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Foreword

The Government of Bahrain 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.
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WHO Regional Director for the Eastern Mediterranean

H.E. Ms Faeqa Al Saleh
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Introduction

The population of the country has increased by 63.5% in the past 25 years, reaching 1.4 million in 2015, and is projected to increase by an additional 19.8% in the next 25 years. It is estimated that 11.4% of the population lives in rural settings (2012), 19.8% is between the ages of 15 and 24 years (2015) and life expectancy at birth is 77 years (2012). The literacy rate for youth (aged 15–24 years) is 98.2%; for adults it is 94.6%, and for adult females it is 91.6% (2010).

The burden of disease (2012) attributable to communicable diseases is 10.5%, to noncommunicable diseases 77.9% and to injuries 11.6%. The share of out-of-pocket expenditure was 14.6% in 2013; the health workforce density is 9.1 physicians and 24.1 nurses and midwives per 10 000 population (2011).

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, several items 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

- The national composition of the HIV committee was reviewed and the committee established.
- The national hepatitis committee was established.
- The national tuberculosis guidelines were updated.

HIV

The HIV prevalence is low among adults aged 15 to 49. Routine testing is administered on 100% of blood collected (1).

There is a national strategic plan on HIV and AIDS in place. The high level of political commitment and the availability of an established system for diagnosing, counselling and treatment of HIV-infected patients are among the strengths of the HIV programme. One of the limitations in the programme is that HIV surveillance is restricted to case-finding, primarily through mandatory screening. In the case of hepatitis, there is a strong surveillance system with the contribution of both the government and the private sector. Preventive strategies, such as hepatitis A and B vaccination for high risk groups, are available and these have had a strong impact on the incidence rate. However, follow-up on cases is lengthy.

There are plans for the national HIV control programme to determine the prevalence of HIV among key affected populations and this will improve surveillance and awareness for hepatitis among health care workers and the general population.

Tuberculosis

The tuberculosis-related mortality rate is estimated at 0.7 per 100 000 population (2). A total of 209 detected tuberculosis cases were reported in 2013, of which 140 were new sputum smear-positive cases (2). The treatment success rate for new and relapsed cases registered in 2012 was 44.0% (2). Drug-resistant tuberculosis is estimated at 1.9% among new cases and 100% among previously treated cases (2).

The country has a well established surveillance system with contributions from the public and private sectors, which include case identification and contact management. A reduction in the estimated number of tuberculosis cases has been achieved among nationals, however, among non-nationals the rates have remained constant.

The next step is to reduce the number of new cases imported from countries with a high tuberculosis burden to reach the target by 2035 (1 case per 100 000 population). Efforts
should be made to improve surveillance and awareness among health care workers and the
general population.

Malaria

The country is considered to be a low burden and low risk country for malaria. Total
confirmed malaria cases increased from 87 in 2003 to 233 in 2012, of which 100% were
imported (3). In 2013, 6% of confirmed cases were due to *Plasmodium falciparum* and 94%
were *P. vivax* (4).

The country is free from local malaria transmission. All cases reported were imported
from the Indian subcontinent. The country has a well established surveillance system with
contributions from both the public and the private sectors.

The country aims to maintain activities at the same level as there is no local transmission.
Due to the increase in imported cases, the main priorities are having in place a strong,
vigilant disease surveillance system and the availability of high quality malaria diagnosis
processes and effective treatment in all health facilities.

Neglected tropical diseases

The country was certified free of dracunculiasis in 1998 and no autochthonous cases were
reported for cutaneous or visceral leishmaniasis (4).

The main challenge is in sustaining the national control programmes for communicable
diseases, especially neglected tropical diseases, with a specific focus on the surveillance
system for emerging and re-emerging diseases. In this respect, the country can take advantage
of: an open political environment; increased orientation towards privatization; strategic
alliances with other organizations and strong collaboration with stakeholders; community
participation; investment in information and health technologies; and acknowledgement of
the role of service planning.

Recommended actions include improving the surveillance of neglected tropical diseases
and progressively scaling up treatment with WHO-donated medicines.

