

Health profile 2015

# Libya



World Health  
Organization

Regional Office for the Eastern Mediterranean

## WHO Library Cataloguing in Publication Data

World Health Organization. Regional Office for the Eastern Mediterranean

Libya health profile 2015 / World Health Organization. Regional Office for the Eastern Mediterranean

P.

WHO-EM/HST/230/E

1. Health Status - Libya 2. Delivery of Health Care - organization & administration 3. Communicable Disease Control 4. Chronic Disease 5. Health Promotion 6. Civil Defense - organization & administration 7. Public Health Surveillance I. Title II. Regional Office for the Eastern Mediterranean (NLM Classification: WA 300)

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# Contents

- Foreword .....3
- Introduction .....5
- Communicable diseases.....8
- Noncommunicable diseases .....12
- Promoting health across the life course .....18
- Health systems .....22
- Preparedness, surveillance and response .....26
- Demographic profile .....31
- Analysis of selected indicators .....32
- References .....33



# Foreword

The Government of Libya and WHO are working together to effectively improve the public health situation in the country with special emphasis on the five key regional priorities:

- health security and prevention and control of communicable diseases;
- noncommunicable diseases, mental health, violence and injuries, and nutrition;
- promoting health through the life-course;
- health systems strengthening; and
- preparedness, surveillance and response.

The strategic directions to address these priorities are broadly in line with WHO's 12th General Programme of Work, the Programme Budget 2016–2017 endorsed in May 2015 by the 68th World Health Assembly and the five strategic areas of work endorsed by the WHO Regional Committee for the Eastern Mediterranean in 2012.

Reliable and timely health information is essential for policy development, proper health management, evidence-based decision-making, rational resource allocation and monitoring and evaluation of the public health situation. While the demand for health information is increasing in terms of quantity, quality and levels of disaggregation, the response to these needs has been hampered because of fragmentation and major gaps and weaknesses in national health information systems.

The strengthening of health information systems is a priority for WHO in the Region. Intensive work with Member States since 2012 has resulted in a clear framework for health information systems and 68 core indicators that focus on three main components: 1) monitoring health determinants and risks; 2) assessing health status, including morbidity and cause-specific mortality; and 3) assessing health system response. In order to successfully achieve this important goal, concerted and aligned action at national and international level are required to address the gaps and challenges in the health information systems of all countries. This will ensure the generation of more effective evidence to monitor improvement in the health situation, nationally, regionally and globally.

This comprehensive health profile is intended to serve as a tool to monitor progress in the health of the population. WHO's collaboration with its Member States will strengthen the national health information systems, and enable the generation of timely and reliable evidence to assess the health situation and trends, and the health system response. Most important, it will provide the information needed by health policy and decision-makers.

The Libyan health system like many other services in the country has been adversely affected by ongoing conflict and political unrest. The inadequate health information system, shortages of medical supplies and technology, loss of health staff, damage to infrastructure and lack of sufficient funds pose serious challenges to public health. The support of WHO is invaluable in protecting public health in Libya and the wider region.

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# Introduction

The population of the country has increased by 32.6% in the past 25 years, reaching 6.3 million in 2015. 22.0% of the population lives in rural settings (2012), 17.1% of the population is between the ages of 15 and 24 years (2015) and life expectancy at birth is 75 years (2012). The literacy rate (2012) for adolescents (15 to 24 years) is 99.9%; for adults it is 89.9% and for adult females it is 83.7%.

The burden of disease (2012) attributable to communicable diseases is 9.8%, noncommunicable diseases is 77.8% and injuries is 12.3%. The share of out-of-pocket expenditure is 29.7% (2013) and the health workforce density (2009) is 19.0 physicians and 68.0 nurses and midwives per 10 000 population.

The public health issues facing the country are presented in the following sections: communicable diseases, noncommunicable diseases, promoting health across the life course, health systems strengthening and preparedness, surveillance and response. Each section focuses on the current situation, opportunities and challenges faced and the way forward. In addition, trends in population dynamics and in selected health indicators are analysed to provide policy-makers with evidence and forecasts for planning.





# Communicable diseases

HIV

Tuberculosis

Malaria

Neglected tropical  
diseases

Vaccine-preventable  
diseases

# Communicable diseases

- A HIV/AIDS national programme has been developed by the National Centre for Disease Control, which launched a nationwide communication campaign.
- In 2014, new vaccines were introduced to the national vaccination programme: human papillomavirus vaccine and injectable polio vaccine, which was added to the pentavalent vaccine previously in use.

## HIV

The HIV prevalence is low. The most affected population is people who inject drugs, with an overall HIV prevalence of 22.0% (1).

There is a national strategic plan for HIV. The country has a low prevalence of HIV in the general population, but there is a concentrated epidemic among injecting drug users with surveys showing a high prevalence in this group. Finding a cost efficient way to test all pregnant women has proved challenging. The monitoring system is suffering from fragmentation of programme functions. Population size estimates of key at-risk populations are planned to project HIV prevalence. A national HIV/AIDS programme has been developed by the National Centre for Disease Control, which launched a nationwide communication campaign. The government has been supporting an increase in coverage of key hepatitis interventions through active engagement in diagnosis and screening, care and treatment. Great strides have been made in early diagnosis and surveillance and in the introduction of hepatitis in the expanded programme on immunization.

