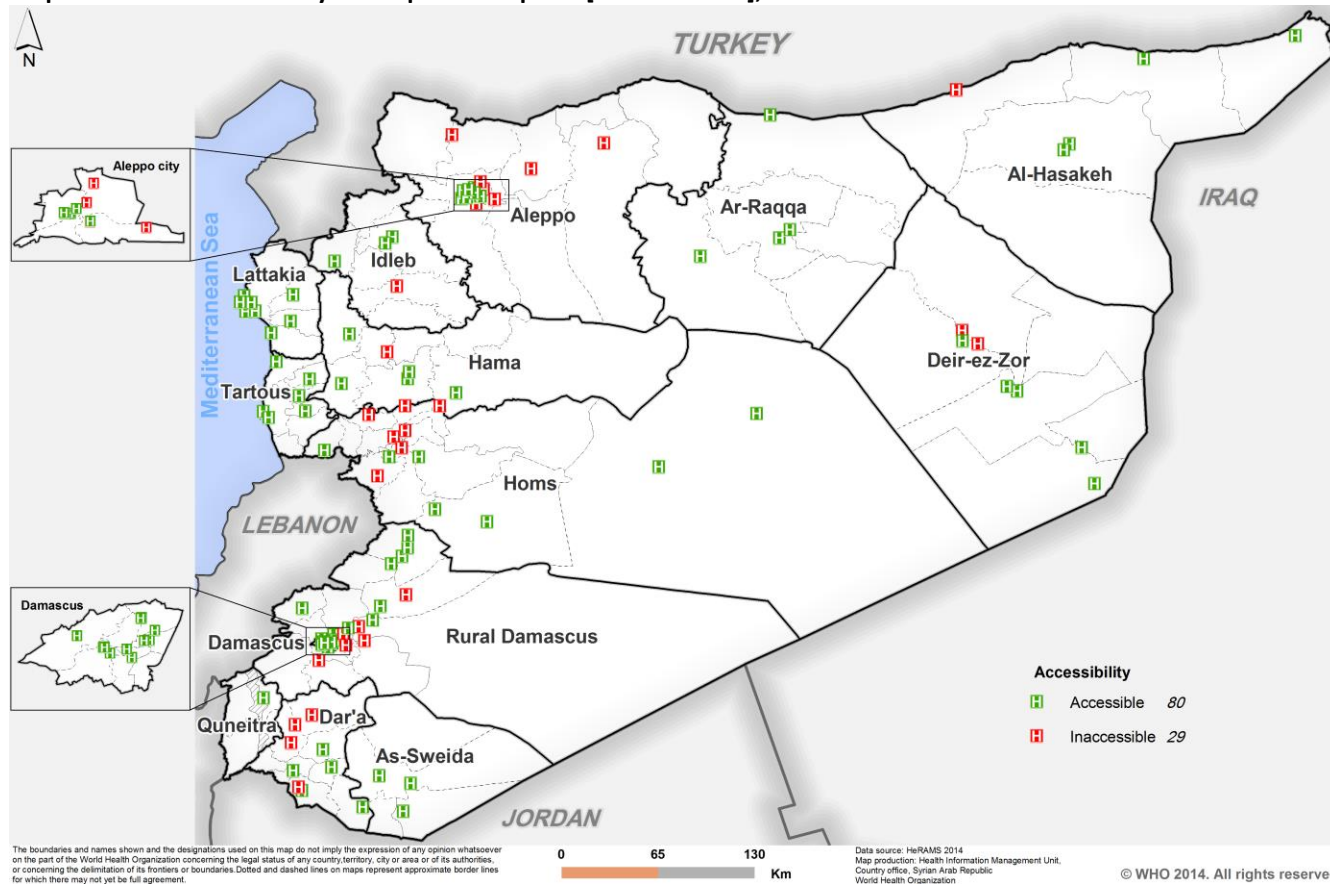


Figure 7: Accessibility status of the public hospitals [MoH & MoHE] per governorate, June 2014

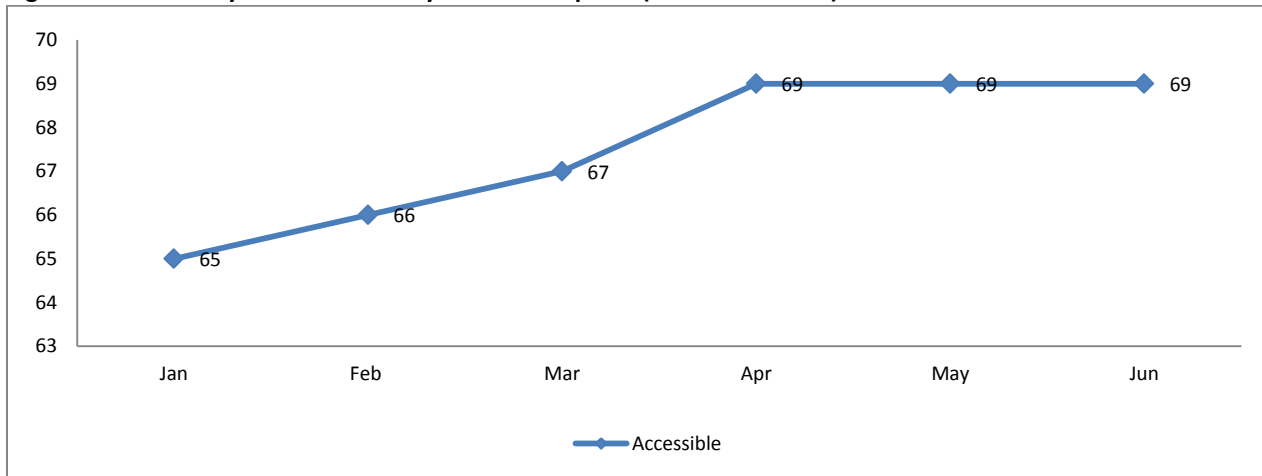


Map 3: Status of accessibility of the public hospitals [MoH & MoHE], June 2014



Trend analysis of accessibility to MoH hospitals during the 1st half of 2014 is presented in Figure 8. By end of the 2nd quarter 2014, accessibility to MoH hospitals has been slightly improved, out of 97 MoH hospitals, 71% (69) are accessible, compared to 69% (67) accessible during the 1st quarter 2014. While 29% (28) of MoH hospitals remain inaccessible [Figure 5].

Figure 8: Trend analysis of Accessibility to MoH Hospitals (1st half of 2014)



4. 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, number of hospitals' beds available per 10,000 population, availability of ambulances, and generators, all summarized at governorate level.

4.1 Level of Damage of the hospitals' buildings

The level of damage to hospital buildings has been 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 end of the 2nd Quarter 2014, out of 109 reported public hospitals [MoH & MoHE], 43% (47) hospitals are damaged (11% fully damaged while 32% partially damaged), and 56% (61) are intact [Figure 9].

The hospitals reported damaged (fully or partially), are in 11 out of a total 14 governorates.

Detailed analysis on the number and percent of damaged public hospitals [MoH and MoHE], at governorate level is presented in [Figure 10] and [Map 3].

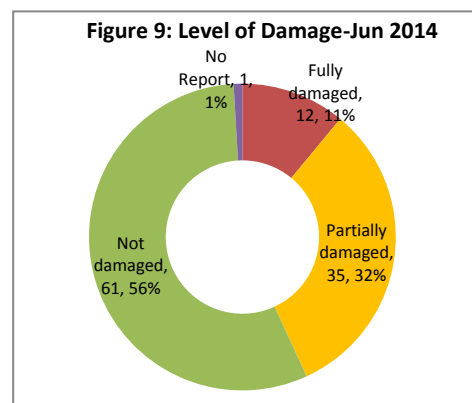
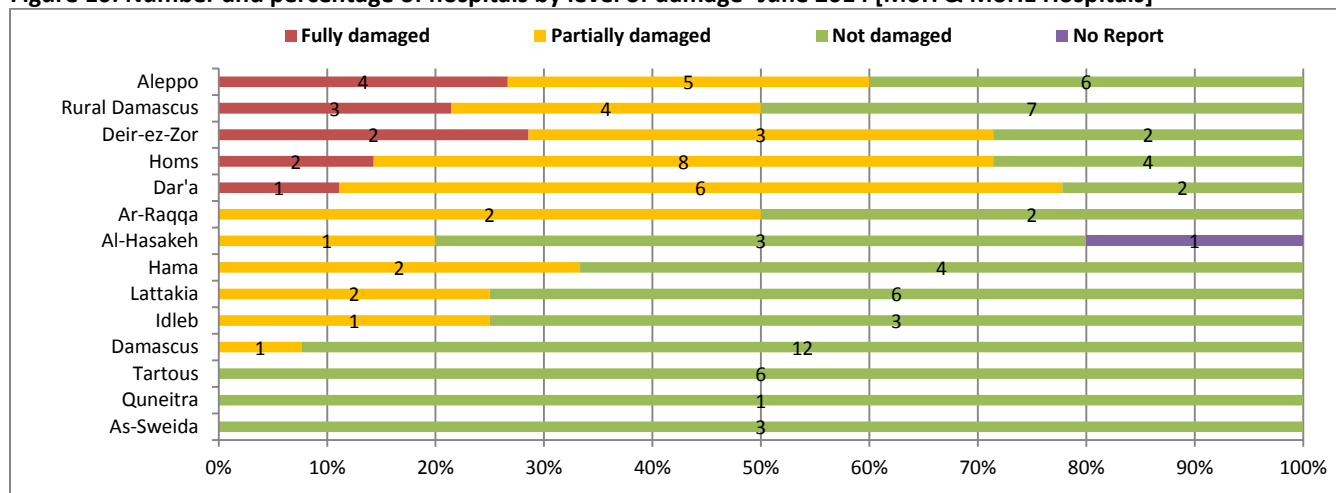
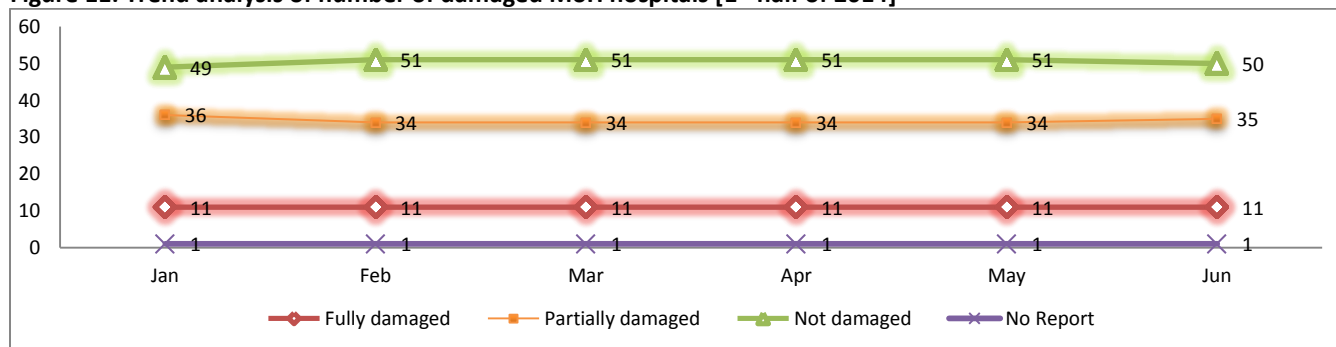


Figure 10: Number and percentage of hospitals by level of damage -June 2014 [MoH & MoHE Hospitals]

