

Helpdesk Report: Libyan Health Service Capacity

Date: 1 February 2011

Query: What capacity has the Libyan health service to respond to the current crisis including: technical capacity of staff; reliance on foreign health workers; medical supply distribution system; decentralisation of services; capacity of the private sector? Where possible look specifically at the Misurata municipal area.

Enquirer: DFID Libya

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1. Overview

General information on Libyan Health Service Capacity:

Primary healthcare includes:

- 1165 primary healthcare centres and units. Centres serve from 10,000 to 26,000 citizens. Units serve from 5,000 to 10,000 citizens.
- 39 polyclinics staffed by specialised physicians containing laboratories as well as radiological services and a pharmacy. These serve approximately 50,000 to 60,000 citizens.
- 23 communicable disease centres.

Secondary healthcare includes 36 general hospitals and 26 rural hospitals for those referred from the first level. Tertiary healthcare includes 21 specialised hospitals.

The Magharebia news website (see section 6) reports that the health situation in Libya is worse than the official picture would have you believe, in particular in relation to the skewed distribution and access issues for services. Furthermore the report points out that the government specifically avoids proper evaluation of the system in order to be able to make itself look better. It makes the point that virtually the whole of Eastern Libya is served by 1 hospital in Benghazi. Additionally, the report highlights a number of problems related to medical education.

News on the Libyan health service response to the crisis, March 2011:

- Surgical beds are 80% occupied at Tobruk medical centre in Libya. Intensive care unit beds are at full capacity and all eight ventilators are occupied.

- Reports from refugees from the Gaddafi-controlled areas in the west are that medical staff and patients are being forcibly held and threatened by the government forces.
- Overall, health facilities have been able to deal with the influx of wounded but they are facing shortages in the supply of specific medical materials like anaesthesia and surgical sets.
- Misurata hospital has been damaged in fighting. Broken glass, rubble and wrecked medical equipment litter the floors of the abandoned medical facility after coalition warplanes failed to stop Col Gaddafi's tanks from shelling the western Libyan city.

Technical capacity of staff:

Healthcare personnel per 100,000 population, 2006 data:

- 125 physicians
- 25 dentists
- 25 pharmacists
- 480 nurses and midwives
- 230 paramedical staff (only 2004 data available)

General information on staff capacity:

- The standard of nursing care in Libya is inadequate due to poor quality nursing education.
- There is a shortage of qualified physicians to work in public healthcare facilities. According to estimates in 2006, there are around 40% of facilities without doctors, which is one of the main reasons for self-referral to the secondary and tertiary health care hospitals.
- There is a shortage of trained midwifery staff to take care of antenatal and postnatal care.
- A system for human resources training on new procedures or techniques is non-existent. The educational system behaves as if specialists do not need continuing education.
- The human resource situation is critical in paramedical specialties with absence of diversity, narrow range of professions available and the low level of training.
- Libya is lacking specialists in the areas of anaesthesia, cardiology, and radiology.
- Nursing is not taught to degree level, and curricula are out of date and lacking in clinical experience content.

Recent news on staff training:

- The first round of mass casualty management training for paramedical staff was conducted at Mesaaed Hospital in Libya from 22 to 23 March 2011 by WHO and the Egyptian Ministry of Health.
- WHO is establishing a training centre in Tobruk Medical Center in Libya. Training on mass casualty management is due to start on 25 March and will include 3 staff members from each key hospital in Western Libya.

Reliance on foreign health workers

Different categories of staff, total and proportion Libyan nationals (WHO, 2007):

- 8847 physicians, 84% Libyan
- 1050 pharmacists, 95% Libyan
- 32349 nurses and midwives, 94% Libyan
- 16700 technicians, 91% Libyan

General information on reliance on foreign health workers:

- Nursing practice is dependent on expatriate staffing. The WHO 2007 report says that, contrary to the data, most qualified nursing staff is not Libyan.
- The proportion of imported human resources in Libya has dropped from more than 80% in the seventies to less than 8% in 2005. It is unlikely that the reliance in Libya on imported HR will stop completely.

News on reliance on foreign health workers, March 2011:

- In the first 5 days of violence in February, 1800 wounded were treated at the hospital in Benghazi, according to an MSF team. In Benghazi, the International Medical Corps assessment team found a shortage of hospital staff, particularly nurses, as many were foreign and have fled the country. This exodus has created serious gaps in critical care, especially in specialties such as paediatrics, gynaecology, and orthopaedic and reconstructive surgery.
- Although doctors are coping, many foreign nurses working in eastern Libya have now fled, leaving gaps in many health facilities. Medical students are doing their best to fill some of the gaps.

Medical supply distribution system

Until recently, the National Pharmaceutical and Medical supplies Company provided pharmaceutical supplies centrally to both the public and private sector. Now the Libyan professionals are allowed to have agencies for the international pharmaceutical companies and they are able to provide medicines and supplies of international quality to both the public and private health sector.

Distribution in the Libyan pharmaceutical sector of the Libyan healthcare system has endured several limitations that hinder efficient performance. Such limitations include, but are not limited to, weak transportation systems, obsolete inventory management systems (medicines expire in storage), lack of coordination between storage and transportation systems, lack of computerised information systems, and weak security and monitoring systems that lead to seepage of medicines outside the healthcare system.