Further work is needed in the area of HIV prevention. The country needs support in adapting regional HIV strategies and action plans into the national policies and plans in order to achieve universal access to HIV prevention and treatment. National capacities need to be strengthened to generate and use strategic information through national information systems and routine programme monitoring, in line with global standards. Orientation on the global guidance on hepatitis strategic planning and on the new global hepatitis guidelines on diagnosis, case treatment and surveillance is needed.

## Tuberculosis

Tuberculosis-related mortality is estimated at 8.7 deaths per 100 000 population (2013) (2). A total of 1412 detected tuberculosis cases were reported in 2013, of which 641 were new sputum smear-positive cases (2). The treatment success rate of new and relapsed cases registered in 2012 was 60.0% (2). Drug-resistant tuberculosis is estimated at 3.7% among new cases and 20.0% among previously treated cases (2).

There are gaps in communication with and follow-up of patients. However, improvements are expected with implementation of the 2015 programme for surveillance of tuberculosis and multidrug-resistant tuberculosis cases.

The tuberculosis programme needs special emphasis on capacity-building for staff in general tuberculosis and multidrug-resistant tuberculosis management, surveillance (recording, reporting, definitions, tools and procedures), medicine management and training on the tuberculosis laboratory network. Desk review of the country's tuberculosis programme is crucial to ensure the specific type of support and interventions needed.

## Malaria

The country is considered a low burden and low risk country for malaria. Total confirmed malaria cases increased from 47 in 2003 to 88 in 2012, of which 100.0% were imported (3). In 2012, among the confirmed cases, 58.0% were *Plasmodium falciparum* and 31.8% were *P. vivax* (3).

With the collapse of the surveillance system and the challenges facing health care in the country, the malaria programme requires urgent review, particularly of malaria diagnosis and surveillance. The country is experiencing a high number of immigrants, mostly from sub-Saharan African countries with high burden of falciparum malaria.

Providing reliable malaria diagnosis and effective treatment and strengthening malaria surveillance, particularly among immigrants, are crucial and urgently needed.

## Neglected tropical diseases

The country was certified free of dracunculiasis in 2000 but is still endemic for cutaneous and visceral leishmaniasis, and is under surveillance for blinding trachoma (4). In 2012, 4 cases of leprosy were reported (4).

In general, the neglected tropical disease burden can be characterized as low prevalence. There is evidence of an active transmission area and the animal reservoir host has been established. There is a need for improving the early detection of neglected tropical diseases by strengthening national capacity for disease surveillance and certification and verification of the elimination of selected neglected tropical diseases. Simultaneously, efforts should be made to increase access to essential medicines for neglected tropical diseases and to expand preventive chemotherapy and innovative and intensified disease management.

## Vaccine-preventable diseases

Immunization coverage among 1-year-olds improved between 1990 and 2013 from 90.0% to 99.0% for BCG, from 84.0% to 98.0% for DTP3, from 89.0% to 98.0% for measles and from 84.0% to 98.0% for polio (5). In 2013, hepatitis B (HepB3) vaccine coverage among 1-year-olds was 98.0% (5).

Conjugate pneumococcal vaccine and rotavirus vaccination were introduced for infants in October 2013. All the vaccines are covered by the government budget and given to citizens and other residents for free. In 2014, new vaccines were introduced into the national routine immunization programme including human papillomavirus vaccine and injectable polio vaccine added to the pentavalent vaccine previously in use. Neonatal tetanus was eliminated and polio was interrupted many years ago. With the recent waves of displaced populations and disruption of primary health care, including vaccination activities in certain areas, the possibility of outbreaks such as measles and polio have increased. A particular group at risk is refugees and asylum-seekers, with reports indicating a number of unregistered children who have had no access to immunization services. There is also a concern about the stock of certain vaccines due to irregular electricity and supply. Measles is still a major problem and more efforts are needed to achieve measles elimination. Focus should be given to strengthening the expanded programme on immunization to cover internally displaced persons, refugees and asylum-seekers, as well as conducting catch-up vaccination campaigns to cover areas with reported low coverage, especially for measles and polio.

# Noncommunicable diseases

Noncommunicable diseases

Mental health and substance abuse

Violence and injury

Disabilities and rehabilitation

Nutrition



# Noncommunicable diseases

- A noncommunicable diseases programme was established in 2010.
- The United Nations missions are supporting the government in the area of nutrition with medical supplies and emergency health interventions.

## Noncommunicable diseases

The burden of noncommunicable diseases is responsible for 77.8% of all deaths; cardiovascular diseases account for 43.2%, cancers 13.6%, respiratory diseases 4.2% and diabetes mellitus 5.3% of all deaths (6). As a result, 18.0%, of adults between the ages of 30 and 70 years are expected to die from the four main noncommunicable diseases (7). More than 13.4% of youth (13–15 years of age, 20.2% boys, 6.6% girls) have ever smoked cigarettes, while 35.7% of youth have been affected by passive smoking (8). Per capita consumption of alcohol is 0.1 litres of pure alcohol (9). Prevalence of insufficient physical activity in adolescents is 76.7% (11–17 years of age, 78.2% boys, 88.2% girls) and age-standardized is 38.0% (32.8% males and 43.3% females) (10). Raised blood pressure affects 35.7% of adults over 18 years, (39.5% males and 31.4% females), while obesity affects 27.8% of the population (19.9% males and 36.4% females) (7). Only seven of the 11 essential medicines required for treatment of noncommunicable diseases are available in the public health sector.<sup>1</sup>

