



ECDC RISK ASSESSMENT

Situation in northern Africa/Libyan Arab Jamahiriya and the influx of migrants* to Europe

12 April 2011

EXECUTIVE SUMMARY

Currently there are no major outbreaks related to infectious diseases reported in Libyan Arab Jamahiriya, the camps at the borders with Egypt, Tunisia and Niger or the reception and detention camps in EU countries (Italy, Malta and Greece). The risk of importation of infectious diseases from North Africa to the EU is therefore considered to be low.

From a public health perspective, the most urgent concern is related to the living conditions of the migrants in the reception and detention centres, such as overcrowding and poor sanitation, as these are important risk factors for infectious disease outbreaks.

Outbreak-prone infectious diseases in crowded conditions as may exist in the reception and detention centres are mainly measles, diphtheria, influenza, pertussis and acute respiratory infections. The risk for vaccine-preventable diseases largely depends on the susceptibility of the population. In addition, poor sanitary conditions may increase the risk for diarrhoeal diseases.

Public health measures that may be taken in order to mitigate the risk of infectious disease outbreaks are:

- An appropriately adapted surveillance system for early warning purposes, including entry health assessment and proper referral systems.
- Dedicated mother-and-child services as well as mental healthcare facilities at the reception and detention centres.
- Specific vaccination strategies in order to 1) protect both children and adults against those diseases which they are more vulnerable to, due to the emergency conditions they are experiencing; and to 2) assure children continuity with their immunisation history. In addition, specific attention should be paid to healthcare workers' immunisation status in the specific situation.

The majority of the current migrants are healthy adult males, for whom the infectious disease risk is considered to be limited. The International Organization for Migration (IOM) has a view that the situation may get more complex as the second wave of migrants is anticipated to include more vulnerable persons, e.g. women and children or persons with pre-existing medical conditions.

ECDC, in collaboration with the Member States, the European Commission and international organisations, is continuing to closely monitor the situation in order to rapidly identify and assess potential communicable disease threats.

* For the purpose of this risk assessment, 'migrants' is defined as including refugees, asylum seekers, displaced populations, irregular migrants and in some cases labour migrants, as defined by IOM in the Glossary on Migration, 2004 available at http://www.iom.int/jahia/webdav/site/myjahiasite/shared/shared/mainsite/published_docs/serial_publications/Glossary_eng.pdf

SOURCE, AND TYPE OF REQUEST

European Commission, Directorate General for Health and Consumers, Unit C3, 5 April 2011.

PUBLIC HEALTH ISSUE

Risk of communicable disease outbreaks and spread through influx of migrants to Europe due to unrest in northern Africa/Libyan Arab Jamahiriya.

CONSULTED EXPERTS

WHO headquarters, WHO Regional Office for Europe

EVENT BACKGROUND INFORMATION

Background information on Libyan Arab Jamahiriya

Libyan Arab Jamahiriya is Africa's fourth biggest country and has land boundaries with Algeria, Chad, Egypt, Niger, Sudan and Tunisia (Figure 1). Its coastline is 1770 km long. The estimated GDP for 2010 is US\$ 89.03 billion [1]. Seventy-eight percent of Libyan Arab Jamahiriya's 6.6 million population live in urban areas with 1.5 million in its capital Tripoli. The country has an estimated 1.5 million migrant workers, mainly adult males, from Egypt (1 million), Pakistan (80 000), Sudan (59 000), Bangladesh (50 000), Philippines (26 000) and Nepal (2000) as well as other countries, mainly in Africa and Asia [2]. Libyan Arab Jamahiriya lacks an adequate national health information system and therefore accurate health indicators are not available [2]. The country is both a transit and destination country for men and women from sub-Saharan Africa and Asia, trafficked for the purposes of forced labour and commercial sexual exploitation [1].

Figure 1: Map of Libyan Arab Jamahiriya



Source: Central Intelligence Agency (United States of America) [1].

Situation in Libyan Arab Jamahiriya

Following the civil unrest in bordering Tunisia and Egypt, protests started in Benghazi on 15 February 2011 and extended to the entire country. Violence is reported from western and eastern areas. Numbers of dead and injured people have still not been made available by independent sources and estimates vary; the WHO Regional Office for the

Eastern Mediterranean estimates that at least 2 000 people have died so far in Libyan Arab Jamahiriya as a result of the civil war [3] and many more have been injured. Heavy fighting and bombardments continue to be reported by international media in western Libyan Arab Jamahiriya.