News on medical supply distribution, March 2011:

- WHO has established a medical supply management system in Misrata and Tobruk within Libya, as well as at the Libyan side of the border with Egypt. A registration point for medical supplies has been created at each location, and a logistics support hub in Tobruk will be managed by the Libyan National Transitional Committee.
- At present, the medical supply line from Benghazi manages to reach out to a range of health facilities, but the volatility of the situation, coupled with shifting frontlines means that this supply chain is getting dangerously long.
- Highly insecure roads mean that drivers take great risks in trying to reach the medical facilities, often having to drive for hours in order to deliver the supplies. As the situation in Libya continues to develop, the respect for medical facilities, vehicles and personnel by all parties is paramount, and the only way patients will be able to receive urgent medical care.

Decentralisation of services

In 2000, the General people's congress (GPC) decided to dismantle the central body, the Secretariat of health, in order to allow decentralisation of authority at Shabiat level. The decentralisation process devolved considerable administrative and budgetary power to the Shabia level. While the decision was made to bring resource allocation decisions close to

their point of impact, this lack of centrally-determined policy guidelines, or oversight and monitoring systems, or organised information systems, created the unusual situation that the overall allocation of resources within public health care in Libya were simply not known.

All hospitals in Libya are considered as independent institutions based on the act no. 09 from General People's Congress, which was issued in 2004. The law gives the hospitals authority to have their own budgets and to have special accounts in the banks for income.

All hospitals are managed by secretariats of health at Shabiat (district) level except Tripoli Medical Centre, Tajoura Cardiac Hospital and Shabrata cancer center, which are centrally run.

Capacity of the private sector

The small but growing private health sector continues to be hampered by the lack of an overall policy approach to the sector from the health authorities. In the absence of a clear and consistent government policy, private clinics face deep uncertainty and cannot afford to invest in their expansion and development.

The total number of private health facilities in Libya is 2194, distributed as follows:

- 67 inpatient clinics
- 414 outpatient clinics,
- 166 laboratories ,
- 1543 Pharmacy, and
- 4 diagnostic centers

Key findings related to inpatient clinics:

- 67 inpatient clinics were operating at time of the study, with 1433 beds.
- 42% of all beds in inpatient clinics are in Tripoli, 12.6% in Misurata, 11.5% in Benghazi, 11.3% in AL nikat al Khams.
- 52 inpatient clinics are practicing general activities and the rest are specialised and 40% of all specialised inpatient clinics are Gynecology and obstetric care.
- The number of labor force in inpatient clinics is 3661, 3156 Libyans and 505 non-Libyans.
- 10867 deliveries have taken place in private clinics, 31% of all deliveries through caesarean section.

Key findings related to outpatient clinics:

- The number of outpatient clinics operating at the time of the study is 414
- 44.6% of all outpatient clinics are general practice and 55.4% are specialised clinics.
- The number of labor force in outpatient clinics 2872, 2259 Libyans and 613 non-Libyans

Key findings related to pharmacy:

- The number of pharmacies operating at the time of the survey is 1543, 20.8 per ten thousand people.
- The number of labour force is 3733. 57.1% from specialties 57.1%, pharmacy technicians 32%, doctors 8% and other disciplines 2.9%.
- 33.6% of this workforce are in Tripoli and 13.1% in Aljafarah.

Distribution of the labour force in private health laboratories, Libyan and non-Libyan by occupation in the Misurata district:

- Specialist laboratories and analysis: 10 Libyan, 0 non-Libyan
- Technical analysis: 28 Libyan, 1 non-Libyan

- Other: 12 Libyan, 1 non-Libyan
- Total: 50 Libyan, 2 non-Libyan

Numerical distribution of the workforce in private pharmacies according to the occupation in the Misurata district:

- 171 pharmacists
- 192 assistant pharmacists
- 8 physicians
- 8 others
- 379 total

The distribution of private health facilities by type in the Misurata district:

- 10 inpatient clinics
- 40 outpatient clinics
- 1 diagnostic centre
- 14 laboratories
- 150 pharmacies

Of the 10 inpatient clinics in Misurata, 7 are general and 3 are specialist. 2 specialise in women, children and labour. The other specializes in eye health.

Of the 40 outpatient clinics in Misurata, 14 are general and 26 are specialist. 5 specialise in women, children and labour ; 1 in urology and infertility, 1 in eye health, 1 in orthopedics, 15 in dentistry and 3 others.

2. Key document: health system profile

Health System Profile. Libya

WHO, 2007

<http://gis.emro.who.int/HealthSystemObservatory/PDF/Libya/Full%20Profile.pdf>

Health status and demographics

Basic health status indicators for Libya are mixed. Life expectancy and health-adjusted life expectancy (HALE) are among the best among the MENA region at 73 and 64 years respectively. On the other hand, maternal, neonatal, and infant mortality rates- 51 per 100,000 live births, 11 per 1000 total births and 24 per 1000 live births respectively- are on par with MENA, but behind the averages in OECD member countries.