The WHO Framework Convention on Tobacco Control was signed in 2004, and the protocol on illicit tobacco trade was signed in 2012. The noncommunicable disease programme was established at the end of 2010, with components for surveillance, nutrition, violence and injury, disabilities and rehabilitation and mental health and substance abuse. The incidence and prevalence of noncommunicable diseases has multiplied over the past three decades as a consequence of changing lifestyles and the prevalence of risk factors, particularly obesity. The government has taken a number of steps to tackle noncommunicable diseases; however, challenges remain such as inadequate supply of essential medicines, poor diagnostic capacity, large numbers of displaced populations and the potential for further conflict. The weakness of primary health care services means that the public health impact of noncommunicable diseases could become significant in the future.

Suggested actions should include the following in the short term: ensuring regular supply of essential medicines, laboratory and diagnostic supplies; raising awareness through community-based interventions; assessing the population and system needs and capacities for prevention and management; and enhancing human resources to deliver care at all levels of the health system. Long term actions should comprise developing a national strategy and

<sup>1</sup> WHO Regional Office for the Eastern Mediterranean, unpublished data, 2013.

plans, which should include financing approaches for prevention and control, and integrating noncommunicable diseases into health planning processes. The noncommunicable diseases programme needs support in developing its national strategies and action plans as it was slowed in 2013 and frozen in 2014 due to the impact of the country situation. Strengthening capacity for surveillance of risk factors and monitoring and evaluating programmes is also essential.

## Mental health and substance abuse

The suicide rate is estimated at 1.8 per 100 000 per year (11).

Mental health is a chronically neglected field in the country. There is no mental health policy or mental health legislation; subsequently there is no budget or means by which to account for expenditure. In addition to the 2 mental hospitals, there are 6 mental health outpatient facilities. Two are in mental hospitals, two are in general hospitals and two are in polyclinics. There is an increasing trend of substance use among young people. A diploma training programme for mental health specialists started in 2013; however, the programme was not fully implemented due to conflict. There are insufficient trained staff in the areas of mental disorders and disabilities, particularly in substance abuse disorders and in mental disorders among children. The current conflict in the country is expected to further increase the proportion of the population in need of acute psychosocial support. In order to improve mental health in the country, a combination of immediate and long-term interventions is needed. The immediate actions should consist of assessment of mental health and psychosocial support needs and system's existing capacities, strengthening coordination among actors working in the field of mental health and improving the supply of essential psychotropic medicines. Long-term actions should include: integrating mental health and substance use services at the community and primary health care levels; building the capacity of health professionals to deliver evidence-based interventions for priority mental and substance use disorders; enhancing access to evidence-based psychosocial interventions; developing a national mental health strategy and plan; and increasing awareness of mental health and the rights of people with mental disabilities based on best evidence-based practices and human rights.

## Violence and injury

The percentage of deaths caused by injuries in 2012 was 12.3%. Of this, unintentional injuries accounted for 78.5% (79.2% due to road traffic injuries and 3.6% as a result of falls) and 21.5% were due to intentional injuries (72.1% collective violence and legal intervention and 14.6% as a result of interpersonal violence) (6).

The deteriorating security situation in the country has not allowed for a robust assessment of the actual situation on the ground. However it can be understood that the number of injured people continues to rise.

In the current situation, efforts should focus on the provision of the required post-injury care (emergency and trauma care as well as rehabilitation services) as much as circumstances allow.

## Disabilities and rehabilitation

The prevalence of disabilities is 2.9%, and is higher among males (3.3%) than females (2.5%) (12). The types of disabilities and difficulties are: physical 28.5%, visual 11.8%, cognitive 22.5%, hearing 16.3% and socializing with people 48.3% (12).

There is a notion that the need for rehabilitation services has increased over the past two decades due to continuous armed conflicts, ongoing violence and the breakdown of community support systems. However the ongoing situation does not allow for appropriate assessment of the situation on the ground. The UN Convention on the Rights of Persons with Disabilities was signed in 2008. The High Commission for the Welfare of Persons with Disabilities is the national coordination mechanism, as of 2007, and is chaired by the Minister of Social Development, with representation from persons with disabilities. The constitution includes articles on disability. The law on the welfare, rehabilitation and employment of persons with disabilities (2006) is being amended. A national disability strategy and its implementation plan (2012–2016) exist. The Ministry of Health has been improving access for people with disabilities to mainstream services and rehabilitation services; however, funding is currently not available to meet all identified needs.

The International Classification of Functioning, Disability and Health has been applied in the collection and analysis of disability data. A national plan for better health of persons with disabilities and national disability strategy/eye health plan have been developed.

The adoption of the WHO global disability action plan: better health for persons with disabilities 2014–2021 is an opportunity to strengthen health sector disability action within the broader multisectoral arena, building on the existing national strategy. The recent initiative to implement the International Classification of Functioning, Disability and Health also needs to be taken forward to strengthen the evidence base for action on disability and rehabilitation.



## Nutrition

The prevalence of various forms of malnutrition conditions in children under 5 years is summarized in the following indicators: 5.6% underweight, 6.5% wasting, 2.9% severe wasting, 21.0% stunting, and 22.4% overweight (13). Low birth weight is 4.0%.<sup>2</sup>

The country is experiencing a double burden of malnutrition. Due to the ongoing political and security turmoil that started 2011, the country is considered under a complex emergency situation by the United Nations Country Team. Accordingly the United Nations agencies are supporting the government with medical supplies and emergency health interventions.