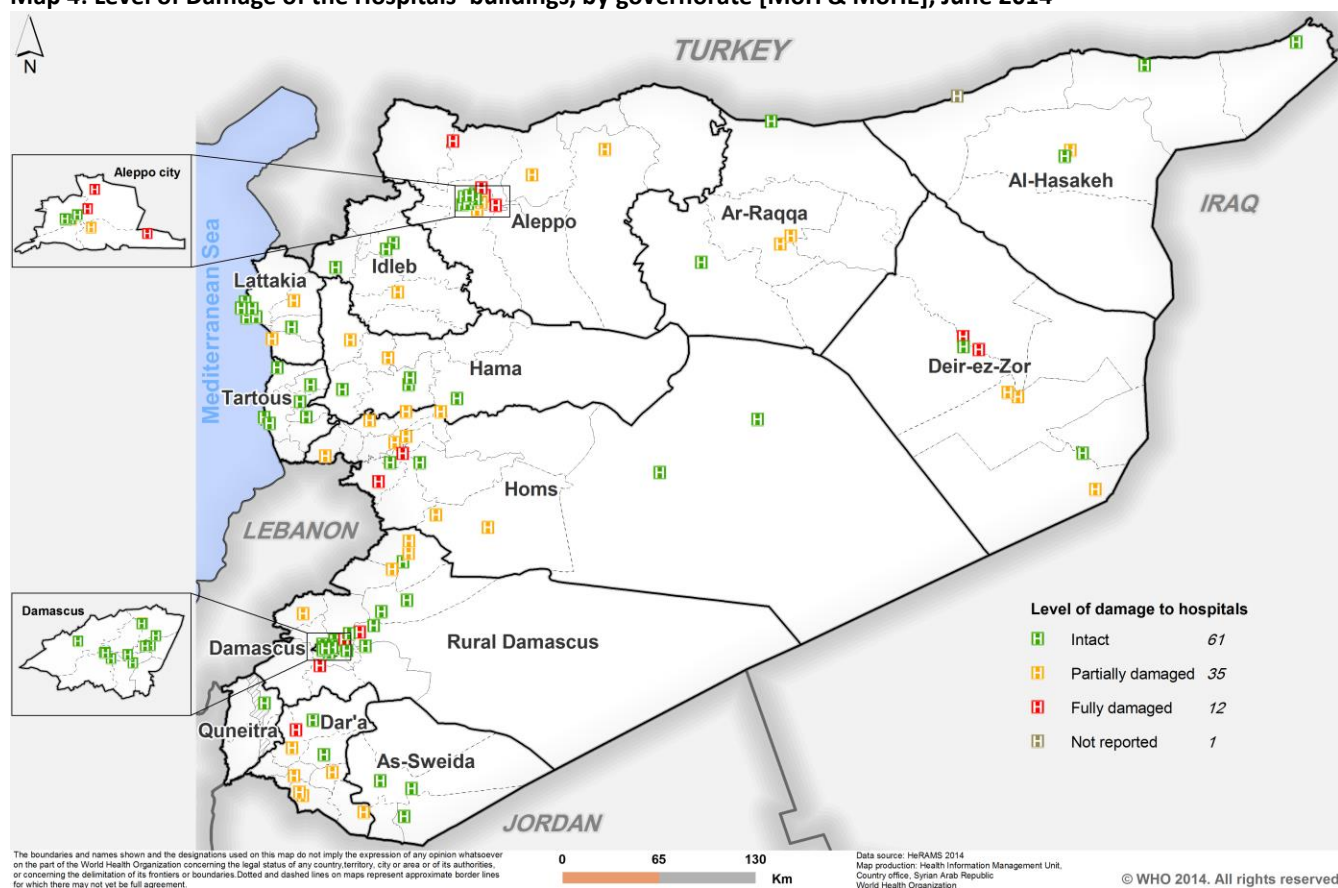


Trend analysis of the number of damaged MoH hospitals (building condition) during the 1st half of 2014 is presented in [Figure 11].

Figure 11: Trend analysis of number of damaged MoH hospitals [1st half of 2014]



Map 4: Level of Damage of the Hospitals' buildings, by governorate [MoH & MoHE], June 2014



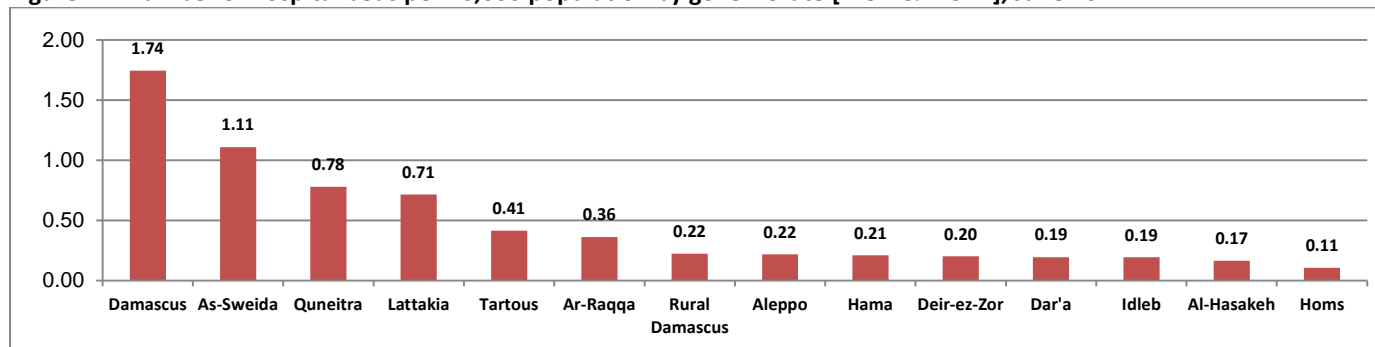
The list of fully damaged hospitals:

Province	District	HospitalName
1. Rural Damascus	Duma	Rural Damascus specialized hospital – Duma
2. Rural Damascus	Harasta	Harasta general hospital
3. Rural Damascus	Darayya	Darayya general hospital
4. Aleppo	Fourth	Zahi Azraq general hospital
5. Aleppo	A'zaz	A'zaz national hospital
6. Aleppo	The Third	Ebn Khaldon hospital for mental health
7. Homs	Al-Qusayr	Al-Qusayr general hospital
8. Homs	The Second	National hospital
9. Deir-ez-Zor	Deir-ez-Zor	Maternity and Paediatric specialized hospital
10. Deir-ez-Zor	Deir-ez-Zor	Alfurat general hospital
11. Dar'a	Jassem	Jassem general hospital

4.2 Availability of hospital beds per 10,000 population

Measuring the availability of hospital beds across crisis areas provides a good proxy indicator for equity in the allocation of resource. The global standard³ for the availability of hospital beds per 10,000 population is > 10. Analysis of the number of actual beds (currently in use in functional hospitals) per 10,000 population [Figure 12], has shown gaps across all governorates (i.e., all governorates are below the global norms), which is an indication for gaps in health staff and health services.

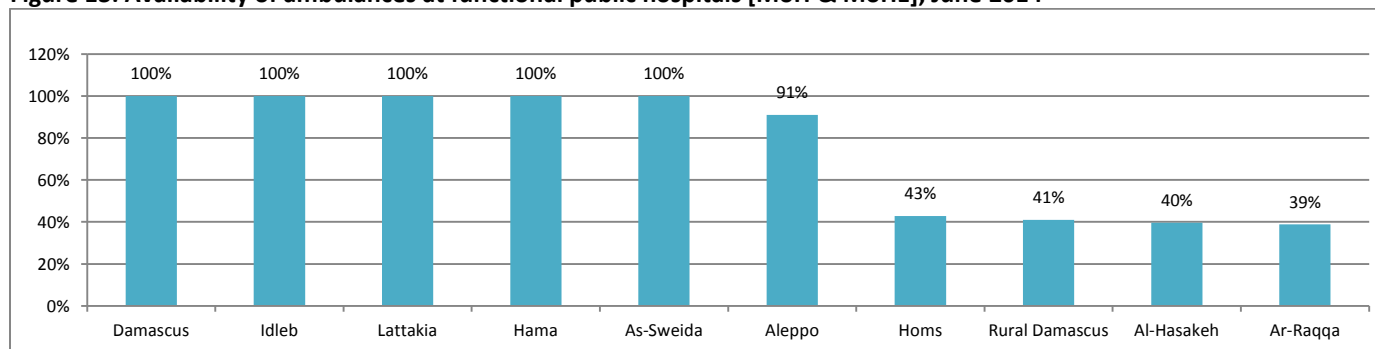
Figure 12: Number of hospital beds per 10,000 population by governorate [MoH & MoHE], June 2014



4.3 Availability of ambulances and electrical generators

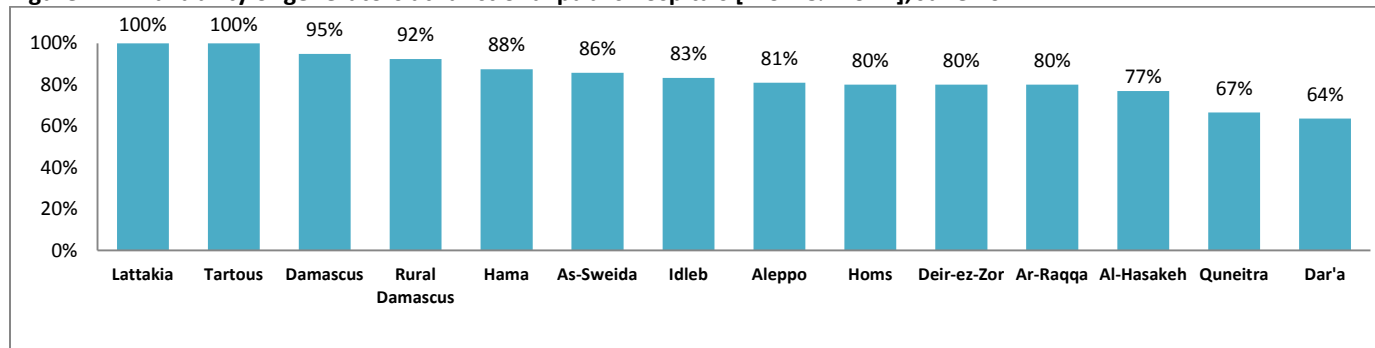
Referral system in Syria has widely disrupted due to the crisis. Each governorate has a pool of ambulances located in the DoH (Directorate of Health) and mobilized to hospitals as needed. The availability of ambulances is assessed at functional hospitals, and data is aggregated at governorate level. Main gaps on ambulances are in Homs, Rural Damascus, Al-Hasakeh, and Ar-Raqqa governorates [Figure 13].

Figure 13: Availability of ambulances at functional public hospitals [MoH & MoHE], June 2014



Shortages of generators in many of the partially functional hospitals have been reported from 12 governorates [Figure 14].

Figure 14: Availability of generators at functional public hospitals [MoH & MoHE], June 2014



³IASC: Global Health Cluster core indicators

5. Prioritization of Health Situation at Sub-Districts' Level

Prioritization of health districts has been developed to support coordination of response and focused geographical secondary health care interventions (e.g., delivery of humanitarian assistance, SHC service provision, rehabilitation of hospitals, capacity building, etc....)

Analysis of the health situation has been conducted based on availability of secondary health care services/ facilities at a district level. The health districts situation has been prioritized following a scale of good, fair, or bad.