Health system and organisation

The public health sector is the main health services provider. Healthcare including preventive, curative and rehabilitation services are provided to all citizens free of charge by the public sector. Almost all levels of health services are decentralised. All hospitals are managed by secretariats of health at Shabiat (district) level except Tripoli Medical Centre, Tajoura Cardiac Hospital and Shabrata cancer center, which are centrally run.

Organisational structure of public system

The General People's Committee for health and environment is responsible for planning, financing, resource allocation, regulation, monitoring and evaluation as well as provision of health services through the Secretariat of health and environment and specialised centers at the central level and through secretariats of health in 22 Shabiat.

The health care delivery system operates on primary, secondary and tertiary levels.

Primary health care includes:

- 1165 primary healthcare centres and units. Centres serve from 10,000 to 26,000 citizens. Units serve from 5,000 to 10,000 citizens.
- 39 polyclinics staffed by specialised physicians containing laboratories as well as radiological services and a pharmacy. These serve approximately 50,000 to 60,000 citizens.
- 23 communicable disease centres.

Secondary health care includes 36 general hospitals and 26 rural hospitals for those referred from the first level. Tertiary healthcare includes 21 specialised hospitals.

Private health care system

A growing private health sector is emerging although currently it has a limited role. The government has decided to encourage the expansion of private clinics and hospitals.

Country-wide data on the private sector:

- 84 inpatient clinics
- 1361 number of beds
- 431 outpatient clinics
- 259 dental clinics
- 1502 pharmacies

Data on private health facilities in the Misurata district:

- 9 inpatient clinics
- 112 number of beds
- 27 outpatient clinics
- 25 dental clinics
- 81 pharmacies
- (More recent data in section 3)

The small but growing private health sector continues to be hampered by the lack of an overall policy approach to the sector from the health authorities. In the absence of a clear and consistent government policy, private clinics face deep uncertainty and cannot afford to invest in their expansion and development. There are several ways in which policy instability creates uncertainty. First, these clinics are granted licenses to operate by the basic people's congresses (BPCs), but without clear criteria or inspection policies. This leads clinics to fear that their license could be revoked arbitrarily by the BPCs. Second, clinics rely on healthcare professionals who work in the public sector and transfer to the private sector. Recent decree has barred this "dual practice" from January 2006, which obviously has serious implications for private clinics. This decree is seen as unworkable since most doctors rely on private work for most of their income, but its existence increases uncertainty for private clinics. Finally, the absence of health insurance means that private providers are restricted to basic activities such as simple operations.

Decentralisation

In 2000, the General people's congress (GPC) decided to dismantle the central body, the Secretariat of health, in order to allow decentralisation of authority at Shabiat level. The decentralisation process devolved considerable administrative and budgetary power to the Shabia level. With no authority over Shabia and lower level health committees, the central health authorities were powerless to enforce or monitor pending requirements through formal methods such as the use of certificates of need. While the decision was made to bring resource allocation decisions close to their point of impact, this lack of centrally-determined policy guidelines, or oversight and monitoring systems, or organised information systems, created the unusual situation that the overall allocation of resources within public health care in Libya were simply not known. In 2003, the General health inspector was appointed at the

central level by the General People's Committee to supervise the Shabiat secretariats of health without any executive authority.

From 2006, there has been a move towards centralisation and synchronisation at various levels. The country has been divided into 22 Shabiat and GPC decided to re-establish the secretariat of health under the name of General Peoples Committee for Health and Environment and giving it the authority to inspect and supervise the central institutions and the secretariats of health at the Shabiat level.

All hospitals in Libya are considered as independent institutions based on the act no. 09 from General People's Congress, which was issued in 2004. The law gives the hospitals authority to have their own budgets and to have special accounts in the banks for income. The hospital director has the authority to recruit all cadres of health staff according to the rules and regulations.

Health care expenditure

In comparison to its MENA peers, Libya spends much less on health care as a percent of GDP about 3.3%- but similar amount in absolute terms. When adjusted for purchasing power differences across countries, Libya spends only USD 222 per person per annum. The Government spends 60 million Libyan dinars (LD) annually for medical treatment of Libyan citizens abroad. More is spent out-of-pocket by Libyans travelling for treatment to Arab countries and Europe.

In 2006, 30.5% of public health expenditure was on staff costs, 30% on drugs and supplies and 24% on investment.

Human resources

Health care personnel per 100,000 population, 2006:

- 125 physicians
- 25 dentists
- 25 pharmacists
- 480 nurses and midwives
- 230 paramedical staff (only 2004 data available)

Distribution of different categories of staff by Libyan/non-Libyan:

Personnel (number)	Libyans	non-Libyans	Total
Physicians	7429	1418	8847
Dentists	988	114	1102
Pharmacists	1000	50	1050
Nurses & midwives	30273	2076	32349
Technicians	15196	504	16700
Admin	37745	0	37745
Total	92631	4160	96791

The phenomenon of public sector employment being used as the welfare distribution mechanism is common across the Libyan public sector, particularly in health and education. Local control of health budgets has enabled some Shabiat to increase administrative and nursing staff to extremely suspect levels, as noted by the general planning council health care committee report. According to figures from the Inspector general of health, in Ghat 65% of registered health workers are nurses versus a country average of 39%, while in Kufra 64% of health workers are administrators versus a country average of 31%, a figure which is considered high by the WHO. Experts estimate that around 30% of all registered nurses are inactive.