Extensive review of the nutrition set up and services is needed as there is no relevant infrastructure, including programmes and human resources, existing at the Ministry of Health.

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<sup>2</sup> Ministry of Health, unpublished data, 2014.



# Promoting health across the life course

Reproductive,  
maternal, newborn,  
child and adolescent  
health

Ageing and health

Gender, equity  
and human rights  
mainstreaming

Social determinants  
of health

Health and the  
environment

# Promoting health across the life course

- Neonatal and maternal mortality have been reduced through the improvement of child health care programmes and antenatal coverage.
- In 2012 a new department caring for the health of elderly was established under the National Centre for Disease Control.
- The public health sector has been the main health service and health care provider including preventive, curative and rehabilitation services to all citizens free of charge.
- The government endorsed the WHO regional strategy on health and environment and framework for action 2014–2019 and has started its implementation in order to reduce environmental risks to health.

## Reproductive, maternal, newborn, child and adolescent health

The maternal mortality ratio declined by 76.9% between 1990 and 2015 from 39 to 9 maternal deaths per 100 000 live births (14) and the under-5 mortality rate decreased by 69.0% from 42 to 13 deaths per 1000 live births (15). The leading causes of under-5 mortality are acute respiratory infection (8.0%), prematurity (23.0%) intrapartum-related complications (9.0%) and congenital anomalies (27.0%) (16).

The reduction in neonatal and maternal mortality has been achieved through the improvement of child health care programmes and antenatal coverage. Health care facilities are administering all deliveries using skilled personnel. Postnatal care has improved for both mothers and children. The leading causes of maternal mortality are still postpartum haemorrhage, eclampsia and sepsis. Reproductive health services were negatively affected in the last months of 2014 and the beginning of 2015 as a result of the large number of internally displaced persons, closure of some hospitals and lack of access in conflict zones.

Focus should be placed on: supporting health facilities with obstetric kits and other required medical supplies; enhancing reproductive health services by setting up outreach services; ensuring a minimal initial service package for reproductive and maternal health care is available at primary and secondary health care level facilities; improving health information on maternal and perinatal health including developing and implementing the road map for strengthening maternal and perinatal death surveillance and response; drafting guidelines for best practices in antenatal and postnatal care and ensuring access to quality interventions,

including adaptation and implementation of guidelines; and supporting the establishment of reliable and implementable guidelines and measures.

## Ageing and health

Life expectancy at birth for both sexes rose by 7 years between 1990 and 2012 (from 68 years to 75 years) (16). In 2010, the ageing population over 60 years represented 6.7% of the population (17).

The ageing population is increasing and the government has a number of activities for the benefit of this population through the social security and social care funds. The resulting burden on health care represents a great challenge to the country's health system and should be considered in future health plans. In 2009, the government's national strategy for active and healthy ageing and elderly care was developed. In 2012, a new department, caring for the health of elderly, was established under the National Centre for Disease Control. There are plans to train physicians in geriatrics in cooperation with WHO. In addition, the city of Zawiya is preparing to join the WHO global network of age-friendly cities.

The momentum created by the launch of the *World report on ageing and health* in October 2015 and the related global strategy and action plan could help streamline the national strategy and national efforts. Capacity building is also needed to strengthen the age-friendly services provided through primary health care system.

## Gender, equity and human rights mainstreaming

The country falls among the high human development countries, ranking 40th among 152 countries in terms of gender inequality (18). Female adult (above 15 years of age) literacy is relatively high at 83.7% in 2012 (19) and female participation in the labour force is 30.0% (20).

The national health law (106) guarantees gender equality, non-discrimination and right to health care and financial and social care for all citizens. The public health sector is the main health service provider including provision of preventive, curative and rehabilitation services to all citizens free of charge. A public social care insurance fund and another fund for retirement are in place. In 2010, a new health insurance law was issued making insurance obligatory for all citizens through their employers. However, the law has not been implemented due to the current political situation.

There is a need to work towards ensuring the integration of gender-, equity- and human rights-based approaches into humanitarian health response activities among all affected populations as much as the situation allows.

## Social determinants of health

The *Human development report 2014* ranked the country at 55 out of 187 countries across the world on the human development index (18). The urban population increased between 1990 and 2012 from 75.7% to 78.0% (20). In 2010, the age group of 0–24 years was 48.7% of the total population (17). Adult literacy rates in 2012 were 88.5% (21), while unemployment was 8.9% and for youth (15–24 years) was 23.9% (20).

Before the current conflict, the country had not formed a national multisectoral committee for social determinants of health. However, cooperation with certain sectors such as education and social security and planning was pursued. The political and security situation in the country has impeded efforts to address social determinants of health among other health issues.

There is a need to integrate a social determinant lens while pursuing humanitarian health response activities among all affected populations, to the extent that the situation allows.

## Health and the environment

It is estimated that 4900 people a year die as a result of environmental factors and the percentage of disability-adjusted life years attributable to the environment is estimated at 17.0% (22). Access to improved sanitation facilities is 97.0% (16) resulting in an estimated 37.9 deaths in 2012 due to inadequate access (23). It is estimated that 0.01% of the population uses solid fuels (biomass for cooking, heating and other usages) (24), resulting in less than 100 deaths per year as a result of indoor pollution (25).