The followed calculation methodology to rank the health districts' situation is as follow:

1. Three indicators were considered [hospitals' Functionality Status, Level of Damage, and Accessibility]
2. Public hospitals data (of the three indicators), for June 2014,
3. Weighing scale has been assigned to hospitals, as below:

Functionality Status	Mark	Condition of damage	Mark	Accessibility	Mark
Fully functioning	10	Intact	10	Accessible	10
Partially functioning	5	Partially damage	5	Inaccessible	0
Not functioning	0	Fully damage	0		
Not reported	0	Not reported	0		

4. At district level, scores of hospitals added-up and the total scores has been divided by 3 (because of the 3 indicators).
5. Based on a scale of 10, the following ranges have been assigned:

Poor [1 st Priority]	0-3
Fair [2 nd Priority]	4-8
Good [3 rd Priority]	9-10

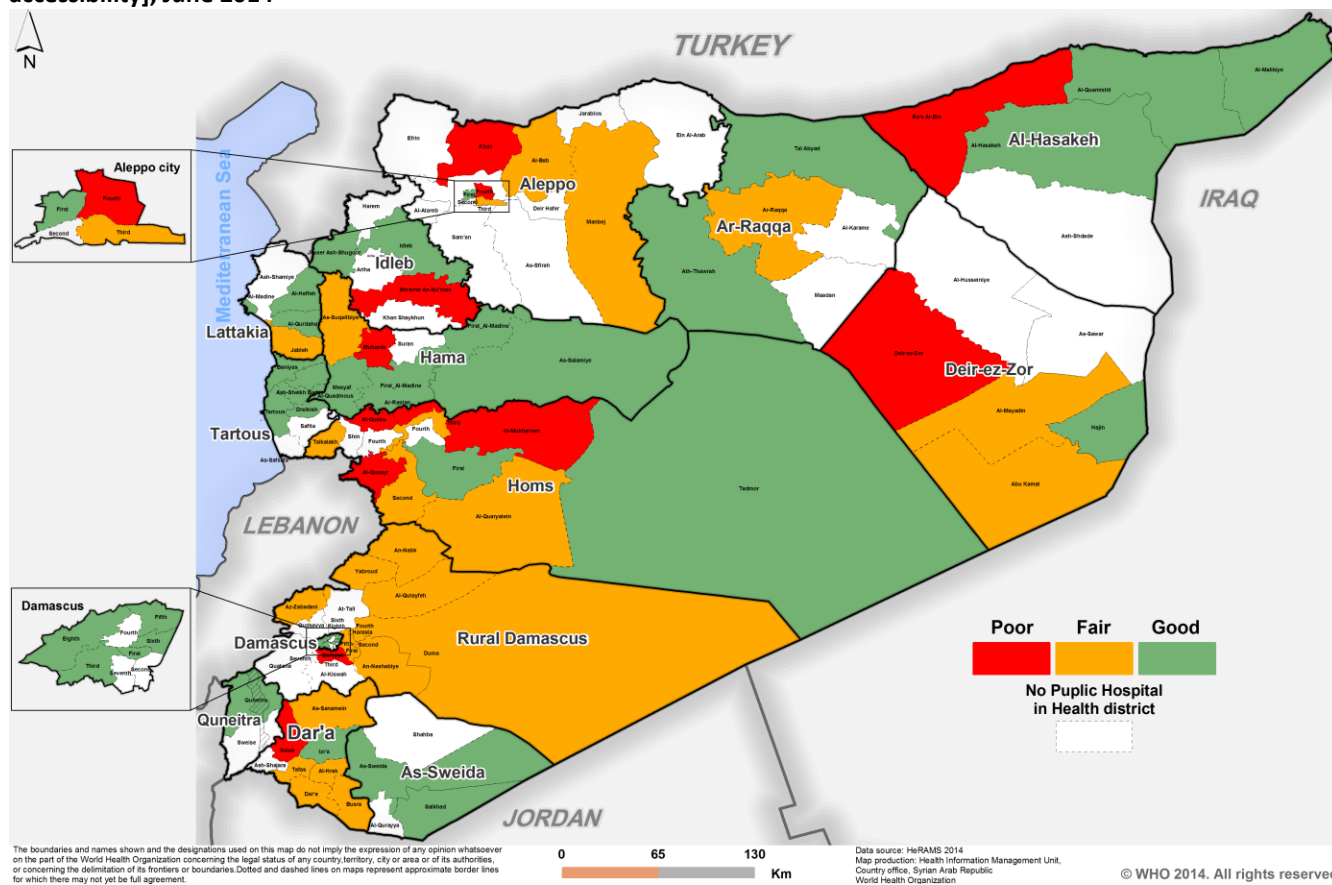
**Two key indicators (polio vaccination coverage and EWARS coverage) were not included in the prioritization analysis, as it is a priority across the country.

Based on the prioritization analysis [Map 5] and [Figure 15] have been produced. The worst health situation in terms of secondary care services is highlighted with red colour, which should be considered as 1st priority for SHC delivery of assistance.

Figure 15: Prioritization of hospitals' situation [MoH & MoHE], June 2014



Map 5: Prioritization of hospitals' situation, based on three indicators [functionality, damage condition, and accessibility], June 2014



6. Availability of Health Human Resources

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

- ◆ **Proportions** of medical-related staff (doctors, nurses, and pharmacists)
- ◆ **Comparison** of available health human resources; MoH vs., MoHE hospitals
- ◆ Distribution of medical doctors (Specialists, Emergency Physicians, Resident doctors, and Dentists), per governorate
- ◆ Distribution of specialist cadre by gender, per governorate

The **proportion** between different categories of health staff, among the total functional (fully and partially) MoH and MoHE hospitals (85/109), by end of the 2nd Quarter 2014, is as follows: the emergency physicians remain the lowest proportion of health staff (0.4%), followed by pharmacists (0.8%), dentists (1%), Midwives (5%), specialists (17%), resident doctors (20%), and nurses (57%); [Figure 16].

As MoHE hospitals are located in four governorates; detailed distribution (No. and %) of MoH vs., MoHE hospitals is shown on Table 2.

A **comparison** between the available medical-related staff has been conducted for both MoH and MoHE hospitals; [Figure 17].

Figure 16: Proportion of Health Staff, June 2014

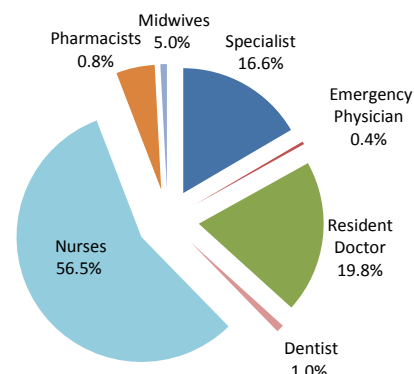
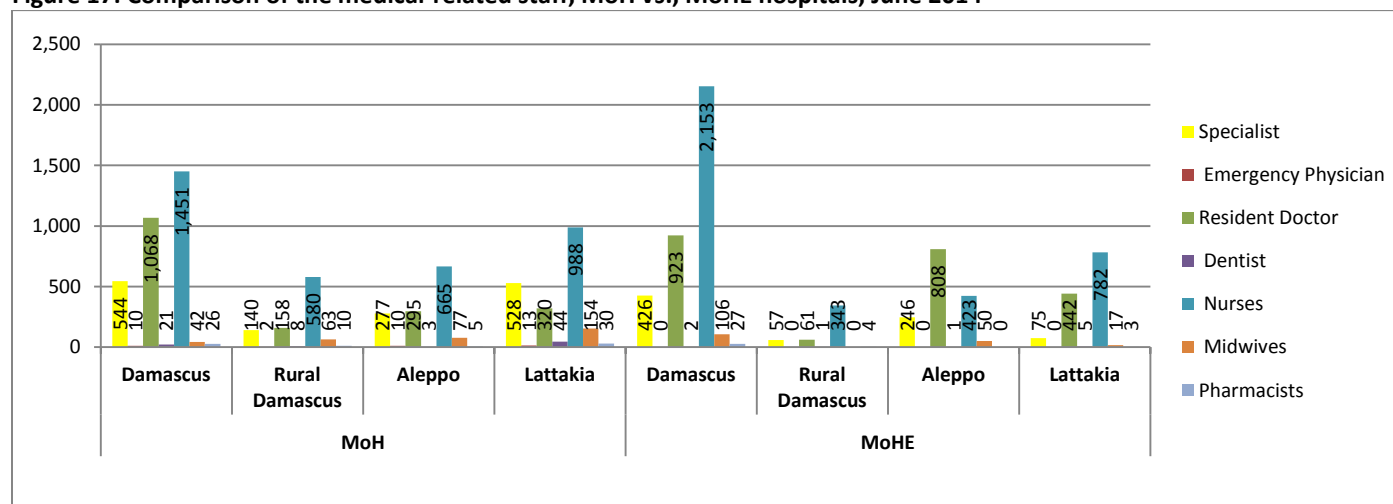


Table 2: Distribution of MoH vs., MoHE hospitals (No. and %)

Affiliation of hospitals	Aleppo	Damascus	Rural Damascus	Lattakia
MoH	11 [73%]	8 [53%]	13 [93%]	6 [75%]
MoHE	4 [27%]	7 [47%]	1 [7%]	2 [25%]
Total	15	15	14	8

Figure 17: Comparison of the medical-related staff, MoH vs., MoHE hospitals, June 2014



6.1 Availability of health workers by 10,000 population

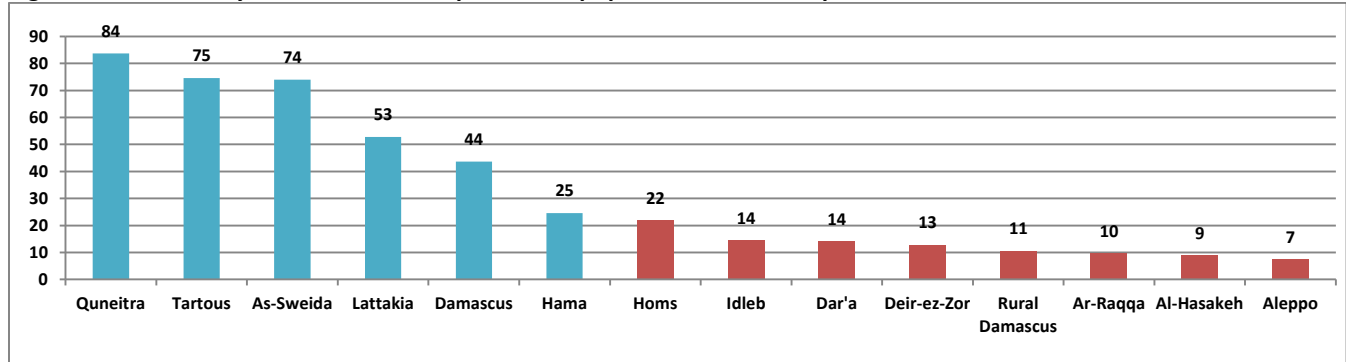
Analysis of the availability of **health workers (medical doctors + nurses + midwife)** per 10,000 population by administrative unit, is one of the core global health indicators, which could be used as a proxy to monitor the equity in allocation of health human resources.

The medical workers included in this analysis are a total of **specialists, emergency Physicians, resident doctors, nurse, and midwives**, in all public functional Health Facilities (including MoH and MoHE Hospitals, in addition to health centres].

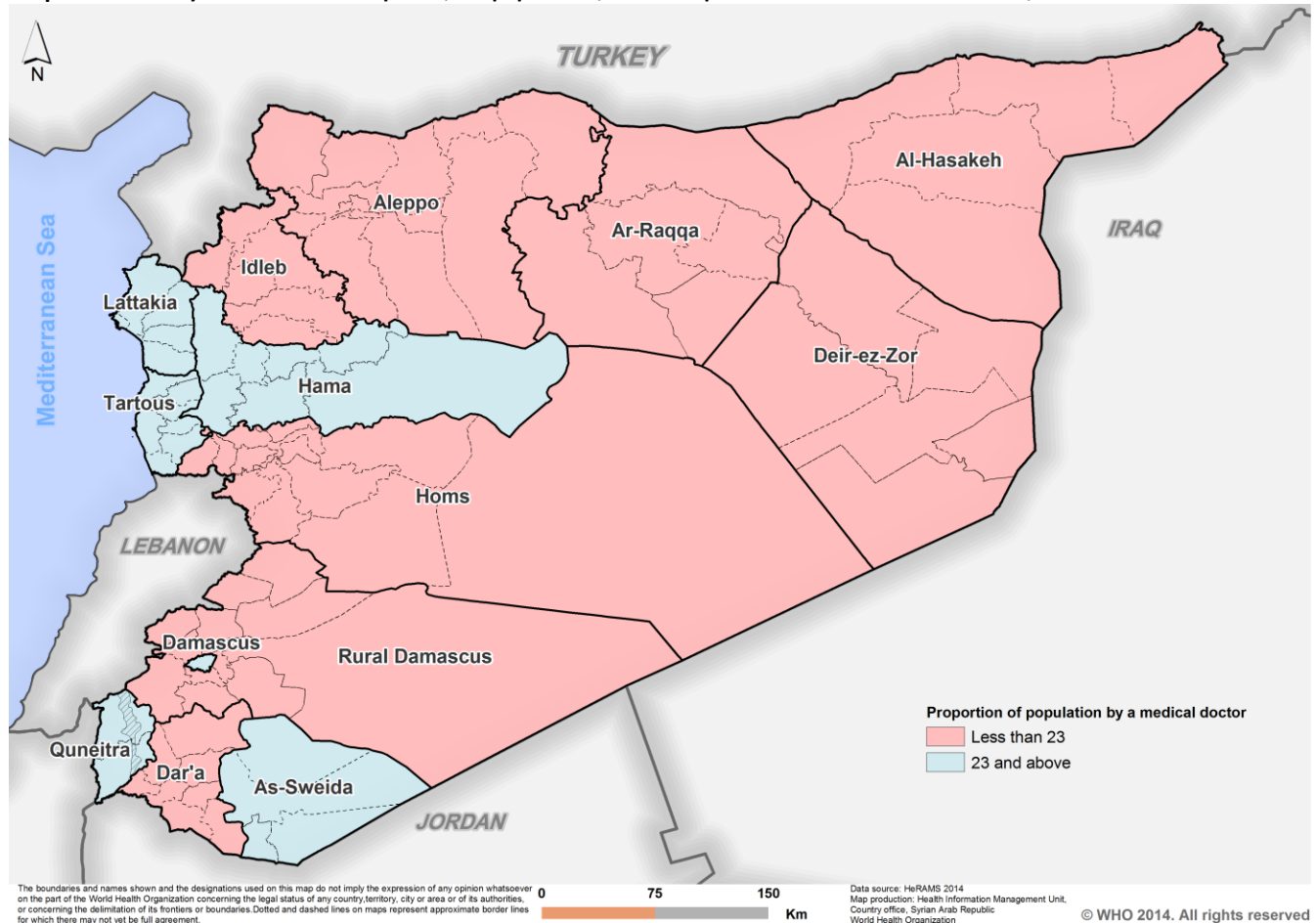
The benchmark⁴ of health workers per 10,000 population is >22.