Vaccine-preventable diseases

Immunization coverage among 1-year-olds improved between 1990 and 2013 for DTP3
from 94.0% to 99.0%, measles from 87.0% to 99.0% and polio from 94.0% to 99.0% (5).
Neonatal tetanus coverage increased as well during the same period by 95.8% (from 48.0%
to 94.0%) (5). In 2013, hepatitis B (HepB3) vaccine coverage among 1 year-olds was 99.0%
(5).
No cases of endemic measles have been reported for more than 3 years. Several new lifesaving vaccines have been introduced, including *Haemophilus influenzae* type B, pneumococcal conjugate and rotavirus vaccines. Vaccination services are provided through government-funded programmes at primary health care centres located within accessible distance to residences. A comprehensive multiyear plan for the immunization programme was developed for the period 2012–2017. The plan has been updated in line with the global vaccine action plan and the Decade of Vaccines vision. Moreover, in view of the introduction and envisioned expansion of new vaccines, the cold chain capacity was upgraded and a workplan for a strategic vaccine store was initiated. Implementation of this plan was evaluated and the recommendations of the technical immunization committee were updated accordingly. The surveillance of vaccine-preventable diseases has been strengthened with a weekly feedback report on communicable disease surveillance data, including vaccine-preventable diseases, sent to the authorities and other concerned agencies. A monthly vaccination bulletin is also distributed. This bulletin indicates the routine vaccine coverage; vaccination of adults, the elderly, and high risk groups; the results of immunization units and cold chain monitoring visits; adverse events following immunization; and progress towards global targets such as acute flaccid paralysis surveillance performance, measles and rubella elimination indicators, neonatal tetanus and control of childhood hepatitis B. The objectives for the Expanded Programme on Immunization in 2015 are to sustain the accomplishments, add a second dose of injectable polio vaccine, introduce the varicella vaccine routinely and strengthen adult and elderly vaccination. These objectives are achievable due to the high level of political support, partnership with the private sector, availability of policies, community awareness, vaccine acceptability, health care providers’ commitments and accountability, the strong immunization and surveillance programme and the support of a highly functional technical immunization committee.

Owing to the success of the Expanded Programme on Immunization in maintaining high coverage for all antigens, the focus is now on strengthening adult immunization, including influenza and hepatitis B vaccination in high-risk groups. The cost of all vaccines is covered by the government budget.
Noncommunicable diseases

Noncommunicable diseases

Mental health and substance abuse

Violence and injury

Disabilities and rehabilitation

Nutrition
Noncommunicable diseases

- New epidemiological realities have been addressed and behaviour conducive to better health promoted, with a focus on the promotion of healthy lifestyles, noncommunicable diseases, risky behaviour and substance abuse.
- Mental health, environmental health, food safety, and health among special groups have all been strengthened.
- A committee has been established to develop a mental health strategy for 2016–2020.

Noncommunicable diseases

The burden of noncommunicable diseases is rising, causing 77.9% of all deaths; cardiovascular diseases account for 26.3%, cancers 12.8%, respiratory diseases 5.9% and diabetes mellitus 12.7% (6). As a result, 13% of adults aged 30–70 years are expected to die from the four main noncommunicable diseases (7). Around 24% of adolescents (13–15 years of age, 34.2% boys, 13.7% girls) have ever smoked cigarettes, while 38.7% report having been affected by passive smoking (8), and annual per capita consumption of alcohol is 2.1 litres of pure alcohol (9). Raised blood pressure affects 28.1% of the adult population aged over 18 years (29.1% of males and 26.6% of females), while obesity affects almost a third of the population, 32.9% (29.5% of males and 38.0% of females) (7). All 11 essential medicines for treatment of noncommunicable diseases are available in the public health sector.\(^1\)

The country has a dedicated noncommunicable diseases unit as part of the Public Health Directorate for the prevention and control of noncommunicable diseases and risk factors. There is a national operational multisectoral action plan that integrates the major noncommunicable diseases and their shared risk factors; it includes a set of nationally adopted targets and indicators based on WHO recommendations. There is a coordination committee for noncommunicable diseases and primary health care units for the implementation of the national noncommunicable diseases prevention and control plan. Guidelines are available for the management of common noncommunicable diseases in primary health care and these are implemented across the country.

Multisectoral coordination needs to be strengthened on interventions such as implementing best buys in regard to salt reduction, marketing of non-alcoholic beverages for children and labelling of food; public awareness on these issues also needs to be improved. Uptake for existing primary health care services for early detection of noncommunicable diseases and risk factors should be promoted and monitoring of care for noncommunicable diseases

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\(^1\) WHO Regional Office for the Eastern Mediterranean, unpublished data, 2013.
using the Gulf Cooperation Council’s noncommunicable diseases quality indicators for primary health care should be strengthened.