Due to the ongoing emergency and its detrimental impact on environmental health services, it is assumed that these figures are on the rise. Air pollution is not monitored and reported. However, remotely sensed data show high levels of particulate matter in the air. A national public authority for environment is concerned with the implementation of environment protection law number 15 and its bylaws, under the supervision of the Prime Minister. Urban sprawl, new developments and dispersed settlement patterns have reduced access to sanitation and water networks. Pollution remains a problem due to the rapid growth of the population and motorized traffic. The government is working on a long term environmental health development plan with the support of WHO and European Union. The government has been working on strengthening national capacity to assess and manage the health impacts of environment risks.

The government endorsed the WHO regional environmental health strategy and framework for action 2014–2019. The next step is to initiate a national multistakeholder process to develop a strategic environmental health framework for action in 2015–2016. In order to do this, urgent action is needed to update data related to all environmental health services and risk factors.



# Health systems

National health  
policies, strategies  
and plans

Integrated people-  
centred health  
services

Access to medicines  
and health  
technologies

Health systems,  
information and  
evidence

# Health systems

- A 2009 decree called for developing the health system based on principles of solidarity and universal coverage through social health insurance schemes, welfare funds and private insurance.
- A strategy for patient safety has been established.

## National health policies, strategies and plans

The country has no active national health plan. Total expenditure on health per capita at international exchange rate increased between 2005 and 2013 from US\$ 219.8 to US\$ 432.8. General government expenditure on health increased for the same period from US\$ 142.1 to US\$ 304.1 (26). General government expenditure on health as a percentage of total expenditure on health also increased for the same period, from 64.7% to 70.3%. Total expenditure on health as a percentage of the gross domestic product increased for the same period from 2.7% to 4.3% (26). The health financing system is characterized by a high share of out-of-pocket spending, 29.7% in 2013, a decrease from 2005 when it was 35.3% (26). Total expenditure on health from external sources was 0.1% in 2013 (26).

Health financing constraints facing the country and the scarcity of budgetary allocations for the past year have contributed to a significant deterioration of public services, including health services. The national health policy and strategy identified priority programmes such as improving governance, human resources, health financing, private sector regulation and partnership, hospital accreditation systems and development of operational research. Although the health budget has been increasing in recent years, it remains modest compared to that of other oil-producing countries in the Region. The health financing system is burdened by the escalating cost of care, mainly due to treatment abroad. New sources of funds for health are being explored while also focusing on rationalizing health spending.

There is limited absorptive capacity in the Ministry of Health, highlighting the urgent need to reform the public financial management system. There are multiple legislative provisions related to health financing, and in 2009 a decree was issued calling for developing the health system based on the principles of solidarity and universal coverage through social health insurance schemes, welfare funds and private insurance. The government has yet to undertake its first round of health accounts and other diagnostic assessments to be used in developing its health financing strategy.



## Integrated people-centred health services

Health service delivery was strengthened between 2010 and 2013, with the density of health posts increasing from 28.5 to 29.3 per 100 000 population (27). In 2013, hospital density was 2.6 per 100 000 population for general hospitals, 0.6 for provincial hospitals, and 0.5 for specialized hospitals (27). Hospital beds were 37.0 per 10 000 population in 2009 (28). Between 2004 and 2009 the health workforce density increased from 12.5 to 19.0 per 10 000 population for physicians, from 48.0 to 68.0 per 10 000 population for nurses and midwives, from 1.5 to 6.0 per 10 000 population for dentists and from 2.0 to 3.6 per 100 000 population for pharmacists (29).

The primary health care network is composed of various levels of health facilities including units, centres, polyclinics, dental care units, and branches of the National Centre for Disease Control. According to a 2014 report from the Ministry of Health, only 8.0% of the existing primary health care facilities are functioning, the rest (92.0%) are not functioning due to maintenance (Benghazi and Tripoli); conflict; shortages in health workers and supplies; or damage (Kikla and Zintan area). Insecurity has led to restrictions in movement of people and health workers in the conflict areas. The destruction of health infrastructure is continuing, further aggravating availability of health services. Maternal and child health care and care for patients with chronic diseases, disabilities and mental health disorders are compromised by restrictions in access to the few functioning health facilities. The health workforce is being rapidly drained due to qualified staff leaving the country and those remaining facing barriers to accessing health facilities. Simultaneously, the demand on primary health care services in these facilities has increased, including added pressure on vaccination services in areas with a high influx of internally displaced persons. The Ministry of Health, Directorate of Quality and Patient Safety and National Centre for Disease Control established a strategy for patient safety and in an attempt to achieve universal health coverage, the Ministry of Health is working with the European Union to establish a replicable family practice programme.

Immediate actions should include addressing the deficiencies of health personnel and improving access to health services, including access to primary and preventive care by establishing a health post with vaccination, mother and child care including growth monitoring, antenatal and postnatal care, family planning services, care of elderly and screening. The establishment of a functional referral system is an urgent need, along with strengthening hospital and emergency care. Other priorities include strengthening delivery of the defined package of health services, training of community health workers and strengthening the outreach team strategy, and improving the quality of surgical care.