Analysis of the availability of health workers per 10,000 population, has shown that Eight governorates are below the global threshold [Figure 18]. Shortage of the health workers have also been visualized on [Map 6].

Figure 18: Availability of health workers per 10,000 population, across all public functional health facilities, June 2014



Map 6: Availability of health workers per 10,000 population, across all public functional Health Facilities, June 2014



⁴IASC: Global Health Cluster core indicators

6.2 Availability & Trend analysis of medical doctors

A detailed analysis on availability and trends of medical doctors and equity of distribution, at public hospitals [MoH and MoHE], is provided below.

The categories considered as medical doctors are including specialists, emergency physicians, and resident doctors. The proportion of medical doctors by category is presented in Figure 19.

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

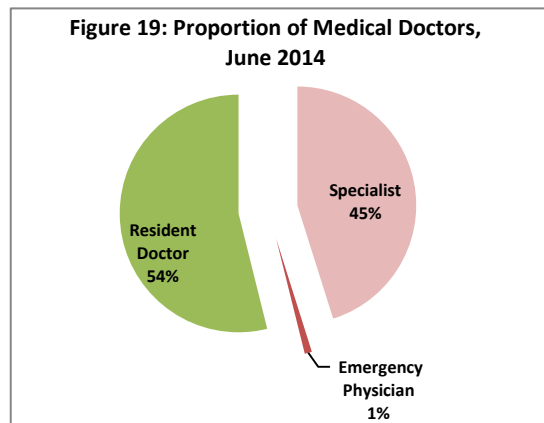
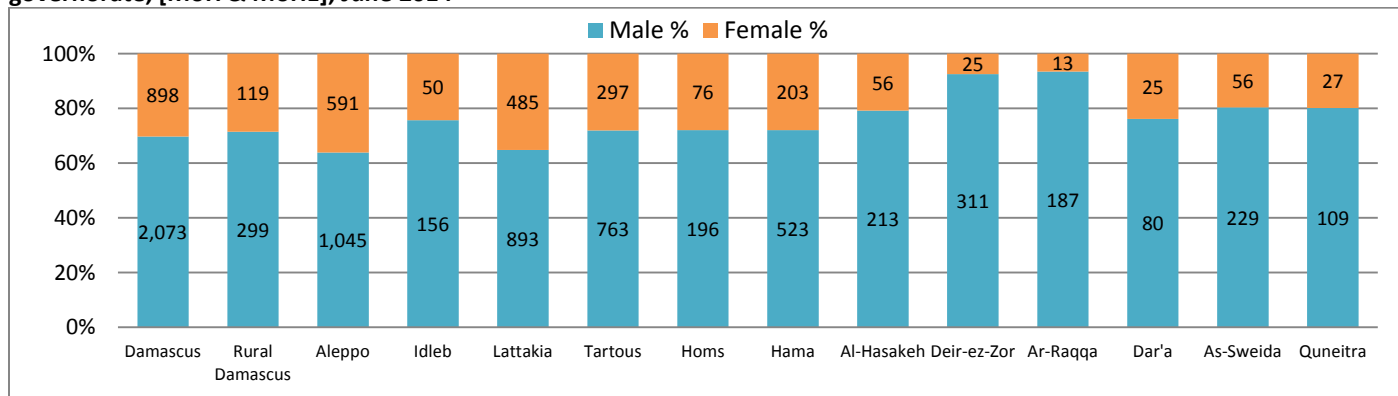


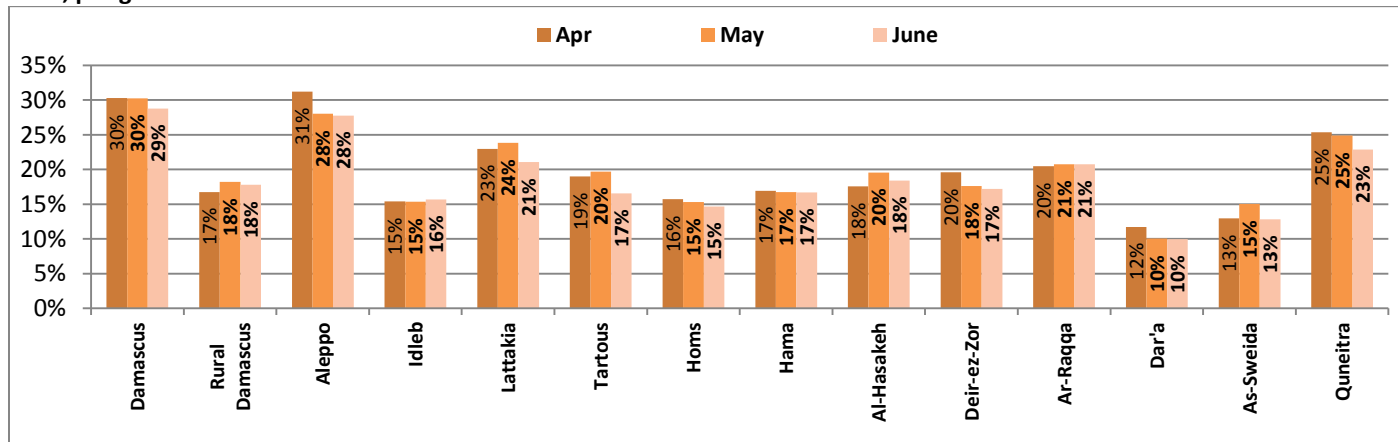
Figure 20: Proportion of Doctors (a total of Specialists, Emergency Physicians, Resident Doctors), by gender, per governorate, [MoH & MoHE], June 2014



Shortage and misdistribution of health staff across governorates, is one of the main concerns of the health system in Syria during this crisis.

The trend analysis of the proportion of medical doctors (total number of Specialists, Emergency Physicians, and Resident doctors) by total health staff, over the 2nd Quarter 2014, has shown variation of medical staff distribution and proportion by governorate [Figure 21].

Figure 21: Distribution of medical doctors (Specialists, Emergency Physicians, and Resident doctors) over the 2nd Quarter 2014, per governorate

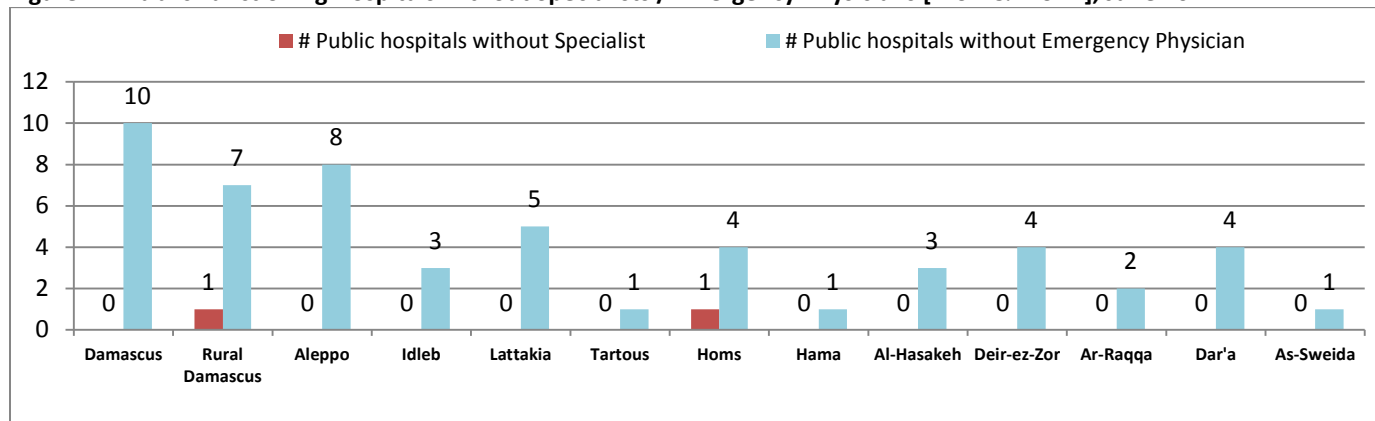


6.3 Functioning Hospitals without Specialists / Emergency Physicians

The shortage of medical staff remains a major issue for health system in Syria, especially in the most affected governorates by the crisis.

Out of a total 85 functioning public hospitals [MoH & MoHE], 53 (62%) are operating without an emergency physician, and 2 (2%) hospitals without a specialist [Figure 22].

Figure 22: Public Functioning Hospitals without Specialists / Emergency Physicians [MoH & MoHE], June 2014



Names of the hospitals that are functioning without a specialist are as follow:

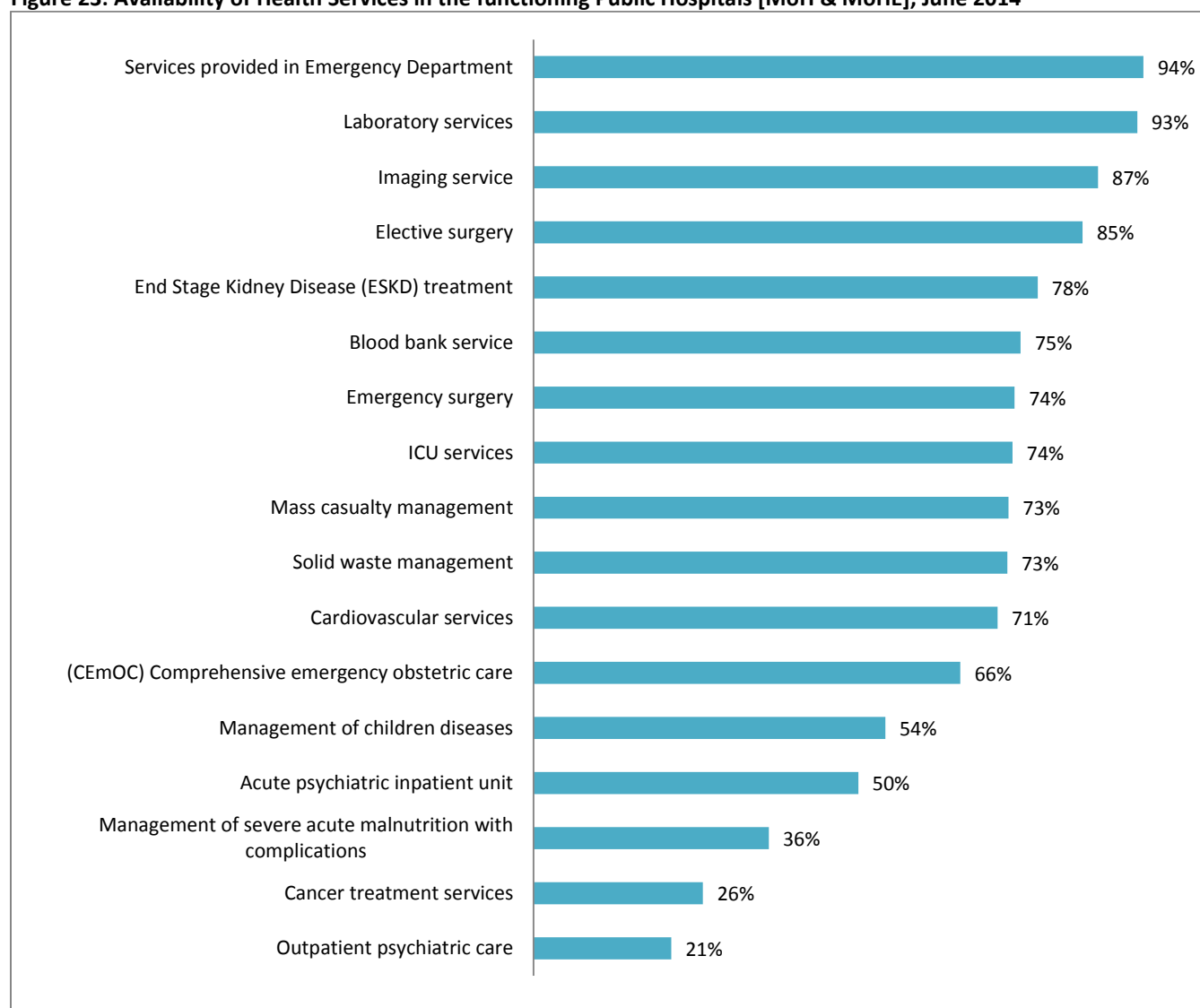
1. Rural Damascus : Qara Hospital, Al-Qalamoun
2. Homs: AL-Shaheed Basil Hospital in Sukhna