Mental health and substance abuse

Neuropsychiatric disorders are estimated to contribute 18.6% to the burden of disease (10) and the suicide rate is 8.1 per 100 000 population per year (11). Annual prevalence of cannabis use is 0.4%, opiates 0.3%, cocaine 0.1% and amphetamines 0.1%. Estimated prevalence for substance use disorders among adult (15 years and over) males is 0.4% and is 0.1% among adult females (12).

In addition to the psychiatric hospital located in Manama there is a strong primary health care system based on a network of health centres distributed throughout the country and run by qualified family physicians. The specialized mental health clinics are run through the programme Towards a Better Mental Health which uses visiting doctors from the psychiatric hospital. There are 8 specialized mental clinics running in the primary health care centres as part of efforts to integrate mental health into primary health care.

In 2015, a committee was established to develop a 5-year mental health strategy (2016–2020) in line with the Ministry of Health strategy and international plans and strategies approved by WHO. The membership of the committee includes mental health specialists and other stakeholders.

Violence and injury

The proportion of deaths caused by injuries in 2012 was 11.6%; unintentional injuries accounted for 62.9% of this (68.1% were due to road traffic injuries and 6.3% were as a result of drowning) and intentional injuries accounted for 37.1% (78.1% self-harm and 21.9% from interpersonal violence) (6). In 2010, the estimated road traffic fatality rate was 10.5 per 100 000 population (13). For post-injury trauma care, there is a universal emergency access telephone number, however, less than 10% of the seriously injured are transferred by ambulance (13).

More comprehensive laws regarding road safety risk factors were addressed with the enactment of the new traffic legislation in 2014. Challenges include inadequate information systems and the lack of an injury prevention programme structure in the Ministry of Health to systematically address this important area.

There is a need to establish a functional injury prevention and control programme structure in the Ministry of Health, to set up an injury surveillance system and to strengthen vital registration using cross-validation with other data sources, including those of the Ministry of the Interior. The trauma care system needs in-depth assessment to identify and address
possible gaps. The newly enacted traffic legislation should be viewed as a vital, positive, first step that needs to be complemented with adequate enforcement.

Disabilities and rehabilitation

The prevalence of disability is 2.9%, and is higher among males (3.0%) than females (2.8%) (14). Age-specific disability prevalence is highest in the over-65 years age group (12.4%) and lowest among those aged 0–9 years (1.8%) (14). The distribution of disabilities or difficulties by type is: physical- or locomotor-related 30.7%, visual 17.4%, mental 14.6%, hearing 6.4% and speech 4.2%. Multiple disabilities constitute 10.4% of all disabilities (14).

The UN Convention on the Rights of Persons with Disabilities was signed in 2007 and ratified in 2011. The High Commission for the Welfare of Persons with Disabilities has been the national coordination mechanism since 2007. It is chaired by the Minister of Social Development and has representation from persons with disabilities. The constitution includes articles on disability. The overarching disability legislation, the Law on the Welfare, Rehabilitation and Employment of Persons with Disabilities of 2006, is being amended. There is a national disability strategy and implementation plan (2012–2016). The National Eye Health Plan 2014–2019 was developed in 2014, with special focus on the reinforcement of teleophthalmology for diabetes and diabetic retinopathy, screening of schoolchildren and a screening programme for retinopathy of prematurity. Family physicians are given relevant training under the continuing medical training programme. There is a regular referral system in place along with back-up of referral acceptance at secondary or tertiary level. Services for cochlear implantation are available.

The adoption of the WHO global disability action plan Better Health for Persons with Disabilities 2014–2021 is an opportunity for strengthening action for disability in the health sector within the broader multisectoral circle, and for building on the existing national strategy. The recent effort towards application of the International Classification of Functioning, Disability and Health also needs to be expanded to strengthen the evidence base for action on disability and rehabilitation.

Nutrition

The estimated prevalence of conditions resulting from malnutrition in children under 5 years of age is summarized in the following indicators: 7.6% underweight, 6.6% wasting and 13.6% stunting (15). Breastfeeding is a very common practice among mothers, however, prevalence of exclusive breastfeeding for 6 months is very low at 12.5% and low birth weight is 2.0%.