## Access to medicines and health technologies

The Authority of Drug Supply is the national body which, under the authority of the Ministry of Health, procures all medical supplies for public health facilities and those where medications are provided to patients free of charge. Extensive shortages of medicines and medical supplies currently exist, and very low stocks of vaccines are predicted. The gaps in the supply chain management may be summarized as follows: lack of drug legislation, regulation, guidelines and monitoring for rational drug use; outdated licensing, registration and pricing procedures; poorly regulated procurement, warehousing conditions and procedures; and insufficient capacity at the National Centre for Disease Control. Since June 2014, these gaps have been aggravated as a number of warehouses were destroyed and looted and the logistical difficulties in importing and transporting medicines and medical supplies within the country have grown dramatically. The lack of proper funding for medicine procurement since the beginning of 2015 has added a new layer to the problem.

The Authority of Drug Supply will introduce an electronic application to facilitate the distribution and management of medicines and other medical supplies. The Ministry of Health is working on a national list of essential medicines in consultation with WHO.

Priorities include mapping private service delivery and identifying entry points for public-private partnerships, as well as roll-out of pay-for-performance schemes by the European Union through their health system strengthening programme and planning to improve availability and quality of services.

## Health systems, information and evidence

The health information system is also affected by the conflict. As of 2014, only 7 out of 36 surveillance officers were still reporting to the main centre in Zliten. The government has started efforts to strengthen the national health information system, supported by WHO. The country has completed rapid assessment of the national health information system and revision of the national health indicators list, with 58 core indicators identified. The Health Information Centre is planning a comprehensive training programme on registering mortality and morbidity using the International Classification of Diseases (ICD 10). A guide on death certification has been prepared and pilot workshops were implemented in 2015. There is an ongoing Pan Arab Project for Family Health survey in cooperation with the National Bureau of Statistics and Census.

The country needs to strengthen its health information system and to build capacity in the use of national information and data for analysing and monitoring national health trends and in formulating and implementing a national eHealth strategy. Another essential initiative is the regular collection of national information for inclusion in regional and global observatories.

# Preparedness, surveillance and response

Alert and response  
capacities

Epidemic and  
pandemic-prone  
diseases

Emergency risk and  
crisis management

Food safety

Poliomyelitis  
eradication

Outbreak and crisis  
response

# Preparedness, surveillance and response

- An analysis of strengths, weaknesses, opportunities and threats was conducted in order to improve compliance with the IHR at all 26 entry points in the country.
- The Ministry of Health established a health coordination network covering the country, with hubs in the four major cities.

## Alert and response capacities

The country has requested a second two-year extension (to June 2016) to meet its IHR 2005 obligations. The government has submitted a new IHR plan of implementation with a time-frame of two years. Geopolitical instability has severely affected maintenance of the IHR core capacities. Currently the risk of importing communicable diseases and international disease spread is a real concern because of the weakened surveillance system, recent displacement and the increased number of illegal immigrants. A well performing early warning and response network has not yet been established.

National IHR capacity is being strengthened with the assistance of WHO. An analysis of strengths, weaknesses, opportunities and threats was conducted in order to improve compliance with IHR at all 26 points of entry in the country. Prior to the crises experienced since 2011, the public health sector was already facing a number of challenges including high dependence on foreign health workers, especially in the south of the country; a debilitated primary health care network, especially in the main cities (Benghazi and Tripoli); and marginalized health services in some areas.

In light of the country's current health situation, several immediate interventions are needed: mitigating the risk of transmission of communicable diseases and improving the capacity to respond to communicable diseases outbreaks. Long term actions needed are: continuing to review the current situation in the country for implementation of core capacities under IHR; identifying strengths and weakness of IHR implementation through a gap analysis; strengthening national core capacity in IHR implementation; and drafting of a detailed IHR implementation plan.

## Epidemic and pandemic-prone diseases

The protracted conflict in the country has severely impacted its health system, particularly its public health surveillance system, making it weak and nonresponsive. The country is vulnerable to West Nile fever as well as other zoonotic infections. In 2009, the country faced

an outbreak of plague which highlighted the need for improving the detection, preparedness and response capacity for control of epidemic-prone infectious diseases. Seasonal surges in influenza cases, often reported by the country, also highlight the need for developing a control programme especially for the at-risk populations.

In view of the fragile health system resulting from protracted conflict, the main priority should be to rebuild the public health surveillance system with a focus on the early warning component to timely detect and respond to any health threats.

## Emergency risk and crisis management

The country is susceptible to both natural and man-made disasters that cause a significant loss of life, livelihood and infrastructure, reversing development gains. The annual losses attributable to natural disasters (based on data from 1994–2013), on average were 1.1 deaths, or 0.02 deaths per 100 000 inhabitants, US\$ 17.5 million in purchasing power parity and 0.01% of gross domestic product (30).

In the past three years, the country has gone through extensive conflict that has left many dead, injured and displaced. The last crisis started in June 2014 and is ongoing. War-related traumas have emerged as one of the main health problems in the country. The impacts of the current conflict on health care delivery and medical supplies are significant. The country is also facing an influx of illegal immigrants from sub-Saharan Africa, imposing increasing health and security problems during the conflict.

A full-scale post-disaster needs assessment and disaster risk assessment need to be conducted to build an evidence base for systematic capacity development of the health system, including the health workforce. In addition, a health facilities safety assessment needs to be conducted to exclude disaster vulnerabilities in maintaining continued health care. The involvement of all key stakeholders in such capacity development needs to be reinforced through optimum policy support.