7. Availability of 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 functioning public hospitals [MoH & MoHE]: (89/109). As a result of disrupted healthcare delivery and non-functionality of hospitals, limited provision of health services has been observed across governorates, even within functioning hospitals [Figure 23].

Figure 23: Availability of Health Services in the functioning Public Hospitals [MoH & MoHE], June 2014



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

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

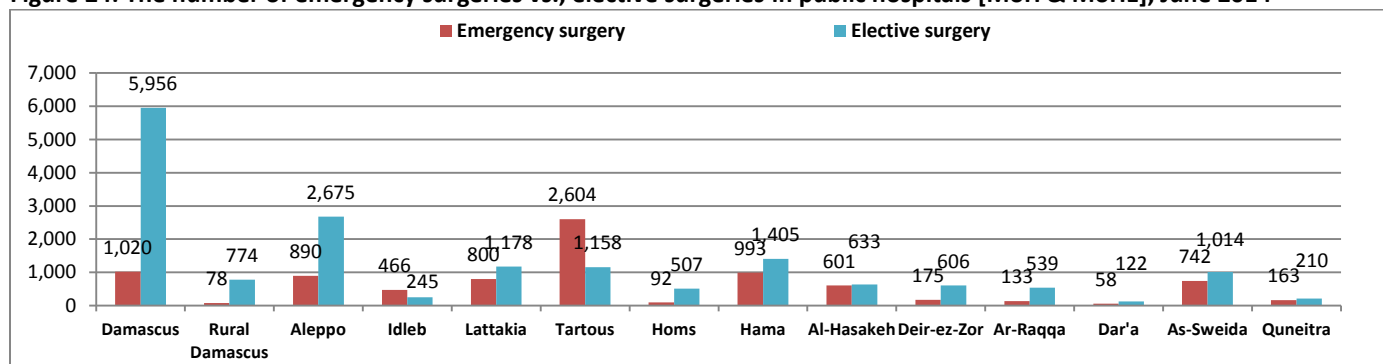
- Emergency and elective surgeries
- Maternal health services [normal deliveries, caesarean sections, and CEmOC]
- Nutrition
- Child Health
- Non-communicable diseases

7.1 Emergency and Elective surgeries:

The number of emergency surgeries to elective surgeries has been assessed at a hospital level, and total numbers were summarized and analyzed at governorate level [Figure 24].

The high figures of elective surgeries in Damascus are reported mainly from Damascus hospital (Almojtahid); total number of cases: **1,169**.

Figure 24: The number of emergency surgeries vs., elective surgeries in public hospitals [MoH & MoHE], June 2014



Analyzing the percentage of total emergency surgeries to elective surgeries, during June 2014, has shown some variations between governorates [Figure 25]:

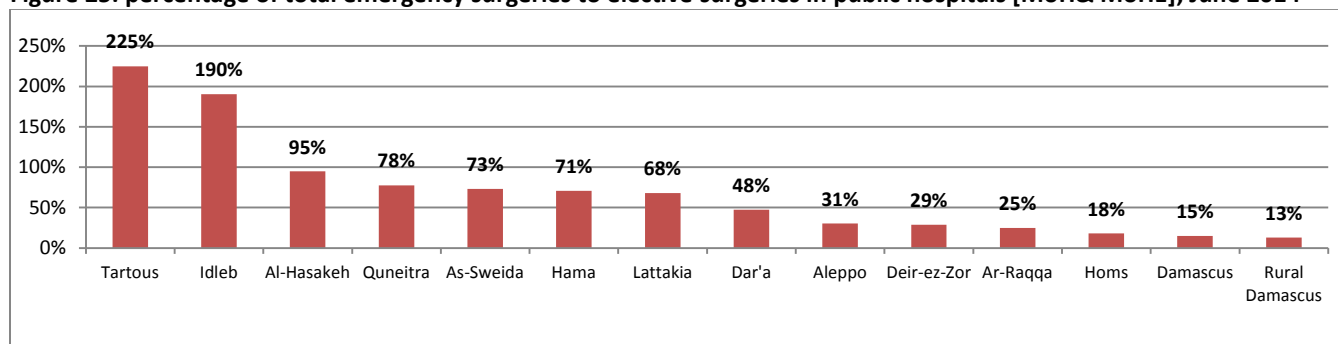
In **Tartous**, the total number of emergency surgeries is more than the double of the elective surgeries. The highest figures are reported from AL-Basil surgical hospital, which is the biggest hospital in Tartous, located in the south eastern part of the governorate and adjacent (close to Hama and Homs). The location of this hospital is also very close to the highway, and majority of the road incidents are received there.

In **Idleb**, the total number of emergency surgeries is almost double of the elective surgeries, which is due to the security situation; emergency surgeries are given higher priority than cold surgeries.

In **Al-Hasakeh**, the national hospital and Al-Malkiah hospital perform most of the emergency surgeries, considering that people in those areas prefer to do the elective surgeries in the private hospitals (e.g., in Al-Malkiah area there are four private hospitals).

In **Quneitra, As-Sweida, Hama, and Lattakia**, the number of emergency surgeries are relatively high because of emergency cases received from surrounding in-secure areas.

Figure 25: percentage of total emergency surgeries to elective surgeries in public hospitals [MoH& MoHE], June 2014



7.2 Maternal health services

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

- Availability of CEmOC (Comprehensive Emergency Obstetric Care)
- Utilization of service (caesarean sections vs., normal deliveries); June 2014 summary figures by governorate, percentage of CSs to normal deliveries, **trend analysis** of the monthly normal deliveries vs., caesarean sections (MoH Hospitals only)

i. Availability of CEmOC (Comprehensive Emergency Obstetric Care)

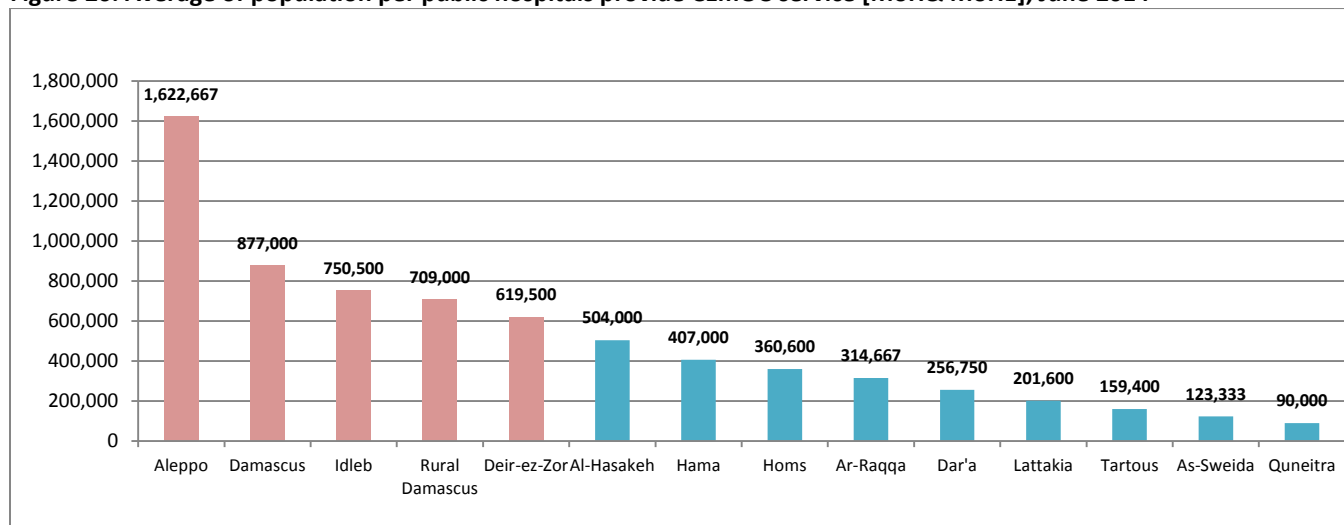
Assessment of the availability of CEmOC (Comprehensive Emergency Obstetric Care) service at public hospitals provides a proxy indicator for the physical availability and geographical accessibility of emergency obstetric services and their distribution across districts in the affected areas.

CEmOC (Comprehensive Emergency Obstetric Care) is considered available if the three components are provided in the hospital (i.e., BEmOC (Basic Emergency Obstetric Care) + caesarean section + safe blood transfusion).

The global standard⁵ for the availability of CEmOC is one hospitals / 500,000 population.

Availability of CEmOC is assessed at public hospitals, and the average of population covered by the hospitals provides CEmOC, is analyzed at governorate level [Figure 26]. Gaps on CEmOC services are in Aleppo, Damascus, Idelib, Rural Damascus, and Deir-ez-Zor.

Figure 26: Average of population per public hospitals provide CEmOC service [MoH& MoHE], June 2014

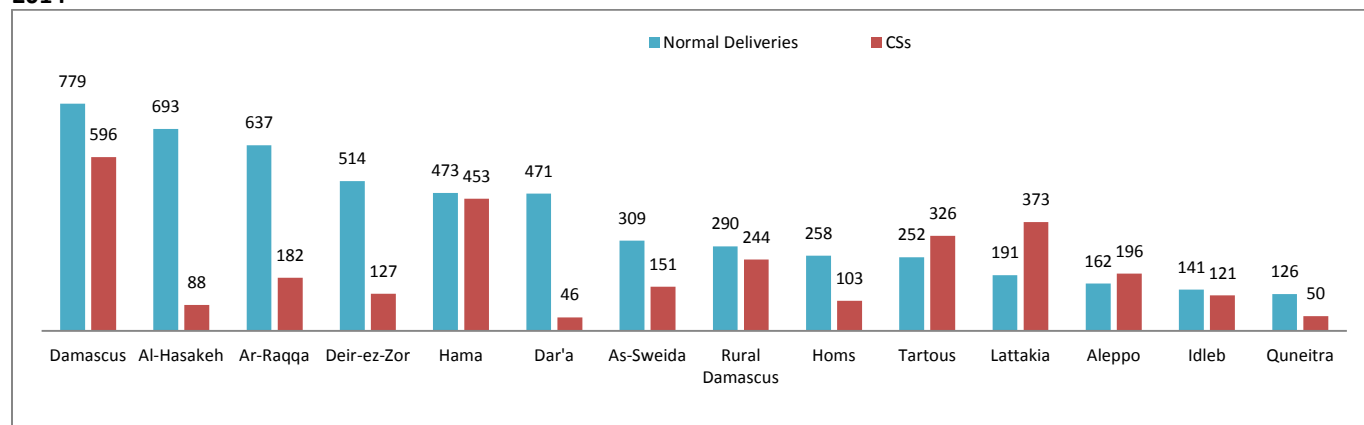


⁵IASC: Global Health Clustercore indicators

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

The numbers of caesarean sections performed at public hospitals (in June 2014) versus the normal deliveries have been analyzed at governorates' level [Figure 27]. The highest numbers are reported from Damascus hospitals [MoH & MoHE].