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The county has experienced an obesity epidemic. The prevalence of overweight and obesity among a number of age groups (children, adolescents and adults) is high and increasing.

The Baby Friendly Hospital Initiative started in 1992; by 1993, all government hospitals were accredited as baby friendly hospitals by UNICEF. In addition, the International Code of Marketing of Breast-milk Substitutes was implemented in 1995, and a national committee was appointed to monitor and follow up this issue (the law in this regard was updated in 2012–2013).

Several programmes targeting adolescents at different levels have been established to overcome iron-deficiency anaemia; these include: an ongoing surveillance programme to evaluate nutritional status, setting food standards for school canteens, fast food quality control, and a number of school campaigns for enhancing healthy eating and increasing physical activity. Additionally, nutrition clinics for managing obesity and overweight among adults are included in the multidisciplinary intervention programmes that were established to combat obesity. Population-based measures have also been introduced to reduce dietary salt and fat, supported by a ministerial decree. The country is planning a 20% annual reduction of salt in bread from the current levels in the coming 5 years. As part of a Gulf Cooperation Council initiative, mandatory food labelling for fat and salt on all imported or locally produced food items is about to be introduced. Since its establishment, the nutrition unit has been working actively with the national health strategy to ensure that all nationals have access to high quality, comprehensive, nutrition and dietetics health services throughout their life. The unit aims to provide community-based services responsive to the needs of the people and to use available resources efficiently and effectively. Planned activities, which are consistent with the strategic goals, include: achieving and maintaining the health and nutritional well-being of all; ensuring continued access by all to sufficient supplies of safe foods for a nutritionally adequate diet; providing promotive, preventive and curative nutrition health services to all age groups throughout their lifespan; integrating nutrition activities into the general health services (preventive as well as curative) activities; developing sustainable and environmentally-sound policies and programmes that lead to improved nutrition and health for both present and future generations; and emphasizing the role of the individual in being responsible for their own health.
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


- A rapid assessment of vulnerabilities and the right to health with a review of the current health legislation have been initiated in collaboration with WHO to provide insight on existing strengths and gaps that need to be addressed.


Reproductive, maternal, newborn, child and adolescent health

Maternal mortality ratios remained almost constant between 1990 and 2013 at 21–22 per 100 000 live births (16) and the under-5 mortality rate decreased from 23 to 6 deaths per 1000 live births (17). The leading causes of under-5 mortality are prematurity (16.0%), intrapartum-related complications (18.0%) and congenital anomalies (30%) (18). The proportion of women receiving antenatal care coverage (at least one visit) is 100%.3

This reduction in maternal mortality is consistent with changes in key determinants of mortality due to improving immunization coverage and antenatal, postnatal and delivery care. The main challenge to sustaining progress in maternal and child health is the increasing pressure on public health care facilities caused by the increase in the ageing population combined with the general population growth. Added to these are the increase in noncommunicable diseases due to unhealthy lifestyles, the continually rising costs of, and expenditure on, health care delivery as well as shortages in some health specialties. The rising cost of health care, which is well in excess of the normal rise in price indices (similar to most countries), means that the future sustainability of the health care system is a major issue, both in terms of government financing and the provision of a quality service.

National policies and strategies on reproductive, maternal, newborn, child and adolescent health need to be updated and research needs to be further strengthened. There is still not enough information on major determinants of ill health throughout the lifespan to enable a strategic, evidence-based approach to policy-making and planning. The concept of

integrated health care throughout the life course has been partially realized but still needs to be further promoted.

Ageing and health

Life expectancy at birth rose by 4 years between 1990 and 2012 (from 73 years to 77 years) (18). In 2010, the population aged over 60 years represented 3.5% of the total (19).

A number of sectors are working for the care of the elderly in the country: the Ministry of Health, the Ministry of Social Affairs, the General Organization for Social Insurance, the National Committee for the Elderly and nongovernmental organizations. The government has a pension system and a social security organization, Al Hekma Society for Retired Persons. The lack of qualified health care providers is still a major problem.

A national strategy and executive plan for the older population for 2009–2014 has been endorsed by the Ministry of Health. The main strategic directions of the strategy are: decreasing the burden of disease and disabilities; the provision of quality health care services; strengthening the multidisciplinary health care team; the adoption of an age-friendly primary health care system; developing a health information database; building the capacities of human resources; raising community awareness; involving older persons in decision-making; and strengthening cooperation between governmental and nongovernmental sectors. There is also a proposal for Manama to join the WHO Global Network of Age-friendly Cities.