The historically high quality of Libyan physicians, achieved through an excellent education system and testified to by the enormous numbers now working abroad, is under threat. During the sanctions, Libyan doctors found it hard to obtain high quality continuous education, and although now efforts are now being made to redress the situation with the help from doctors of Libyan origin working abroad, a knowledge deficit still remains. Finally, Libya still finds itself lacking in specialists in a number of key areas such as anaesthesia, cardiology and radiology, despite enormous number of medical students, and the funds spent on scholarships for doctors to specialise abroad.

The standard of nursing care of Libya is also inadequate due to poor quality nursing education. Nursing practice is dependent on expatriate staffing. Most qualified nursing staff is not Libyan. Nursing is not taught to degree level, and curricula are out of date and lacking in clinical experience content.

Access and coverage

Owing to the large number of health facilities, access to primary health care is not an issue in Libya. According to official figures 100% of the population has access to health services. Around 90% pregnant women are attended by trained health personnel and 99% of all deliveries are attended by trained personnel. Infants attended by trained personnel is also very high at around 98%. More than 98% of the population has access to safe drinking water and adequate excreta disposal facilities.

The national Expanded Programme on Immunisation (EPI) is successful, reaching high routine immunisation coverage and convincing the population of the importance of childhood immunisation. During the past 5 to 6 years, this programme has faced some administrative and managerial problems that have affected its continuity and performance. The reporting system as well as the vaccine-preventable diseases surveillance system has been affected consequently. In 2004, the Libyan Arab Jamahiriya reported high routine immunisation coverage (97% for BCG, DPT3, OPV3, 85% for HBV3 and 93% of infants fully immunised.

There direct is access to specialist (ambulatory and hospital) services without any GP gate keeping role. The referral system is disorganised and needs improvement. Many centres operate on an open access basis. Patients needing basic health care can go directly to the secondary or tertiary hospitals without referral from lower levels leading to overburden on referral level facilities.

Infrastructure for primary healthcare

Total number of health facilities in Libya (and in Misurata):

- Polyclinics, 37 (4)
- Primary healthcare centres and units, 1382 (68)
- Communicable disease centre, 23 (2)
- Total, 1442 (74)

Generally the quality of Primary Healthcare (PHC) services needs improvement. The focus has been more on increasing the quantity rather than quality. Despite availability and high accessibility of services, there is a general lack of satisfaction by the general public, evident by increasing utilisation of private sector health facilities and self-referral to secondary and tertiary care facilities for minor ailments and basic services.

Some of the key issues are highlighted below:

- High expectations of patients are not met by the services provided at primary health care facilities due to various reasons.
- There are no defined catchment areas for health facilities with non-availability of information on number of people served by a facility. This leads to difficulties in calculating indicators of utilisation. Instead, there is more reliance on surveys for collecting information rather than a routine information system.

- There is a shortage of qualified physicians to work in PHC facilities. According to estimates, currently there are around 40% of facilities without doctors, which is one of the main reasons for self-referral to the secondary and tertiary health care hospitals.
- There is a shortage of trained midwifery staff to take care of antenatal and postnatal care.
- Outreach services are limited to school health services, which include examination, vaccination, health education and hygiene.
- Health education material is not available in primary health centres and units and sometimes there is shortage of medicines.

There is a plan to register the catchment population of each health facility, which would help improve the availability and quality of information.

Secondary/tertiary care

Secondary and tertiary care is provided through a network of general hospitals in rural and urban areas and specialised hospitals. There are a total of 84 hospitals with total bed capacity of 19950 beds, 3.7 beds per 1000 population. These facilities are besides the social and rehabilitation services supervised by the social solidarity fund.

Almost all levels of health services are decentralised. All hospitals are managed by secretariats of health at shabiat level except Tripoli Medical Centre and Tajoura Cardiac Hospital and Shabrata cancer center, which are centrally run.

Number of hospitals and beds in Misurata:

- 2 specialised hospitals
- 3 general hospitals
- 1 rural hospital
- total of 6 hospitals with 1840 beds

Number of private health facilities and beds in Misurata:

- 9 inpatient clinics
- 112 beds
- 27 outpatient clinics
- 25 dental clinics
- 81 pharmacies

Pharmaceuticals

Until recently, the National Pharmaceutical and Medical supplies Company provided pharmaceutical supplies centrally to both the public and private sector. Now the Libyan professionals are allowed to have agencies for the international pharmaceutical companies and they are able to provide medicines and supplies of international quality to both public and private health sector.

Drugs and medical equipment used to be supplied solely by the National Pharmaceutical and Medical Equipment Company, which is a public company. The government has decided to allow the private hospitals and specialised private companies to import drugs. The National Committee for Drugs is charged to review the national standard list of drugs and to formulate the norms and standards for drug safety.