Figure 27: The No. of normal deliveries and caesarean sections (CSs) performed at public hospitals [Mo H& MoHE], June 2014



iii. Percentage of CS to normal deliveries

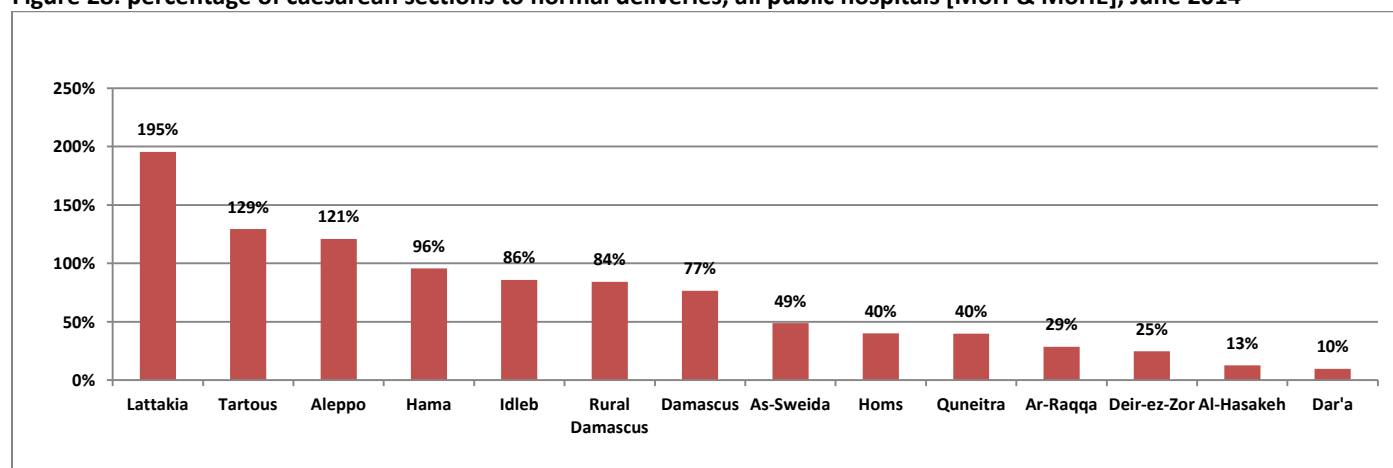
The global norm for the percentage of CS to normal deliveries is 5% to 15%. Based on [Figure 28], 12 governorates are above the threshold.

The high reported figures of caesarian section in Tartous and Lattakia are due to the preference of the pregnant women to have cesarean sections (become like a social or cultural custom), for several reasons, such as:

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

In Aleppo, all high numbers are reported form Al-Bab hospital in northern areas on Aleppo governorate, in which majority of the pregnant women prefer to do caesarean sections, because of the security situation and hassles you could go through if they opted for normal delivery.

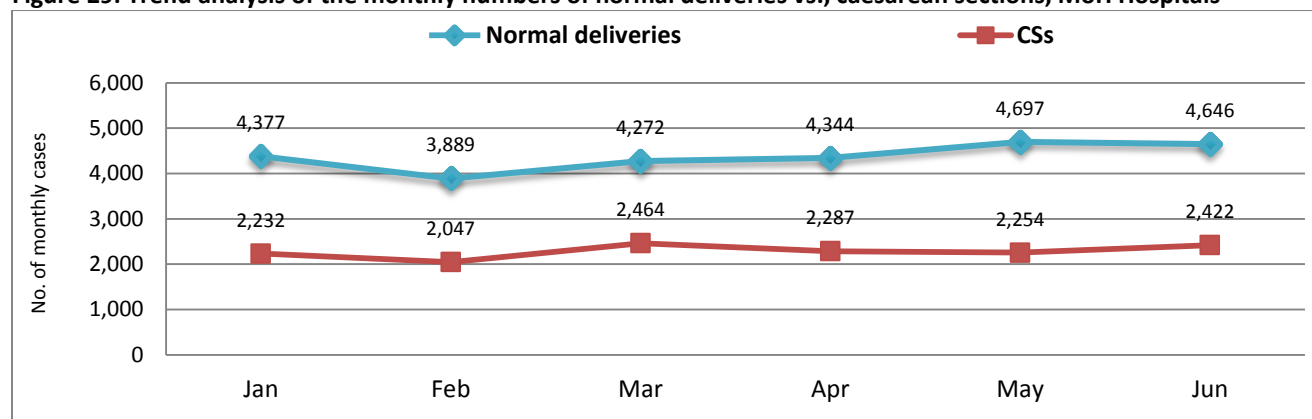
Figure 28: percentage of caesarean sections to normal deliveries, all public hospitals [MoH & MoHE], June 2014



iv. 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 hospitals, from Jan to Jun 2014, is shown in Figure 29.

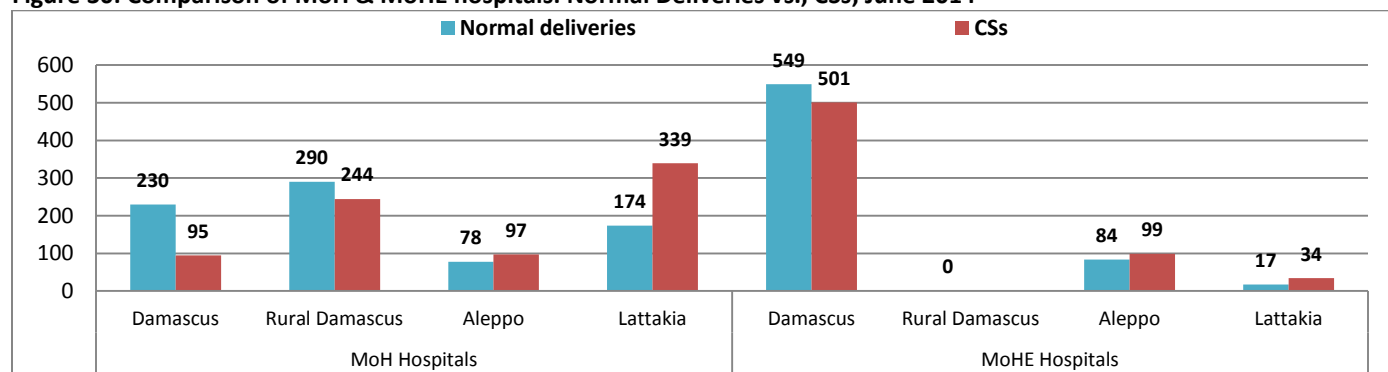
Figure 29: Trend analysis of the monthly numbers of normal deliveries vs., caesarean sections, MoH Hospitals



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

Comparative 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 30.

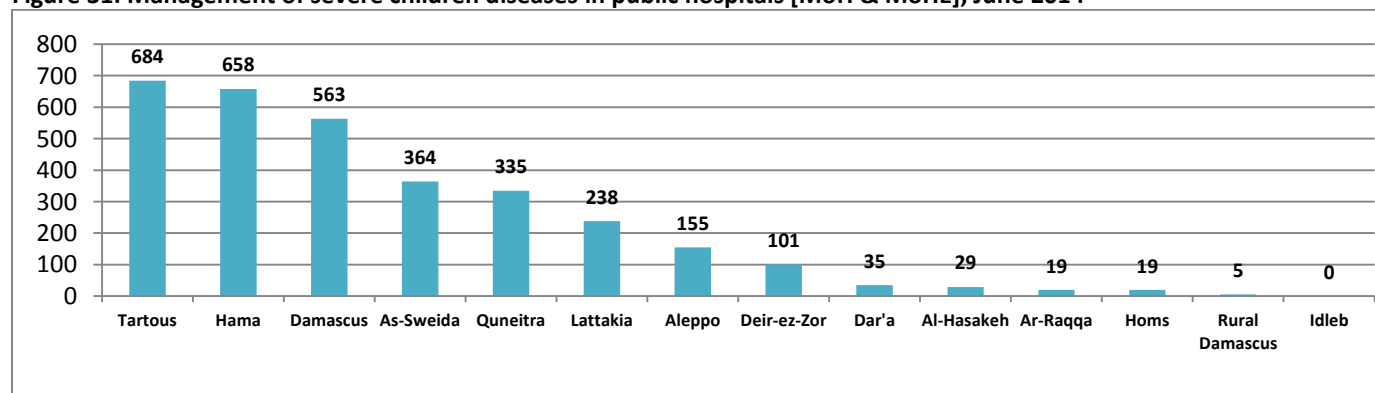
Figure 30: Comparison of MoH & MoHE hospitals: Normal Deliveries vs., CSs, June 2014



7.3 Child Health

Management of children diseases (severe children illnesses) are assessed at hospitals level. Figure 31, shows the distribution of total reported cases of children by governorate.

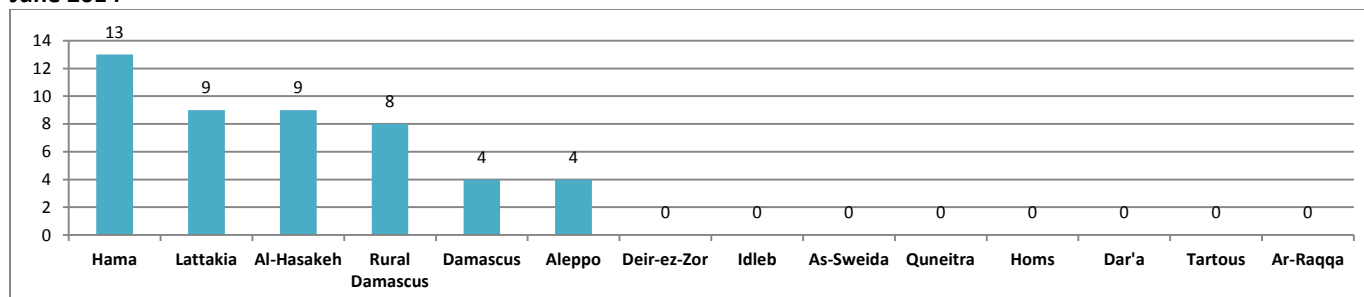
Figure 31: Management of severe children diseases in public hospitals [MoH & MoHE], June 2014



7.4 Nutrition

Monitoring of severe acute malnutrition with complications was conducted at public hospitals level; Figure 32, shows the number of cases during June 2014, at governorate level.

Figure 32: The number of children with severe acute malnutrition with complications in public hospitals [MoH & MoHE], June 2014

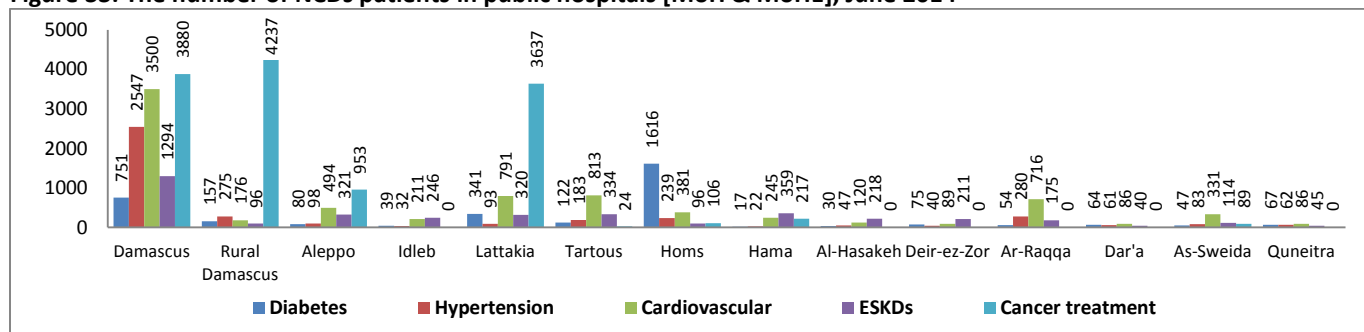


7.5 NCDs (non-communicable diseases)

NCDs were assessed through HeRAMS by checking the availability and utilization of services at hospitals level. The highest numbers of NCDs are reported from Damascus hospitals. Among all NCDs, Cancer patients are the highest figures, reported mainly in Damascus, Rural Damascus, and Lattakia public hospitals. 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, which interprets the high numbers of reported cancer patients.