Gender, equity and human rights mainstreaming

The country is classified among the very high human development countries, ranking 46th among 152 countries in terms of gender inequality (20). Female adult (above 15 years of age) literacy is relatively high at 91.6% in 2010 (21) and participation in the labour force is 39.4% (22).

The government is party to the Convention on Elimination of All Forms of Discrimination against Women, the International Covenant on Economic, Social and Cultural Rights and the Convention on the Rights of the Child. In successfully seeking election to the inaugural human rights council in 2006, the government made 19 pledges and its universal periodic review provided information on efforts to fulfil them. The government is actively studying the need for a national plan for human rights to be developed and implemented through an interactive process between concerned ministries and authorities and civil society. A rapid assessment of vulnerabilities and the right to health, along with a review of the current health legislation, has been initiated in collaboration with WHO to provide insight on existing strengths and the gaps that need to be addressed. The government is committed to the promotion of nongovernmental organizations (through legislation or otherwise) and
to creating positive interactions between nongovernmental organizations and other related agencies.

In order to strengthen its commitment to human rights treaties, the concerned national committee will organize training and follow-up workshops for concerned stakeholders, including the police, prison officers, security personnel, the media and nongovernmental organizations to further strengthen national capacities for honouring the country’s commitments.

Social determinants of health

In the Human development report 2014 the country was ranked 44 out of 187 countries across the world on the human development index (20). The urban population remained constant between 1990 and 2012 (88.1% and 88.6%), while access of the rural population to improved water sources increased from 94.9% to 100% (18). In 2010, the 0–24 years age group accounted for 34.4% of the total population (19). The adult literacy rate in 2011 was 93.5% (23). Overall unemployment was 7.4%; for youth (15–24 years) the rate was 27.5% (2012) (22).

Challenges include the lack of clarity within the health sector on its exact role in practically addressing social determinants of health and the perception that this is not a priority in affluent societies. One opportunity for managing this comes via the WHO tools, strategies and indicators for operationalizing social determinants of health in health planning and ongoing programmes.

More research is required on the interconnections between the underlying social determinants of health in the context of economic affluence and the root causes of key public health issues such as noncommunicable diseases and road traffic injuries and related risk factors. This should enable the design, implementation, monitoring and evaluation of effective prevention and control interventions in coordination with other concerned sectors.

Health and the environment

It is estimated that 1600 people a year die as a result of environmental factors; the proportion of disability-adjusted life years attributable to these factors is estimated at 14% (24). Access to improved sanitation facilities is 99% while access to improved drinking-water is 100% (18). The proportion of the population using solid fuels (biomass for cooking, heating and other usages) is estimated at 0% (25).
The main environmental risk factors include air pollution, chemical exposure, housing and environmental determinants of injuries. These contribute significantly to the burden of noncommunicable diseases and injuries. Outdoor air pollution is not adequately monitored or reported, accordingly satellite data and global models were used to show high levels of particulate matter concentration in the environment.

The government has endorsed the WHO regional environmental health strategy and framework of action for 2014–2019. The next step is to initiate a national multi-stakeholder process to develop a strategic environmental health framework for action in 2015–2016.
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 strategy has been endorsed to provide health insurance for nationals and expatriates working in both the public and the private sectors.
- Reconfiguring the health system to address new epidemiological realities by focusing on healthy lifestyle promotion and mental health disorders.
- Sustaining and integrating surveillance system within the national health information system to monitor emerging and re-emerging communicable diseases.

National health policies, strategies and plans

The country’s national health planning cycle is addressed by the National Health Strategy 2016–2025 and by the Health Improvement Strategy. Total per capita expenditure on health at the international exchange rate increased from 2005 to 2013 from (US$ 573.0 to US$ 1067.2; general government expenditure on health increased during the same period from US$ 391.5 to US$748.8 (26). General government expenditure on health as a proportion of total expenditure on health also increased during the same period from 68.3% to 70.2%, while total expenditure on health as a proportion of gross domestic product increased from 3.7% to 4.9% (26). In addition, the share of out-of-pocket spending in 2013 fell to 14.6% from 21.7%2005 (26). There are no external sources for expenditure on health.