## Food safety

Foodborne diseases are among the most reported diseases. The safety of food supplies is the responsibility of the National Food and Drug Control Centre and the National Centre for Disease Control responds to all outbreaks related to foodborne disease.

This programme area is in need of support to develop a national strategy with participation from different sectors and institutions. This process will need to await a settlement of the current fluid situation in the country.

## Poliomyelitis eradication

The last confirmed polio case was reported in 1991. The government has completed additional polio vaccination campaigns. However due to ongoing conflict and inaccessibility, there is a risk of reintroduction of poliovirus in the country. Acute flaccid paralysis surveillance indicators are above the certification standard. The non-polio acute flaccid paralysis rate was 2.1, 2.8 and 2.1 per 100 000 population under the age of 15 years in 2012, 2013 and 2014 respectively. The stool adequacy rate was 97.6%, 93.1% and 95.4% in 2012, 2013 and 2014 respectively (certification standard is 80%) (31).

The government will conduct two subnational immunization campaigns in 2015 in high-risk areas to raise the population immunity and enhance the sensitivity of the surveillance system at the subnational level. The polio importation and response plan needs to be updated.

## Outbreak and crisis response

The recent clashes since August 2014 contributed to further weakening of the health sector. As of June 2015, it is estimated that more than 500 000 displaced persons are considered to be particularly at risk. The emergency medical system, which was already weak before the escalation in violence, has collapsed in many areas as a consequence of the recent violence. Emergency transportation to hospitals is adversely affected due to the prevailing security situation and occasionally because of fuel shortages and poor communications.

In 2012, signs of stability enabled the establishment of a surveillance system. However, with the restarting of the conflict in 2014 and the cuts in communication between the various departments of the Ministry of Health, reporting on communicable diseases has diminished. At the end of 2014 only half of the sentinel sites were reporting regularly on communicable diseases and the alert system was very weak. There are large numbers of displaced people within and around Tripoli and Benghazi. At least 100 000 people are known to have crossed the borders into neighbouring countries (32).

The Ministry of Health, with the support of WHO, is providing coordination of the health response, including needs assessment and monitoring and evaluation, working with the Ministry of Health's Crisis Committee, Medical Supplies Organization, National Centre for Disease Control, International Committee of the Red Cross and Lebanese Red Cross. Bearing in mind that the country is used as a crossing point for hundreds of thousands of immigrants from Africa, and the fact that the primary health care network including the preventive care is almost absent in many locations, the revitalization and the strengthening of the early warning and surveillance system is crucial for the country.

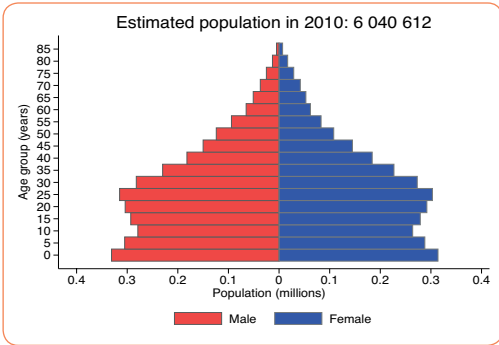
Focus is being placed on implementing outbreak control through the existing National Centre for Disease Control surveillance network and strengthening the routine disease reporting system. Health information needs to be identified and verified with health professionals in each location, while the service delivery should involve health care actors with previous expertise in similar settings.