Technology

Total number of advanced medical equipment in Libya (and in Misurata):

- CT scan 26 (3) public sector, 15 (1) private sector
- M.R.I. 12 (2) public sector, 8(2) private sector
- Angiography 8 (0) public sector, 3 private sector (0)
- Radiotherapy 4 (0)

- Kidney Stone 3 (0)

3. Information from WHO Regional Office for the Eastern Mediterranean (EMRO)

Situation Report #9, Libya, Yemen, Bahrain, 24th March 2011

Strategic Health Operations Centre of EMRO

http://www.emro.who.int/eha/pdf/libya_situationreport_9_24_3_2011.pdf

Health response in Libya:

- The first round of mass casualty management training for paramedical staff was conducted at Mesaaed Hospital in Libya from 22 to 23 March by WHO and the Egyptian Ministry of Health.
- WHO is establishing a training centre in Tobruk Medical Center in Libya. Training on mass casualty management is due to start on 25 March and will include 3 staff members from each key hospital in Western Libya.
- WHO has established a medical supply management system in Misrata and Tobruk within Libya, as well as at the Libyan side of the border with Egypt. A registration point for medical supplies has been created at each location, and a logistics support hub in Tobruk will be managed by the Libyan National Transitional Committee.
- WHO is coordinating with health partners to deliver critical medical needs to Libya. Supplies include five Italian trauma kits, five surgical consumables kits and five Inter-Agency Emergency Health Kits.
- WHO is coordinating with the Egyptian Ministry of Health and the Libyan National Transitional Committee to establish a medical evacuation mechanism from Libya to the Egyptian-Libyan border for critical cases.
- A total of five injured people were evacuated from Libya into Egypt on 23 March, of whom four suffered from compound fractures and one from severe burns. Patients were referred to hospitals in Marsa Matrouh and Alexandria.
- An additional four people suffering from head injuries are due to be evacuated from Libya to Egypt on 24 March.

Surgical beds are 80% occupied at Tobruk medical centre in Libya. Intensive care unit beds are at full capacity and all eight ventilators are occupied. Medical evacuations from Ajdabia to Tobruk are being provided mainly for weapons-related injuries and surgical emergencies. There are severe shortages of food, medical supplies and clean drinking-water within Libya

At the Egyptian border:

- there has been a cumulative total of 20 deaths at the Egyptian border
- WHO has provided equipment to clinics in order to offer full primary health care services and first aid to patients at the first contact points at the crossing area
- the number of patients seen in clinics at the border on 22 March is 411. A total of 8570 patients have been seen in the clinics since 22 February
- WHO public officers have reported no cases of acute watery diarrhoea (AWD), fever, rash or meningitis
- a total 17 cases of acute respiratory infections were reported as of 23 March
- one case of scabies has been detected

At the Tunisian border:

- from 15 to 19 March, the number of daily medical consultations carried out at the Choucha camp was very high (an average of 1380 consultations per day), in spite of the steady decrease in the total size of the population. This has resulted in medicines being prescribed in large quantities

- high numbers of medical consultation rates cannot be explained by an epidemic situation, even though the proportion of consultations for respiratory pathologies remains high. They cannot also be explained by populations seeking services due to scarce access to public health care in Libya. Other reasons must be considered, such as re-consulting due to therapeutic failure, prolonged treatment, or multiple consultations for the same pathology at different service delivery points to gather a stash of medicines prior to repatriation
- the pharmaceutical management system at the camps is under revision. A local team of two pharmacists and three pharmacists' assistants has been mandated to sort all the available stocks and optimise the management of medicines, especially at the Ben Guerdane regional hospital

Situation Report #8, Libya, Yemen, Bahrain, 21st March 2011

Strategic Health Operations Centre of EMRO

http://www.emro.who.int/EHA/pdf/libya_situationreport_8_20_3_2011.pdf

Some relevant points:

- A cumulative total of 190 injured people have crossed the Egyptian border since 22 February. The main causes of injury are gunshot wounds among Libyans and traffic-related accidents among Egyptians.
- The International Medical Corps (IMC) reported that on 18 March, 2000 people fled from Ajdabiya to Tobruk as a result of increased violence in Eastern Libya. These internally displaced persons (IDPs) are currently staying in schools and have limited supplies, with reported needs for health services, blankets and food. Outside of Ajdabiya, there are an additional 80 000 IDPs within the country.
- According to the World Food Programme, there is less than 4 months' food supply inside Libya and the unrest is interrupting the food supply chain. This could soon have severe humanitarian consequences.
- WHO and health partners have finalised a joint contingency plan for health in response to the conflict within Libya. The contingency plan evaluates different scenarios and health response at the Egyptian and Tunisian borders, as well as within the accessible areas of the country.
- The UN Office for the Coordination of Humanitarian Affairs in Libya convened an inter-agency meeting attended by WHO and other humanitarian agencies and partners in Cairo on 19 March. Participants reviewed the possible short/medium-term implications of UN Security Council Resolution 1973 in terms of humanitarian needs and response options within Libya.

Assessment of Private Health Sector in Libyan Arab Jamahiriya

World Health Organisation, Regional Office for the Eastern Mediterranean, 2010

Document in email attachment

This report is the result of a study to assess market magnitude and capacity of the private health sector in the Great Socialist people's Libyan Arab Jamahiriya, it includes the role of the private health sector in Libya. The report shows that the private health sector Human resources and private health sector facilities are growing. The private sector has become an important partner to the public health sector, despite the fact that all citizens are entitled to have a free health services through a chain.