The National Health Strategy 2015–2018 will provide health insurance for nationals and expatriates in both the public and the private sectors, and an executive committee has been established for a national health insurance programme. In addition, ways of improving efficiency in using scarce health resources are being explored to guarantee value for money. The government is working to develop its health accounting system and plans to publish its first round of health accounts in 2015.

In order to maintain this level of progress and to achieve further progress and prosperity, the forthcoming health sector strategy should present a clear vision and mission and must reflect the current and future situation; this should be in line with the government’s economic vision up to 2030: preparing and tackling the major challenges faced by the health sector, focusing on preventive services and health promotion programmes through encouraging community partnership and the principles of self-care, and seeking to provide high quality health care which is evidence-based and in line with the best international standards.

The sustainability of health sector financing and the development and improvement of the health care system require increased efforts and adjustment. Policies and plans need to be created that are aimed at finding alternative and attractive systems which will lead to
effective sustainability and competitiveness and increase interdependence and integration between related government, private and civil sectors. This will have the effect of improving investment opportunities in the health sector and meeting the increasing demand for general and specialized health services and education and for the development of specialized health care centres.

The promotion and integration of partnerships with major stakeholders in the private sector is a key factor in enhancing quality at service level and reducing the economic burden on the Ministry of Health. Proactive medical tourism and increasing investment in health are the end results of successful policies and strategies. Implementing health insurance is one option for health financing: it reduces the economic burden on the Ministry of Health while increasing the choices for citizens and residents to select public or private health care facilities.

**Integrated people-centred health services**

Human resources for health decreased between 2005 and 2011: for physicians the decrease was 66.5% (27.2 to 9.1 per 10 000 population), for nurses and midwives it was 54.5% (from 53.0 to 24.1 per 10 000 population) and for dentists 43.6% (4.1 to 2.3 per 10 000 population). There were 1.5 pharmacists per 10 000 population in 2011 (27). Health service delivery data showed 18 hospital beds per 10 000 population (2009) (28). In 2011 there were 0.1 mental hospitals per 100 000 population (28) and an estimated 8.2 psychiatrists per 100 000 population working in the mental health sector (29).

A full package of comprehensive health services is provided for the whole population. Accessibility for all is maintained by the availability of free services and an established network of 27 health centres and specialized clinics staffed with family physicians. All centres are accredited by Accreditation Canada and a second accreditation is under way. The referral process is well structured, however, the feedback mechanism from secondary care is impaired. An ongoing concern has been the excessive length of stay, average 6 days, and poor efficiency in bed utilization plus the fact that a considerable number of patients visiting secondary health care facilities could easily be treated at primary health care level. There is an increasing tendency towards privatization with strong regulation.

In 2014, dependence on expatriate health workers was much lower than in neighbouring countries. “Bahrainization”, meaning that health services are provided by nationals, has been government policy over the years. Almost 100% of this objective has been achieved in areas such as dentistry, pharmacy and laboratory services, although there is still a substantial gap in the actual workforce needs: there is a noticeable shortage of nurses and doctors in certain specializations and subspecializations. The ratio of female to male employment in the health sector is almost equal, with a noticeably higher proportion of females in many specializations. The health sector needs to optimize allocation of resources
between primary care and hospital care for efficient delivery of services. There is also a need to establish home health care services in response to the needs of an ageing population. The capacity for long-term human resources planning needs to be strengthened. Demographic and epidemiological transitions, characterized by a dramatic rise in noncommunicable diseases and associated risk factors, obesity and tobacco consumption are evidence that proper integration of noncommunicable diseases and mental health in primary health care services is necessary.

Future priorities include strengthening the role of the public sector and better public–private partnerships. The key priorities for health care delivery are: integration of health services within the Ministry of Health (as well as in other government institutions) to provide efficient health services focused on patient needs; provision of quality health services by maintaining international accreditation of facilities and ensuring their compliance with national health regulatory authority requirements; access to all health care services, both primary and secondary, through reduced catchment areas and shortened waiting times; and health service sustainability through the development of sustainable funding arrangements, meeting future demands for health care professionals, upgrading management systems and improving the quality of infrastructure.