Cardiovascular patients registered high numbers in Damascus, Aleppo, Lattakia, Tartous, and Ar-Raqqa [Figure 33].

Figure 33: The number of NCDs patients in public hospitals [MoH & MoHE], June 2014

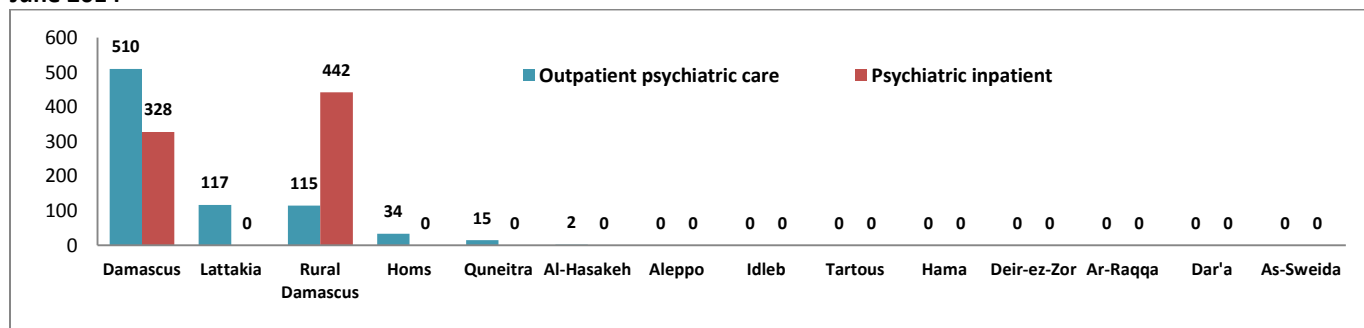


ESKD: End Stage Kidney Disease

7.6 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, at governorate level is shown in [Figure 34].

Figure 34: The number of outpatient psychiatric cases vs., the number of inpatients in public hospitals [MoH & MoHE], June 2014



8. Availability of Medical Equipment

The availability of different types of essential and specialized equipment and supplies has been assessed at hospital level, based on a standard checklist⁶.

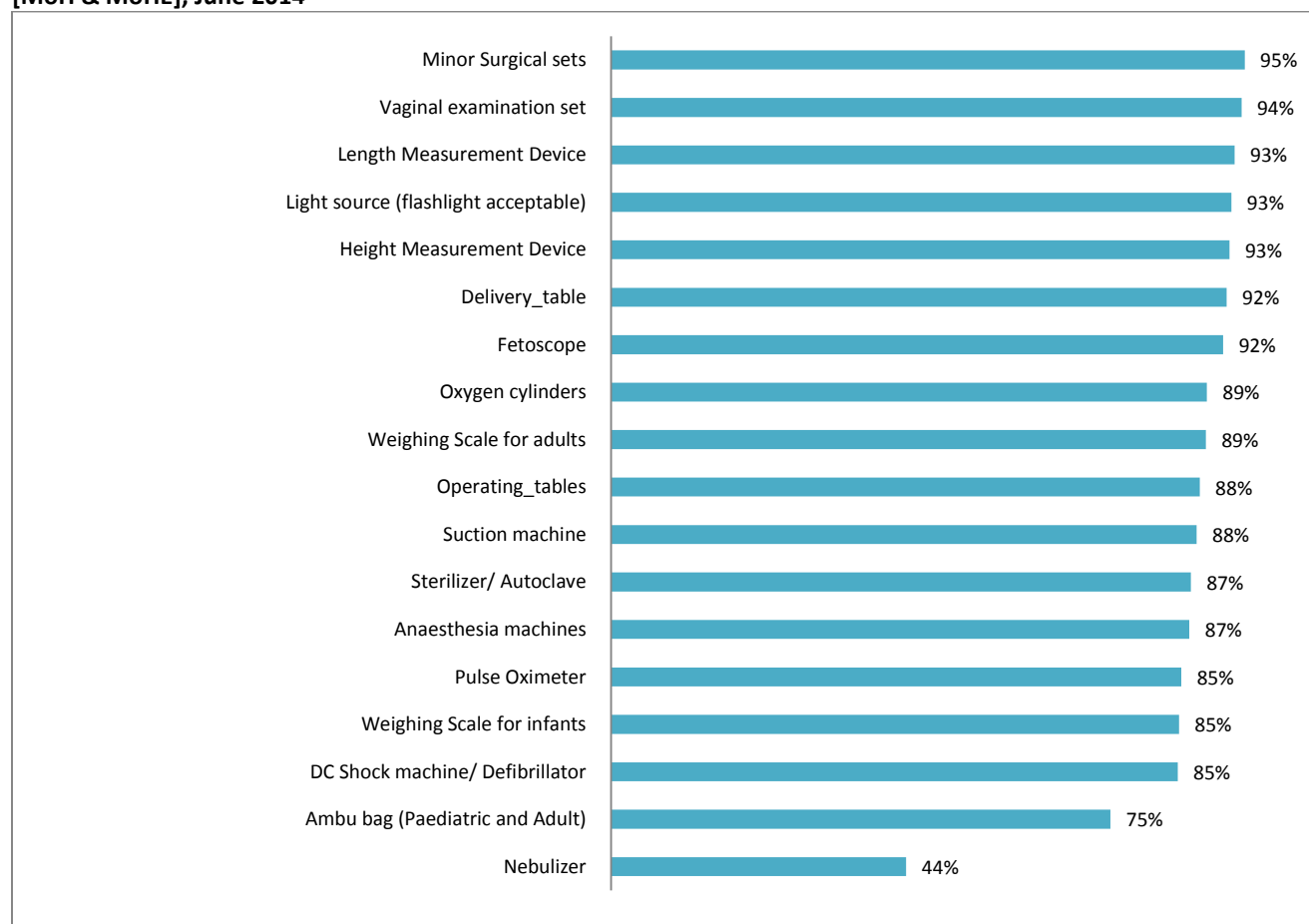
After three years of crisis and irrespective of governorate's security situation, hospitals are suffering of shortage or malfunction of medical devices/ equipment to provide secondary care services. In insecure governorates, medical devices are either destroyed, burned, or malfunctioned, while in safe 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 has been measured across all functioning public hospitals [MoH & MoHE] (89/109), in terms of functional equipment out of the total available equipment in the hospital, which provide good indication for the current readiness of the hospitals to provide the health services, compared to the situation prior to the crisis.

Gaps have been observed, even within the functioning public hospitals. Further details are available on figure below [Figure 35].

Figure 35: Percentage of functional equipment (essential)/ total available equipment, in functioning Public Hospitals [MoH & MoHE], June 2014

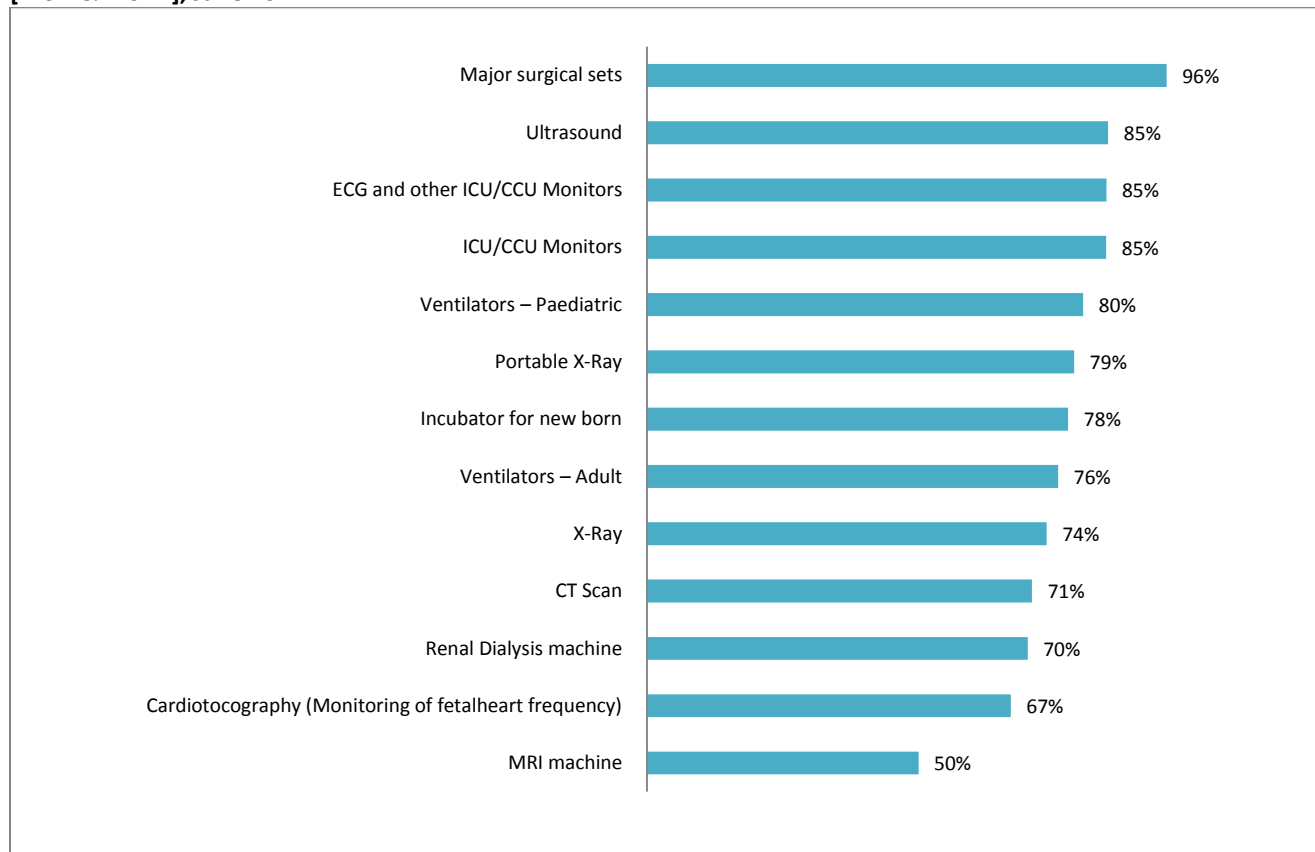


⁶ A more detailed list of essential equipment is available upon request.

Analysis of availability of specialized equipment [Figure 36] has shown many gaps and urgent needs in functional hospitals at different governorates; such as:

- ◆ MRI machines; main gaps are in Aleppo, Dar’a, Deir-ez-Zor, and Hama
- ◆ Cardio-topography (Monitoring of fetal-heart frequency); main gaps are in Deir-ez-Zor, Homs, Al-Hasakeh, Quneitra, and Damascus.
- ◆ Renal dialysis machines; main gaps are in Aleppo, Dar’a, Ar-Raqqa, Deir-ez-Zor, Al-Hasakeh, Idelb, and Hama.
- ◆ CT scanners (portable); main gaps are in Rural Damascus, Idelb, Hama, Al-Hasakeh, Deir-ez-Zor, Ar-Raqqa, and Dar’a.
- ◆ X-Ray machines; main gaps are in Aleppo, Rural Damascus, Idelb, Lattakia, and Ar-Raqqa.