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Key findings related to inpatient clinics:

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- 42 % of all beds inpatient clinics are in Tripoli, 12.6 % in Misurata, 11.5 % in Benghazi, 11.3 % in AL nikat al Khams.
- 52 inpatient clinics are practicing general activities and the rest are specialized and 40 % of all specialised inpatient clinics are Gynecology and obstetric care.
- The number of labor force in inpatient clinics is 3661, 3156 Libyans and 505 non – Libyans.
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Of the 10 inpatient clinics in Misurata, 7 are general and 3 are specialist. 2 specialise in women, children and labour. The other specialises in eye health.

Of the 40 outpatient clinics in Misurata, 14 are general and 26 are specialist. 5 specialise in women, children and labour ; 1 in urology and infertility ; 1 in eye health ; 1 in orthopedics ; 15 in dentistry and 3 others.

Emergency Preparedness and Emergency Action, Libya

WHO website accessed 25/03/2010

<http://www.emro.who.int/eha/libya.html>

Highlights include:

- WHO has completed the refurbishment of a health clinic inside the Libya-Egypt border crossing that will be used for screening, life saving medical care and referral of patients on a 24-hour basis.
- The Tunisian Ministry of Public Health, supported by WHO, UNICEF and other health partners, started a vaccination campaign for an estimated 100 children under 5 years old currently residing in camps.
- Six tons of WHO medical supplies arrived (10 March) to Djerba, Tunisia, in response to medical needs caused by civil unrest in the Libyan Arab Jamahiriya.
- WHO emergency supplies, including medical donations from Italy and Norway, have been delivered to the Libyan Arab Jamahiriya just as supplies in hospitals had reached critically low levels.

4. Libyan Journal of Medicine

Libyan National Health Services the Need to Move to Management-by-Objectives

El Taguri, A. et al. *Libyan Journal of Medicine*, 2008

<http://www.libyanjournalofmedicine.net/index.php/ljm/article/viewFile/4771/4963>

Decentralisation

Until recently, the organisation of Libya National Health Service was characterised by a vertical and horizontal integration. There are obvious attractions in moving away from the highly centralised approach adopted in the early years. Frequently, administrators complain that managers in peripheral units of administration do not follow decisions made by central authorities. The organisation has changed to that of vertical segmentation and horizontal integration that is aimed at by most of the current reform proposals for health systems in the world. With the recent changes, Libya is now made up of 32 Shaabia (municipality) and three administrative districts containing 350 basic peoples' congresses. Health is managed through the people's committees in the municipalities (Shaabiat). In each Basic Peoples' Congress there is a member responsible for the management and follow-up of health within the administrative borders of the congress. In each Shaabia, there is a secretary for health who is selected from among the members of health in the basic peoples' congresses. The Shaabia's Secretary is responsible for the implementation of health policy within the borders of the Shaabia. The supposedly decentralised administration and decision-making should be a unique opportunity as the community are empowered in making decisions. However, useful decisions require well-informed people. Absence of information and explanation from professionals, uncertainty about level of awareness, and education level could undermine the participation of the community.

Human resources

Weakness of human resources (HR) will limit the impact of any new physical resources. Unless mechanisms of acquisition of knowledge and practical training of HR are ensured, their quality would be questionable. The proportion of imported HR in Libya has dropped from more than 80% in the seventies to less than 8% in 2005. It is unlikely that the reliance in Libya on imported HR will stop completely. Efforts should also be strengthened to diversify

skills and training of local HR and to develop an evidence base HR for health services. Different medical disciplines grow by about 10% each year. Nevertheless, a system for training on new procedures or techniques is non-existent and when it does, it is non-transparent and not well organised. For years, universities had no subscriptions to periodicals. The educational system behaves as if specialists do not need continuing education. There is no system for attending congresses. Physicians who are given a chance to attend medical conferences abroad, are never accountable to present summaries of such conferences to their departments.

The situation is critical in paramedical specialties with absence of diversity, narrow range of professions available and the low level of training. There is a large drop-off among graduated nurses in Libya.

A need for the standardization of the pharmaceutical sector in Libya

Mustafa, A.A., *Libyan Journal of Medicine*, 2010

http://www.libyanjournalofmedicine.net/index.php/ljm/article/viewArticle/5440/html_42

According to Faitoori et al., distribution in the Libyan pharmaceutical sector of the Libyan healthcare system has endured several limitations that hinder efficient performance. Such limitations include, but are not limited to, weak transportation systems, obsolete inventory management systems (medicines expire in storage), lack of coordination between storage and transportation systems, lack of computerised information systems, and weak security and monitoring systems that lead to seepage of medicines outside the healthcare system. Medicines distribution processes in Libya also require review and reorganisation in order to comply with current WHO guidelines.