Access to medicines and health technologies

The Directorate of Materials Management is the main agency for organizing the requirements for all drugs and medicines, hospital consumables and equipment for the Ministry of Health. The infrastructure is good and advanced technologies and facilities are available. The national medicine policy has been updated and there is collaboration between government sectors through the national purchasing committee as well as a strong cooperation with all the GCC countries through the Central Gulf Purchasing Programme. Challenges include ongoing political transformation and associated pressures on the health sector; government control of finances, which affects the responsiveness of the health system; staff attracted to the private sector; lack of integration, communication and coordination within departments of the Ministry of Health and the need for greater transparency and accountability in decision-making; the need to enhance the capacity for long-term human resources planning; lack of an updated national medicines policy and implementation plan; inadequate access to controlled medicines; and the fact that no system for performance assessment or incentives has been developed or implemented.

An open political environment that encourages debate and discussion is needed along with: increased orientation towards privatization with strong regulation, strategic alliances with other organizations and strong collaboration with stakeholders, investment in information
and health technologies for improving efficiency, and acknowledgement across government of the role of service planning.

**Health systems, information and evidence**

Health systems are undergoing rapid changes and the requirements for conforming to the new challenges of changing demographics, disease patterns, emerging and re-emerging diseases coupled with rising costs of health care delivery have led to a comprehensive review of the National Health Strategy for 2014–2018 aligned with an integrated health information technology strategy. The review will lead to improvements in health care delivery.

One of the key developments of the Ministry of Health is the National Health Information System (I-SEHA programme) aimed at developing technical health services systems by applying the latest techniques on health services to improve services for patients and increase the efficiency (quality and speed) of delivery.

The I-SEHA programme also includes the provision of electronic services for the implementation of the e-Government project through the provision of all electronic health services such as patient appointments, results of X-rays and laboratory tests, request for registration of births and deaths.

Improvements in the health information systems face significant challenges such as the high and escalating cost of health services, the increasing awareness and expectations of the public and demand for high quality care. The Ministry of Health has taken advantage of developments in technology this to improve health care delivery.
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

- The country has been relatively free from the emergence of any major infectious disease outbreaks in the past decade.

- The country is currently working on reviewing its national disaster management plan and the national plan for emergency response with an all-hazard and multisectoral approach.

- In late 2014, the country began scaling up its preparedness for Ebola virus disease.

Alert and response capacities

The government has declared that it met the International Health Regulations (IHR) 2005 obligations by 15 June 2014. However, the country continues to work to further enhance and maintain IHR capacities beyond 2016.

Significant progress has been achieved in implementing the IHR core capacities in the country, particularly those related to surveillance, preparedness, response, risk communication, laboratory, requirements at points of entry, and IHR-related chemical, radiology and nuclear hazards. Progress has also been made under legislation, coordination and IHR-related zoonotic and food safety hazards.

The existing agreements with the Gulf Cooperation Council countries have also strengthened cross-border surveillance and response and regional risk assessments and enhanced regional capacities in infection prevention and control on potential hazards; this led to updating the national preparedness and response plans accordingly. A national risk assessment is conducted annually and a national plan for preparedness and response to priority risks has been developed. Assessment of the human resources and qualifications required to fully implement the priority health and public health areas has been conducted. Recruitment and planning and implementing programmes to develop the capacity of human resources are being carried out in line with this assessment and as part of the health improvement strategy.

The strong political commitment and leadership expressed by the Ministry of Health may be expanded to include the other relevant line ministries and government sectors. The strong all-hazards and multisectoral coordination mechanism on emergency preparedness and response led by the General Directorate of Civil Defence offers a unique opportunity to enhance coordination and improve emergency preparedness and response across all
sectors. Progress under human resources development needs to continue to maintain IHR functionality in a high quality, sustainable manner.

**Epidemic and pandemic-prone diseases**

The country has been relatively free from the emergence of any major infectious disease outbreaks in the past decade. However, being an important travel hub and a transit point for international passengers traveling to the east, the country should strengthen its surveillance system for early detection of and response to any acute health threats that can spread through international travel. In addition, owing to the presence of a large migrant population, mainly of Asian origin, the threat of exogenous spread of infectious diseases that primarily affect Asian countries (e.g. cholera, dengue fever, Crimean–Congo haemorrhagic fever) followed by local autochthonous transmission cannot be ruled out due to the presence of competent vectors as well as other risk factors that may perpetuate local indigenous transmission once the causative agents of the disease penetrate into the environment.