Several relief agencies provide humanitarian assistance to migrants along the borders of Libyan Arab Jamahiriya and Egypt. Non-governmental organisations such as Médecins Sans Frontières and the Islamic Relief have each delivered tonnes of medical supplies to Libyan Arab Jamahiriya. More than 100 physicians of the Arab Medical Union have been sent to eastern Libyan Arab Jamahiriya. WHO has procured essential drugs and medical supplies including 4000 doses of tetanus toxoid to prevent potential infections arising from the delayed treatment of injuries [4,5]. Non-governmental organisations have not identified any urgent infectious disease concerns in eastern Libyan Arab Jamahiriya, while information about western Libyan Arab Jamahiriya remains limited [6].

After his visit to the border between Tunisia and Libyan Arab Jamahiriya on 2 April, the UNHCR Humanitarian Coordinator for Libyan Arab Jamahiriya raised concerns about 1) the lack of reliable information from inside Libyan Arab Jamahiriya, 2) the disruption of the healthcare system in Libyan Arab Jamahiriya due to the massive flight of non-Libyan Arab Jamahiriyan nurses and medical workers, and 3) the likelihood of a continuous steady flow of mixed migration out of Libyan Arab Jamahiriya [7]. Overall, the need for further humanitarian assistance in the health sector and for the protection of civilians continues [8].

Situation in bordering African countries

According to the International Organisation for Migration (IOM), 485 379 migrants have fled the violence in Libyan Arab Jamahiriya as of 9 April 2011; over 235 000 to Tunisia, over 195 000 to Egypt, over 32 000 to Niger and over 12 000 to Algeria. These figures include almost 350 000 'third country nationals' (TCNs) [9]. Between 10 300 and 10 700 people remain stranded at camps and transit points in Tunisia, Egypt, Niger and Algeria [8]. IOM reports that in order to sustain evacuation procedures funding needs to be assured. [9].

Egyptian border

The number of people crossing the Egyptian border has been decreasing since February. The majority of the more than 195 000 persons who have crossed the border were Egyptians and Libyan Arab Jamahiriyan; as of 9 April around 2 200 people remain in the border camps. The distribution of food and water continues at the border crossings through several international organisations [9]. Emergency health clinics continue to offer medical support around the clock. Vaccinations are provided against polio, tuberculosis, diphtheria, tetanus, whooping cough and measles [10].

Tunisian border

More than 235 000 people have already crossed the Tunisian border, among them more than 215 000 TCNs [9]. The number of people staying in camps is increasing. As of 3 April, more than 11 000 people, mainly from Bangladesh, Chad, Sudan, Eritrea and Somalia were hosted in the two camps in Choucha and the UAE camp [7]. As of 9 April the number of people in need of evacuation assistance was between 6 000 and 6 400. The Ministry of Health of Tunisia and WHO have set up an early warning system and an emergency operations room at the border. The health conditions at the border and in the camps are reported to remain stable. From 12 March onwards, an increased proportion of influenza symptoms has been reported, though not a single case among them needed intensive care. The occurrence of simple diarrhoea is decreasing [11]. Cases of scabies were detected but shipments of ivermectin are underway to the border camps [10].

Border with Niger

More than 32 000 people have already arrived at the border with Niger. Between 5 and 7 April, 3 535 people arrived in camps in Dirkou, Niger. Several international organisations are on site providing assistance [9].

Border with Chad

As of 7 April, the cumulative number of people arriving at the border in Chad remains 6 219. Nearly 1 200 may be in need of transportation assistance to reach their destination.

Situation in EU countries

Italy

In order to control the migration flows from North Africa towards Italy (mainly to Lampedusa and Sardinia), the European Agency for the Management of Cooperation at the External Borders of the Member States of the European Union (FRONTEX) on 20 February 2011 started the joint maritime operation 'EPN Hermes' by setting up an operational area in the south of Lampedusa.

According to UNHCR a total number of 22 861 migrants are reported to have arrived in Italy since mid-January, of which almost 21 000 are of Tunisian origin [12].

Malta

The Maltese health authorities reported a total of 819 people having arrived in Malta from Libyan Arab Jamahiriya, mainly coming originally from Eritrea, Somalia and Ethiopia. Upon arrival, migrants are clinically screened, and immunisation is upgraded according to national schedule (Personal communication).