5. News

Libya: Misurata hospital damaged in fighting

The Daily Telegraph, 24 March 2011

<http://www.telegraph.co.uk/news/worldnews/africaandindianocean/libya/8405273/Libya-Misurata-hospital-damaged-in-fighting.html>

Broken glass, rubble and wrecked medical equipment litter the floors of the abandoned medical facility after coalition warplanes failed to stop Col Gaddafi's tanks from shelling the western Libyan city. A gaping hole has been blown in one of the hospital walls and gunfire can be heard in the distance.

Libyan exodus creates refugee and health worker crisis

Loewenberg, S. *The Lancet*, 19 March 2011

<http://www.lancet.com/journals/lancet/article/PIIS0140-6736%2811%2960371-1/fulltext>

Colonel Muammar al-Gaddafi's brutal crackdown on the uprising, which began Feb 22, has left thousands dead and made more than a quarter of a million people refugees. Aid agencies are scrambling to respond. The first difficulty has been to even assess the needs on the ground—no international medical teams have officially been allowed to enter Gaddafi-controlled conflict zones in the western part of the country. So far, international agencies are focusing their attention on the humanitarian needs of refugees streaming across the Egyptian and Tunisian borders.

By March 14, Gaddafi's forces had started to bomb the port city of Ajdabiya, an important medical centre and the strategic gateway to the rebel stronghold of Benghazi, which has one

of the country's only fully functioning medical centres. Aid agencies do not have direct access to the conflict zones in the west, but there is concern that food and stocks of drugs there will last for only a few more weeks.

It is virtually impossible to enter or find out information about conditions in western Libya, said Duccio Staderini, Médecins Sans Frontières (MSF) deputy programme manager for emergencies. Duccio said the Libyan doctors in the west with whom they have been communicating are no longer reachable. Medical teams on the western border report that almost no wounded have crossed over from the conflict zone. This has fuelled rumours that Gaddafi's forces are executing patients in hospitals and getting rid of the bodies. The reason for this could be to make room for their own wounded, or, some speculate, to hide evidence of human-rights abuses. As *The Lancet* went to press, there was no independent confirmation of these charges.

Reports from refugees from the Gaddafi-controlled areas in the west are that medical staff and patients are being forcibly held and threatened by the government forces. Two doctors who had recently escaped across the border, told Andrew Gleadle of the International Medical Corps (IMC) that people in the health facilities are frightened: "They are running out of supplies, there is a climate of real fear and intimidation", Gleadle told *The Lancet* from across the border in Tunisia, where he is leading an assessment and logistics team. Gleadle said that the team is preparing for two eventualities: first, if they gain access to western Libya and can start coordinating medical assistance, and second, if the war continues and they are suddenly faced with a massive outpouring of refugees.

The MSF team in eastern Libya has distributed 22 tonnes of medical supplies, including drugs, burn kits, dressings, sutures, and external fixators. An operating-theatre nurse is working in the surgery ward of the hospital in Ajdabiya, which is about 160 km from Benghazi. The nurse is assisting the hospital's medical staff, which requested MSF's support after new clashes west of Ras La Nuf, according to a spokesperson.

In the first 5 days of violence in February, 1800 wounded were treated at the hospital in Benghazi, according to an MSF team. In Benghazi, the IMC assessment team found a shortage of hospital staff, particularly nurses, as many were foreign and have fled the country. This exodus has created serious gaps in critical care, especially in specialties such as paediatrics, gynaecology, and orthopaedic and reconstructive surgery.

Medical supplies in demand included drugs and other items for surgeries, acute illnesses and lab testing, as well as antibiotics and anaesthetics. Although both food and medical supplies are sufficient in eastern Libya at the moment, as the fighting moves closer, a disruption in the supply chain could deplete existing stockpiles within weeks. Fuel shortages are already occurring.

WHO, with funding from the Norwegian Government, was able to provide eastern Libya with ten surgical kits, which are sufficient to cover 10 000 people for 10 days. Yet, as bad as the current situation is, efforts are bolstered by a strong medical infrastructure. In fact, the Libyan medical system has been well funded in the past, with first-class equipment, said Ted Tuthill, who is leading the IMC Emergency Response Team in Benghazi. Further, the region received a 3-month shipment of medical supplies in early February, before the fighting broke out.

Although most of the focus from the outside world is on dealing with victims of the war—both MSF and the Red Cross have sent surgeons to the area—Tuthill said that one of the biggest health threats in the rebel-controlled eastern section of the country will be the lack of care for people with chronic diseases, especially with the large exodus of nurses. That, at least, is the medium-term forecast, but with the increased penetration of Gaddafi's forces into the west, war casualties could substantially increase.

Meanwhile, treating mental trauma in refugees streaming across the borders is one of the most pressing problems. Five psychologists have been deployed at the al Choucha camp, providing services mainly for women and children. Volunteers are also being given psychological first-aid training, to help people deal with the mental trauma.

Activists call for Libya to end attacks on health facilities and to let medical supplies in

Moszynski, P., *BMJ news*, 14 March 2011

<http://www.bmj.com/content/342/bmj.d1638.extract>

(Only the extract is available unless you have a subscription)

Forces under the command of Muammar Gaddafi have carried out appalling assaults on sick and wounded people and on health professionals and have prevented urgently needed medical supplies from entering the country, say Libyan doctors and international health campaigners.