The major focus of the country’s preventive and control efforts to address the threat of epidemic and pandemic-prone diseases should be in the areas of influenza and respiratory diseases as well as antimicrobial resistance. In addition, strengthening infection prevention and control in health care settings to address health care-associated infections should be regarded as a priority. The country should further strengthen its public health system and establish an integrated disease surveillance system with a real-time early warning component for enhancing preparedness and response. Additionally, it should predictably monitor, detect and respond to any acute and emerging health threats.

**Emergency risk and crisis management**

The country is susceptible to both natural and manmade disasters that cause a significant loss of life, livelihoods and infrastructure, reversing development gains. The annual loss attributable to natural disasters (based on data from 1994–2013) was on average 2.9 deaths, or 0.37 per 100 000 inhabitants. Losses in purchasing power parity were US$ 2.3 million and losses to gross domestic product amounted to 0.01% (30).

The country is currently working on reviewing its national disaster management plan and the national plan for emergency response with an all-hazards and multisectoral approach. With a view to improving multisectoral coordination, the country has also established a designated unit within the Ministry of Health for emergency preparedness and response. The country has also made significant progress in developing the emergency preparedness and response capacity of health facilities.
Despite the gradual progress already made, there is a need to make all these efforts sustainable with regular monitoring. A full-scale disaster risk assessment needs to be conducted to contribute an evidence base for planning purposes and also to enable systematic capacity development of the health workforce. The involvement of all key stakeholders in this needs to be reinforced through optimum policy support.

Food safety

The Ministry of Health is the lead agency in food safety. A committee has been formed to coordinate actions with other relevant ministries such as the Ministry of Industry and Commerce and the Ministry of Municipalities and Urban Planning. Food safety legislation has been in place for many years but there is a need to review and update this. Laboratory capacity is good. Inspection services are functioning and surveillance data feeds into the food control system.

The food safety system would benefit from increasing regular on-the-job staff training.

Poliomyelitis eradication

The acute flaccid paralysis surveillance system in the country meets the certification standards; in 2014 the rate of non-polio acute flaccid paralysis in children under 15 years of age reached 5.9 per 100 000 and the stool adequacy rate was 100% (31). The last confirmed polio case was reported on 15 December 1993. Polio-free status has been sustained since then due to the high level of population immunity; routine immunization against polio has been mandatory since 1956 and uptake is quite high. National immunization days were implemented on a yearly basis in coordination with other member countries of the Gulf Cooperation Council from 1995–2000. This indicates that the surveillance system is sensitive enough to detect any poliovirus importation. The national poliovirus laboratory in Muscat, Oman, deals with the specimens from the country. The preparedness and response plan for poliovirus importation was developed and endorsed by the Regional Certification Commission. Phase 1 of laboratory containment of polioviruses has been completed and a report documenting the quality of containment activities has been submitted to WHO.

The preparedness and response plan will be regularly updated and a simulation exercise may be carried out to test its appropriateness in field conditions.

The country will continue with efforts to attain global certification through the implementation of recommended surveillance activities, strengthening vaccination programmes and introduction of second dose injectable poliomyelitis vaccine for children in 2015. The country will also prepare to shift from trivalent oral poliomyelitis vaccine to bivalent oral poliomyelitis vaccine based on recommendations from WHO as part of end poliomyelitis game strategies.
Outbreak and crisis response

In late 2014, the government began scaling up its preparedness for Ebola virus disease by assessing and measuring the level of preparedness and readiness for using the WHO assessment checklist and accordingly identifying critical gaps for improvement. These activities were based on WHO recommendations from missions to assess preparedness and readiness measures for rapid response to new outbreaks (such as Ebola). The activities focus on six areas: coordination mechanisms; points of entry; surveillance and contact tracing; infection prevention and control; laboratory services; and risk communication.

The government is committed to building capacities for outbreak and crisis management, strengthening the emerging diseases surveillance, enhancing risk communication between the outbreak and crisis team, mobilizing resource, improving laboratory diagnostics capacity and updating guidelines for outbreak and crisis management. The Ministry of Health will also conduct simulation exercises based on lessons learnt from the H1N1, MERS-COV and Ebola experience.
Demographic profile

Population pyramid 2010

Estimated population in 2010: 1,251,513

Population pyramid 2050

Projected population in 2050: 1,834,775

Total fertility rate

Need for family planning satisfied

Dependency ratio

Life expectancy at birth

Source for all graphs: (19)
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) (17)

Maternal mortality ratio (per 100 000 live births) (16)
References