Greece

From 1 January to 24 March 2011, 5 281 migrants were detected on the Greek-Turkish land border in the Evros region of Greece. The largest group of migrants crossing the Greek border in March were people from Afghanistan (24%), Pakistan (14%) and Bangladesh (12%) [13]. The arrival figures are currently lower than the figures observed during the operation 'RABIT' (EU Rapid border intervention teams at the Turkish-Greek border) in which almost 12 000 migrants had been detected while attempting to cross this border in the Evros River region of north-eastern Greece [14].

At the end of March, ECDC and WHO were requested by the Greek Ministry of Health to assess the public health risks related to irregular migration to Greece. A joint ECDC/WHO assessment visit took place from 4 to 8 April, with the team visiting the detention sites at the Greek borders with Turkey. A preliminary report was shared with the Greek authorities at the end of the visit.

DISEASE BACKGROUND INFORMATION

The following outbreak-prone diseases have been reported from Libyan Arab Jamahiriya in the past [2]:

Hepatitis A

Hepatitis A is endemic in the country but no specific reports are available.

Poliomyelitis

No cases of poliomyelitis have been reported since 2005. The reported vaccine coverage with three doses of oral polio vaccine in one-year-old infants in 2008 was 96%.

Cholera

The last cholera outbreak was reported in 1995 with 22 cases in an expatriate community.

Meningococcal meningitis

Libyan Arab Jamahiriya lies outside the so-called 'meningitis belt'. In 2008, 12 cases of meningococcal meningitis were reported.

Rabies

The current risk of rabies is estimated to be very low.

Measles and other vaccine-preventable diseases

Mandatory measles vaccination was implemented in Libyan Arab Jamahiriya in 1972. In 2008, 329 measles cases were reported, giving an incidence of 59 cases per 100 000 inhabitants, suggesting transmission within the country. The reported vaccine coverage in one-year-old infants in 2008 was 98%. Only 76% of pregnant women had been vaccinated with at least two doses of tetanus toxoid. The Libyan Arab Jamahiriyan situation is very similar to Tunisia and Egypt. Reported vaccine coverage levels in sub-Saharan Africa are low for all EPI vaccinations.

Plague

In 2009, 12 cases of plague, including one death, were reported through the International Health Regulations in a semi-nomadic setting near the Egyptian border (Tobruk). The first identified fatal case presented with pneumonic plague. Rodentic control measures were implemented following this cluster. Prior to this, the last outbreak was reported by the Libyan Arab Jamahiriyan health authorities in 1984 with eight cases, of which none were fatal. Until 2009, the last deaths were reported in 1977 [15].

Vector-borne diseases

Libyan Arab Jamahiriya has been considered free of malaria since 2000; in 2008, 27 imported cases of malaria were reported. Libyan Arab Jamahiriya is reported to be free of dengue fever. Cutaneous leishmaniasis is reported from several areas in Libyan Arab Jamahiriya.

Tuberculosis in the North African region

The countries of the North African region have a moderate burden of tuberculosis (TB) (Table 1). However, the migrants leaving Libyan Arab Jamahiriya are mainly TCNs, coming from countries with a high to very high TB disease burden (Table 2).

Table 1: TB situation in selected North African countries

Country	Population 2009 (millions) ¹	TB incidence 2009 (per 100 000) ¹	TB prevalence 2009 (per 100 000) ¹	Proportion immigrants 2010 ²
Algeria	35	59	67	0.7%
Egypt	83	19	30	0.3%
Libyan Arab Jamahiriya	6	40	55	10.4%
Tunisia	10	24	30	0.3%

1. WHO TB surveillance data for 2009. Available from <http://www.who.int/tb/country/data/profiles/en/index.html>

2. The International Organization for Migration country reports 2010. Available from <http://www.iom.int>

Table 2: TB situation in selected third countries

Third Country Nations	Population 2009 (millions) ¹	TB incidence 2009 (per 100 000) ¹	TB prevalence 2009 (per 100 000) ¹
Eritrea	5	99	142
Ethiopia	83	359	572
Sudan	42	119	206
Somalia	9	285	494
Niger	15	181	328
Ghana	24	201	329
Senegal	13	282	545
Nigeria	155	295	497
Mali	13	324	628
Mauritania	3	330	676
Bangladesh	162	225	425

1. WHO TB surveillance data for 2009. Available from <http://www.who.int/tb/country/data/profiles/en/index.html>

HIV/AIDS

A total of 4 282 persons were reported living with HIV/AIDS in the country, of which 1 200 were estimated to be on antiretroviral treatment. The incidence is reported to be increasing.