Libya: Interview with Simon Burroughs, MSF emergency coordinator for Libya

MSF, accessed 22/03/2011

http://www.msf.org.uk/libya_interview_mar22_20110322.news

How are medical facilities coping in Libya?

Where MSF was present, the medical teams were coping quite well with the influx of wounded patients. All the doctors and medical staff that we met in Benghazi, Brega and Ajdabya were incredibly skilled and dedicated. But they're also very apprehensive about what is going to happen next. They're increasingly feeling the pressure.

Although doctors are coping, many foreign nurses working in eastern Libya have now fled, leaving gaps in many health facilities. Medical students are doing their best to fill some of the gaps.

The lack of access to many parts of the country does not allow us to independently assess the needs, but according to some reports, there might be a growing number of wounded people.

What are the main medical needs at this point?

Obviously, there have been many people injured in the conflict which puts a lot of pressure on health facilities. The conflict also has an indirect impact as people only go to hospital for really urgent matters.

One of our operating theatre nurses spent the night supporting the Ajdabya hospital - the 10 patients he treated with gunshot wounds were followed by a mother who gave birth to twin girls. Normal health needs clearly go on despite the war. The hospital has now been evacuated and one wonders how the twin girls are doing.

On a more global level, we are struggling to get a clear picture of the needs as the security situation does not allow us to undertake even some basic assessments. When we tried to reach the town of Ras Lanuf – 300 km west of Benghazi - we had to turn back twice because of fighting and insecurity.

Libya from east to west : the medical supply lifeline from Benghazi

MSF news, 10 March 2011

http://www.msf.org.uk/libya_supply_story_20110310.news

At present, the medical supply line from Benghazi manages to reach out to a range of health facilities, but the volatility of the situation, coupled with shifting frontlines means that this supply chain is getting dangerously long; “*One of our main concerns is that we must find a way to position the medical supplies closer to where the needs may be,*” explains MSF emergency coordinator in Benghazi, Simon Burroughs.

A steady stream of ambulances and other unmarked vehicles drive up to the central pharmacy to load up with antibiotics, bone fixators, anaesthesia and other urgently needed materials – like the ones supplied by MSF- to treat the wounded in areas where the fighting has been most intense, as far as 1,000 km west of Benghazi.

Highly insecure roads mean that drivers take great risks in trying to reach the medical facilities, often having to drive for hours in order to deliver the supplies. As the situation in Libya continues to develop, the respect for medical facilities, vehicles and personnel by all parties is paramount, and the only way patients will be able to receive urgent medical care.

In addition to continuing donations of medical supplies, and its ongoing assessment of the needs of health facilities in and around Benghazi, MSF also has medical personnel on the ground ready to give support where needed. When fresh clashes west of Ras Lanuf generated another wave of wounded, an MSF operating-theatre nurse spent the night in the surgical ward of Ajdabya hospital -160km from Benghazi - assisting Libyan doctors with ten surgical interventions, most of whom were gunshot wounds. Overall, health facilities have been able to deal with the influx of wounded but they are facing shortages in the supply of specific medical materials like anaesthesia and surgical sets.

From Ajdabya to Brega and beyond, hospitals, polyclinics and basic health centres are all dependant on the central pharmacy for their supplies. “*We were supplying medical facilities even before the events. The only difference now is that we are working 24 hours, 7 days a week,*” explains a Libyan doctor.

Currently, 11 more tonnes of MSF medicine and medical materials are on the way to Benghazi. Egyptian trucks carry out supplies past ‘no man’s land’ into Libya, where they are offloaded into Libyan trucks and dispatched to the areas where they are most needed.

International Medical Corps Teams in Libya, Tunisia & Egypt Find Most Urgent Needs Include Qualified Nurses, Water/Sanitation/Hygiene Services, Psychosocial Support

MSF, 17 March 2011

<http://www.internationalmedicalcorps.org/Page.aspx?pid=1965>

International Medical Corps' emergency response teams...have also found that a shortage of nurses is a key concern in eastern Libya.

MSF Libya Focus

Site accessed 25 March 2011

<http://www.msf.org.uk/libya.focus>

MSF activities:

Since the onset of violent clashes in Libya in mid-February, MSF at first were able to reach the town of Benghazi, in the eastern part of Libya, where the team were supporting medical facilities and trying to access areas affected by violence to treat the wounded. They have since been forced to leave the country amid fierce and ongoing fighting. Another MSF team was deployed in Ras Ajdir, on the western border with Tunisia, ready to cross into Libya with medical material. However, the team experienced trouble getting into Libya, while the

wounded were reportedly not allowed out. MSF's priority is to gain immediate access to this population. Meanwhile, thousands of people, the vast majority of them non-Libyans fleeing the country, are waiting for repatriation to their respective countries. At the Tunisia-Libya border, MSF has identified the need to provide mental healthcare.

6. Additional information

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About Helpdesk reports: The HDRC Helpdesk is funded by the DFID Human Development Group. Helpdesk Reports are based on up to 2 days of desk-based research per query and are designed to provide a brief overview of the key issues, and a summary of some of the best literature available. Experts may be contacted during the course of the research, and those able to provide input within the short time-frame are acknowledged.

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