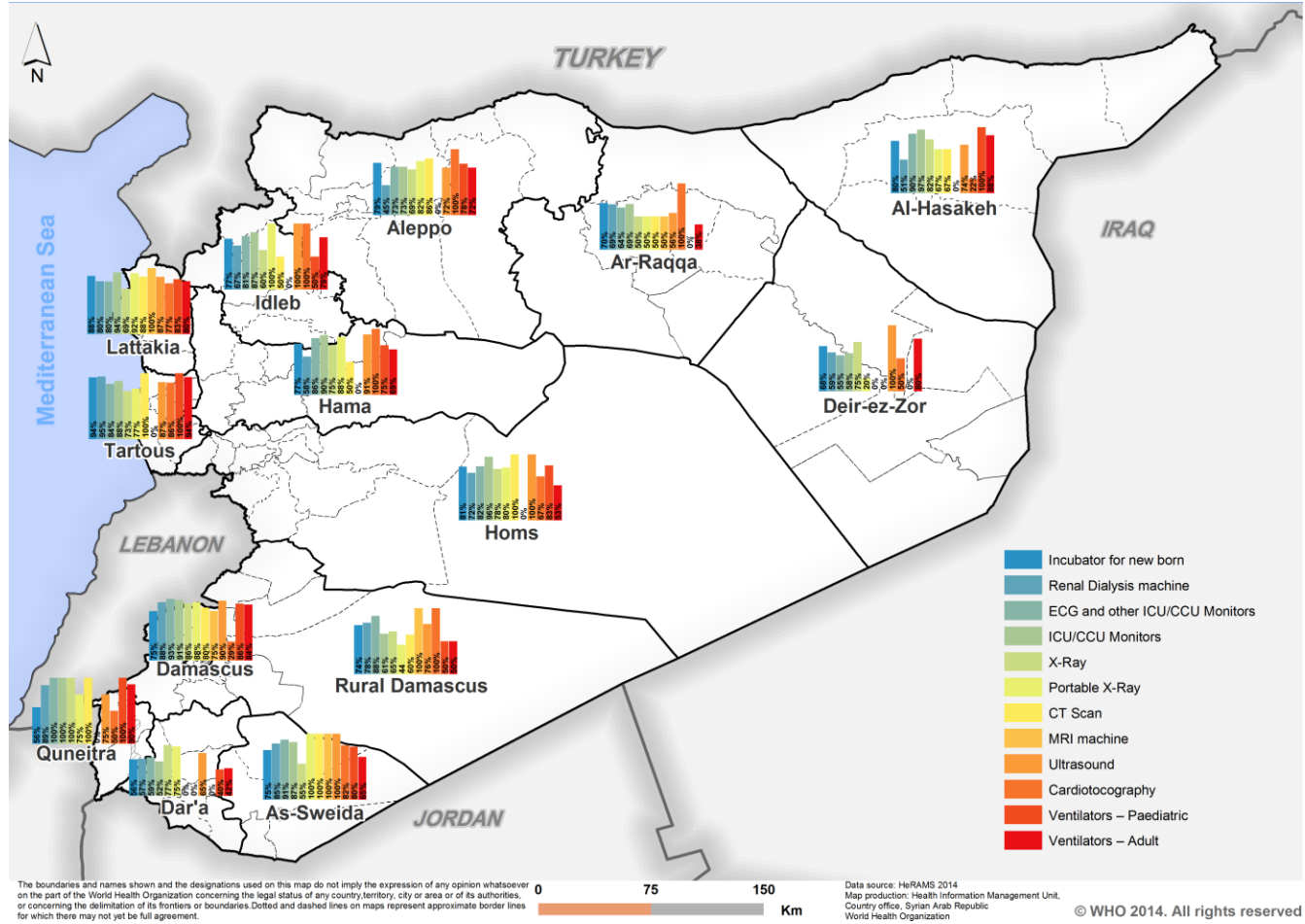
Figure 36: Percentage of functional specialized equipment/ total available equipment in the functioning Public Hospitals [MoH & MoHE], June 2014



The availability of functional specialized equipment at hospitals is visualized on the map below [Map 7], summarized at governorate level. The information provided on the map highlights gaps (malfunction or non-availability) of different specialized medical equipment at governorates’ level, and could be considered as good indication for more focused planning for procurement of equipment and machines.

Percentages of functional specialized equipment/ total available equipment in functioning public hospitals, by governorates, are presented in Map 7.

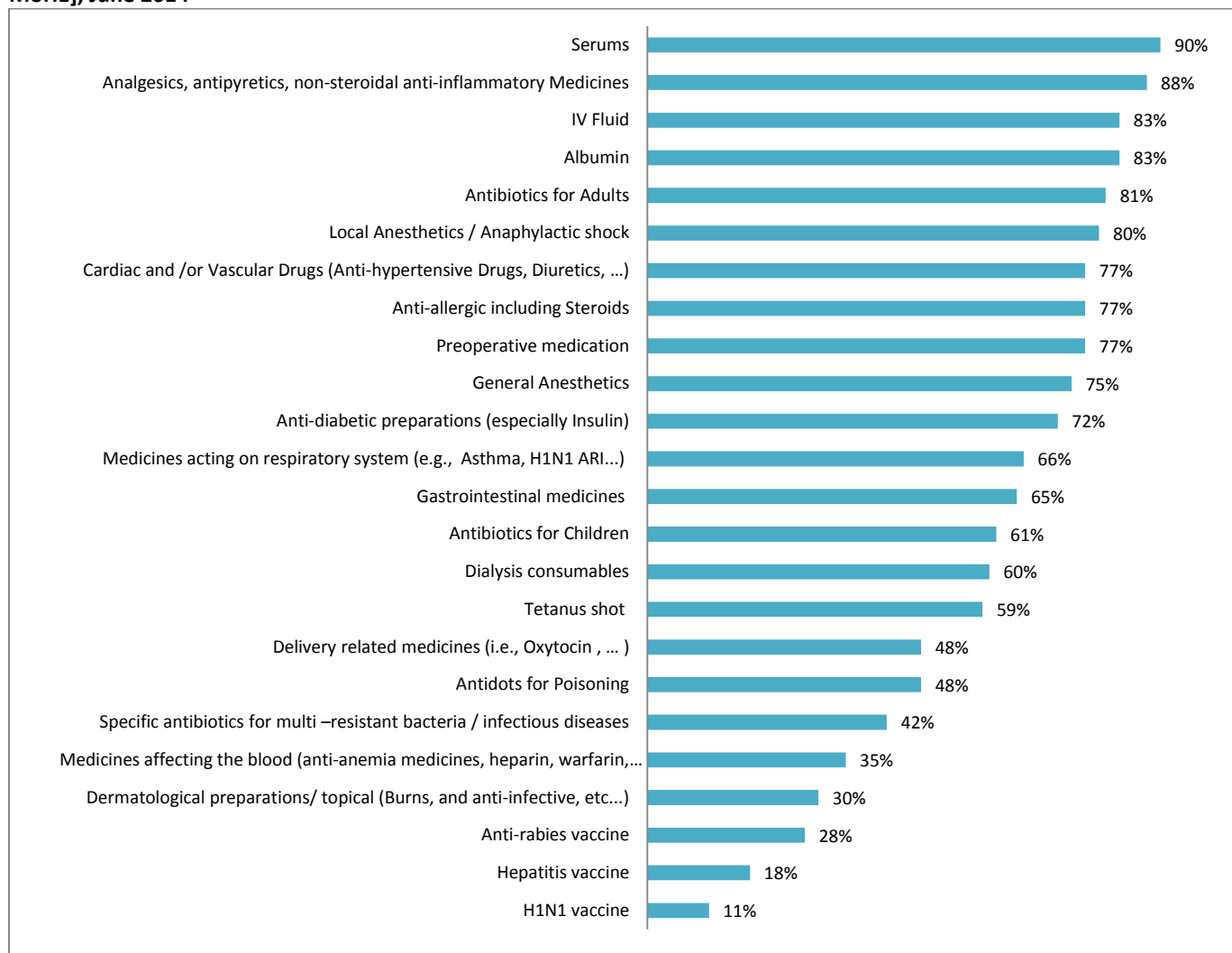
Map 7: Percentage of functional specialized equipment/ total available equipment in functioning public hospitals [MoH & MoHE], June 2014



9. Availability of Medicines & Medical supplies

Availability of medicines and medical supplies at hospitals' level has been 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; gaps are identified accordingly [Figure 37].

Figure 37: Availability of Medicines and medical supplies for one month in the functioning Public Hospitals [MoH & MoHE], June 2014



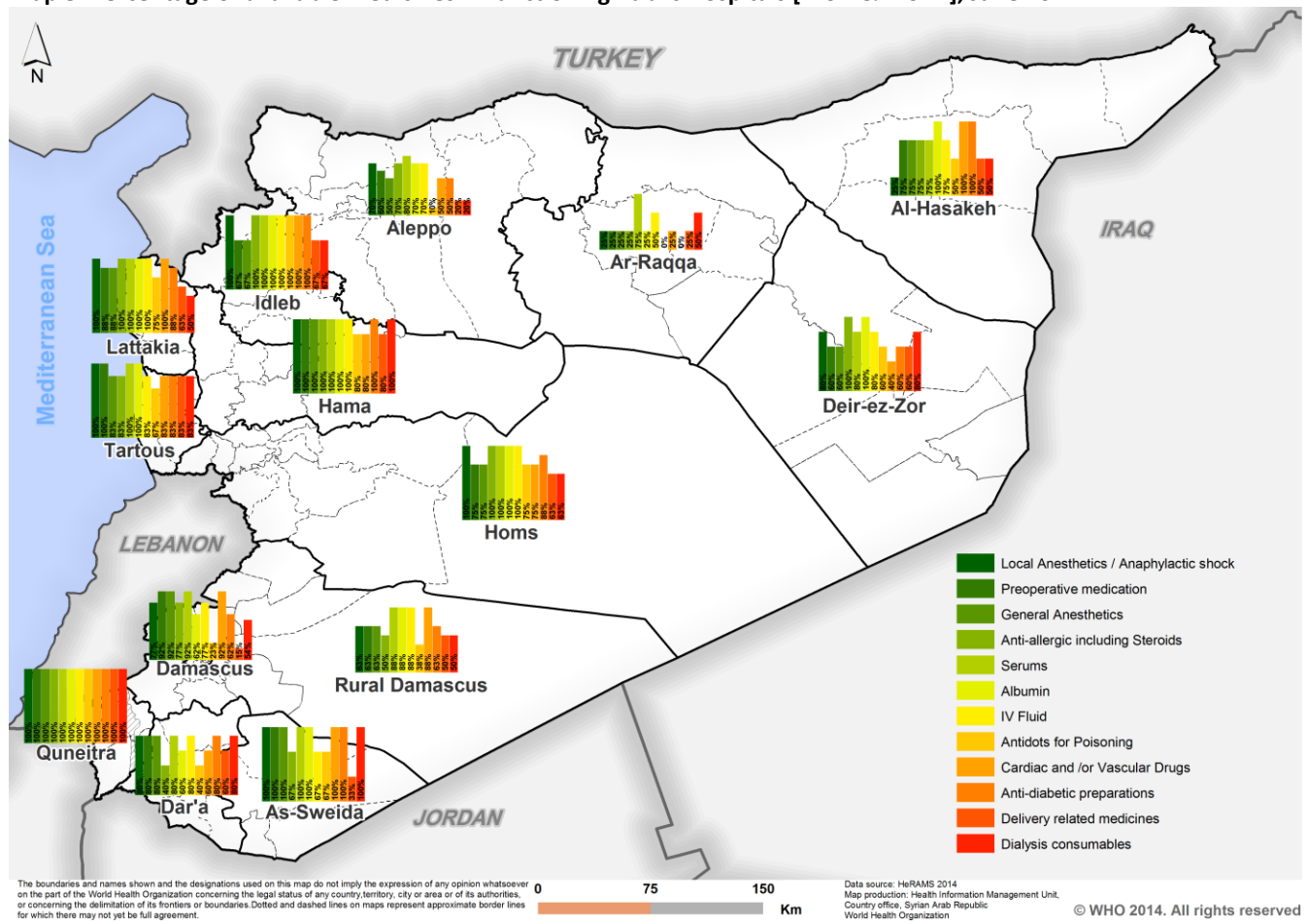
The key gaps on medicines and medical supplies are dermatological preparation (70%), medicines affecting blood (65%), specific antibiotics for multi-resistant bacteria (58%), and Dialysis consumable (40%).

The establishment of the national Essential Medicine List jointly between MOH and WHO during 2013, and the revision of this list during 2014 have positively impacted the provision of medicines inside public hospitals. 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 to 53-69% after WHO efforts to provide this item on a larger scale during last year.

Percentages of available medicines in functioning Public Hospitals, by governorates, are presented in Map 8.

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

Map 8: Percentage of available medicines in functioning Public Hospitals [MoH & MoHE], June 2014



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