RAPID RISK ASSESSMENT

Outbreaks of communicable diseases in Libyan Arab Jamahiriya

Only limited information is available regarding the communicable disease situation in Libyan Arab Jamahiriya. No outbreaks of infectious diseases have been reported so far. Currently the main risks are directly associated with violence, lack of access to healthcare and interruption of treatment of chronic diseases. Nevertheless, wound infections and tetanus may be a problem following injuries. The current risk related to communicable diseases is considered to be low but depends on the length of the crisis, access to safe drinking water and food supplies, shelter and healthcare. Outbreaks of diarrhoea (including typhoid fever, hepatitis A and E), acute respiratory infections and vaccine-preventable

diseases may occur. Diarrhoeal diseases are the main contributor to mortality among children under five years of age. Although the Maghreb is no longer considered an endemic area for plague, natural foci are likely to be present and may result in clusters of human cases.

Communicable diseases related to migrants at the borders

In crowded camps the risk for communicable disease outbreaks is increased and depends on factors like length of stay and sanitary conditions. Outbreak-prone communicable diseases in crowded conditions that may exist at the borders are mainly measles, diphtheria, influenza, pertussis and acute respiratory infections. The risk for vaccine-preventable diseases largely depends on the susceptibility of the population. Depending on the environmental conditions and the presence of appropriate vectors, vector-borne diseases such as malaria, dengue and chikungunya, might spread.

Based on the available information, the majority of the current migrants are healthy adult males, for whom the communicable disease risk is considered to be limited. Nevertheless, the International Organization for Migration (IOM) expects that the situation will become more complex because the second wave of migrants is anticipated to include more vulnerable persons, e.g. women and children or persons with pre-existing conditions, which may increase the risk of outbreaks, including of vaccine-preventable diseases.

With specific regard to tuberculosis, there is no evidence that the current migrant population from North Africa and neighbouring regions has a substantially different risk for TB than the groups of migrants (from the same region) that have arrived in the EU before these recent events. To limit transmission of TB within the migrant population, improvement of the living conditions (e.g. overcrowding) is essential.

Among the vaccine-preventable diseases, measles, poliomyelitis and meningococcal disease do present a potential risk in emergencies such as population displacements.

Importation of communicable diseases to the EU

Currently the risk of importation of infectious diseases is considered to be low and no major outbreaks have been reported. Nevertheless, the risk may change depending on the health situation in the Libyan Arab Jamahiriya, the access to adequate healthcare and living conditions at the reception and detention centres, the demographic composition of the migrants, their health and social status, and the number of persons entering the EU. Considering the difficult conditions at the borders (crowded camps) and delays which may occur before evacuation of the migrants, especially in Member States receiving large numbers of migrants, enhancing surveillance and diagnostic capacities for early detection of infectious diseases could be considered, while ensuring rapid information exchange at all levels.

CONCLUSIONS

Currently there are no major communicable disease outbreaks reported in Libyan Arab Jamahiriya nor in the reception and detention centres at the border. From a public health perspective, the most urgent concern is related to the poor living conditions of the migrants, such as overcrowding and poor sanitation. These are important risk factors for communicable disease outbreaks that could be mitigated by improving living conditions. An appropriately adapted surveillance system for early warning purposes, including entry health assessment, and proper referral systems, is essential to ensure rapid response activities if needed.

Secondly, the possible change of profile of migrants, from young healthy men to a more vulnerable population, including women and children, is to be anticipated. The presence of dedicated mother-and-child care facilities at the reception and detention centres could be considered. Chronic diseases (e.g. chronic obstructive airway disease, heart disease and diabetes) require ongoing treatment.

Finally, taking into account the trauma that the migrants may have experienced before arriving at the reception and detention centres, provision of mental health support is essential.

In order to ensure early detection of the occurrence of outbreak-prone infections and illnesses causing high mortality, an appropriately adapted surveillance system could be in place in the reception and detention centres. Such surveillance allows for the early detection of any changes in trends of diseases and potential outbreaks, and permits the rapid implementation of control measures. Using simple (syndromic) case definitions, covering a minimum of diseases (e.g. measles, dysentery, watery diarrhoea, acute respiratory infection, meningitis), and producing daily updates, the surveillance will allow rapid detection of changing trends.

With the presence of children of under 5 years of age, it is also advisable to monitor the nutrition status.

ECDC, in collaboration with the Member States, the European Commission and international organisations, is continuing to closely monitor the situation in order to rapidly identify and assess potential communicable disease threats.

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