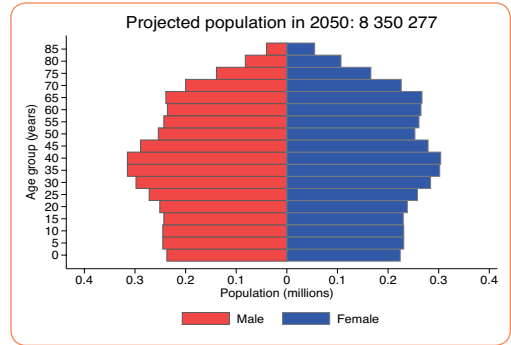


# Demographic profile

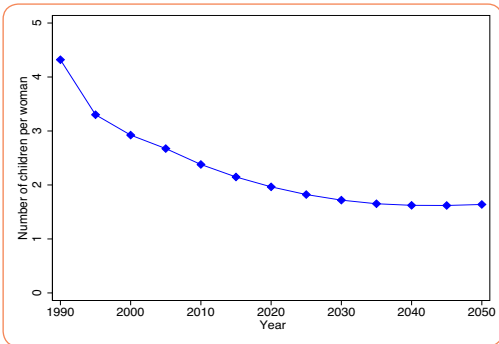
Population pyramid 2010



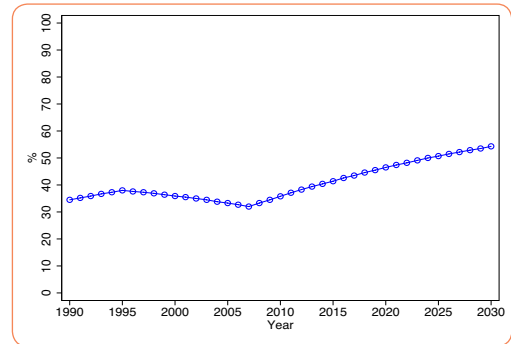
Population pyramid 2050



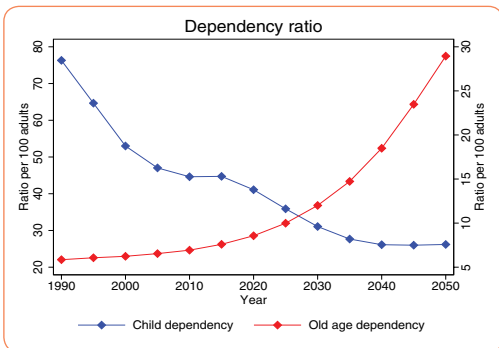
Total fertility rate



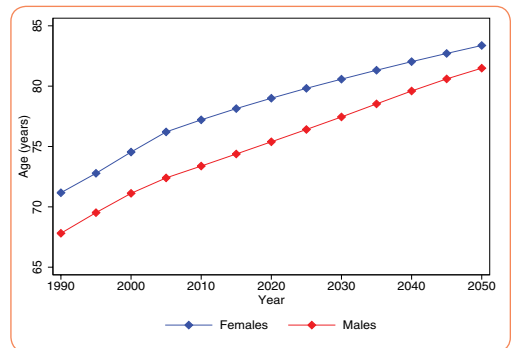
Need for family planning satisfied



Dependency ratio



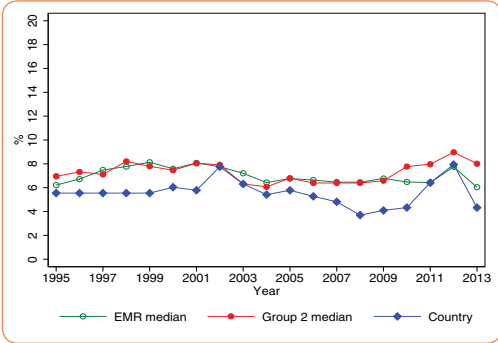
Life expectancy at birth



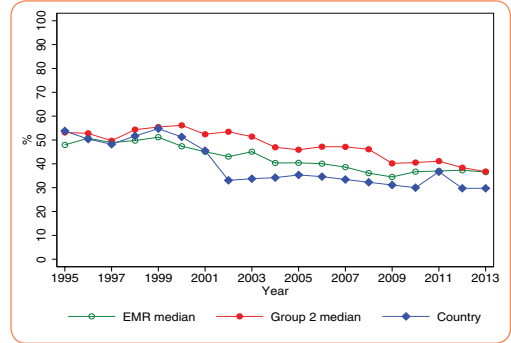
Sources for all graphs: (17)

# Analysis of selected indicators

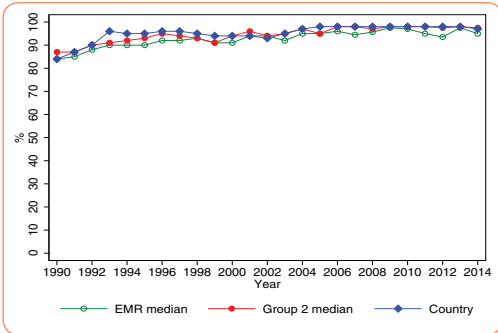
General government expenditure on health as % of general government expenditure (26)



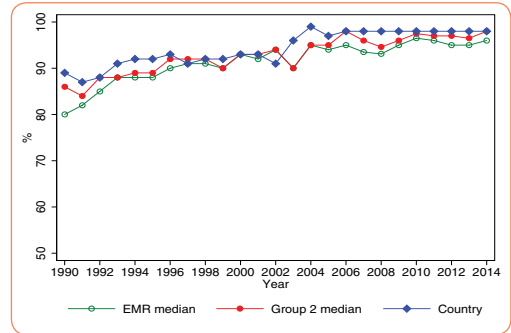
Out-of-pocket expenditure as % of total health expenditure (26)



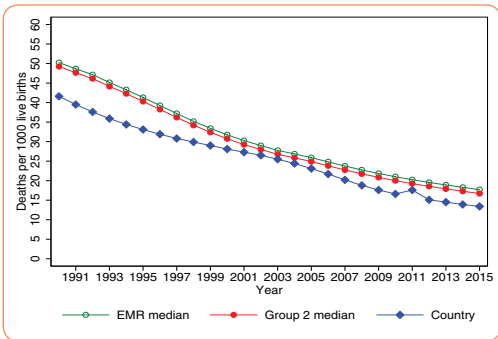
DPT3/pentavalent coverage among children under 1 year of age (%) (5)



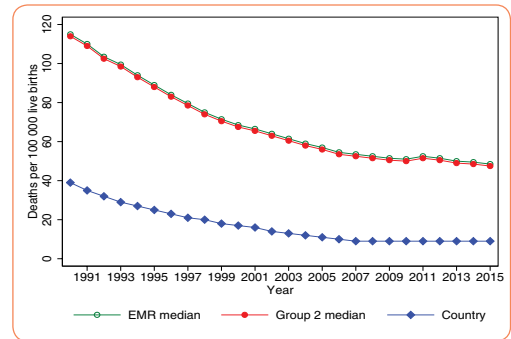
Measles immunization coverage (%) (5)



Under-5 mortality (per 1000 live births) (15)



Maternal mortality ratio (per 100 000 live births) (14)



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