

The Middle East and health

Today's *Lancet* focuses on health in the Middle East, following our earlier call for papers.¹ The boundaries of the Middle East are much debated; no two international authorities agree. The figure shows our definition.

The countries that form the Middle East are hugely diverse and have many inequalities. The gross domestic product per head is only US\$800 in Yemen but it is \$26 000 in Qatar,² and, shockingly, only 36% of Yemenis have access to safe drinking-water, compared with all people who live in Kuwait and the United Arab Emirates.³ Many health issues affect the entire region, however, such as the control of communicable diseases (malaria, pulmonary tuberculosis, and measles are responsible for a substantial proportion of the region's morbidity) and lack of qualified doctors. Iraq has 6.2 doctors per 10 000 people, compared with 216.6 per 10 000 in the UK.³

The research articles published today show the diversity of topics covered in the hundreds of submissions that we received, and emphasise some of the important public-health initiatives being undertaken in this area of the world. They serve as a positive message of how policymakers and clinicians in the Middle East are striving to improve the health of their nations. The review articles focus on health issues mainly affecting populations in the Middle East, such as the high prevalence of familial Mediterranean fever in Arabs, and the health concerns of Hajj pilgrims. This special issue also draws attention to some of the recent success stories about health in this region—eg, a profile of a leading female geneticist practising in the United Arab Emirates and a heartening description of efforts to raise awareness of HIV/AIDS in the Middle East.



The Lancet's editors were overwhelmed by the enormous response to this call for papers, and by the enthusiasm of Middle-Eastern researchers and clinicians to have the opportunity to present to the international medical community the health challenges and initiatives affecting their region. We hope that this special issue will raise awareness of these matters, and emphasise the wealth of expertise available in these countries, so that future international collaborations can be fostered for the overall benefit of improved global health.

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- 3 World Health Organization, Regional Office for the Eastern Mediterranean Country Profiles. <http://www.emro.who.int/emrinfo/> (accessed March 1, 2006).

Public-health challenges in the Middle East and North Africa

In the past couple of decades, while there was modest growth and poverty reduction in the Middle East and North Africa (MENA) region, impressive gains have been achieved in health status through improvements in technology, health-service delivery, public-health programmes, and socioeconomic development.^{1,2} In 2000, MENA governments signed on to the Millennium Development Goals (MDGs), and most MENA countries are on track to achieving most of the goals. But health

outcomes are generally worse among the poorest than among the richest. The challenges facing the MENA region can be grouped into health-transition and health-systems issues.

The MENA region faces a dual burden of disease because of decreasing rates of communicable diseases and increasing rates of non-communicable diseases. According to WHO estimates, by 2010, communicable diseases will account for 29% of the disease burden (down

from 40% in 2000) and non-communicable diseases will account for 53% (up from 45% in 2000).³ By 2020, the respective figures are estimated to be 20% and 60%. Results from the Global Burden of Disease Project⁴ dispel the notion that non-communicable diseases are related to affluence: premature mortality rates from non-communicable diseases are higher in populations with high mortality and low income than in industrialised countries. Upper-income and urban areas in middle-income countries of the region are mainly burdened by non-communicable diseases, having largely eliminated communicable diseases. However, newer communicable diseases such as HIV/AIDS are emerging; in some areas, tuberculosis is re-emerging. Although HIV prevalence rates are low in MENA countries, the risks for further spread exist. Unless effective preventive measures are implemented, the disease could have significant social and economic consequences. Health-related expenditures on HIV/AIDS could on average reach 1.5% of the gross domestic product (GDP) of MENA countries by 2015.⁵

Related to epidemiological transitions are the effects of rapid urbanisation and changes in tobacco consumption and diet. Although tobacco use by adult men in the region (38%) is below the global average (47%), the prevalence may be increasing.⁶ In 1990, the percentage of deaths in the MENA region attributed to tobacco use was 2.4%, a figure that is expected to rise to 9.5% in 2020.³ Another challenge is the nutrition transition, with a high prevalence of stunting (in the low-income countries and certain areas of countries with middle-to-high incomes), along with widespread iron-deficiency anaemia and newer problems such as obesity. Mortality rates by road-traffic injuries are among the highest in the world (26.4 per 100 000 population in low and middle income countries of the region compared with 19 per 100 000 for the world as a whole).⁷

The regional demographic transition, characterised by higher birth rates than death rates, will also require adjustments to public-health systems. Over the past half-century, the MENA region has had the highest population growth in the world, and, more recently, the annual population growth of the region is second only to sub-Saharan Africa.⁸ Many countries in the region have active population policies that contribute significantly to reductions in total fertility rates, starting from a regional average of over 6 births per woman in 1980 to just below 4 in 2003. Concurrent improvements in girls' access to

education and female participation in the labour force have probably contributed to the smaller family size. But the MENA region was a latecomer to the demographic transition, and the average total fertility rate remains significantly higher than that of other developing regions with similar income levels (eg, developing countries of east Asia and Latin America have average total fertility rates of just over 2). Furthermore, as the decline in fertility rates has lagged behind that in mortality rates, the region is now faced with a dual challenge of a rapidly expanding youth population and a smaller growth rate in the ageing population.

Despite the modest economic growth rates over the past two decades, the MENA countries have achieved notable improvements in the health status of their citizens, as seen by an almost 10-year increase in life expectancy between 1980 and 2003 (to 69 years in 2003) and halving of the infant mortality rate over the same period (from 90 to about 40 deaths per 1000 livebirths). These health improvements have been achieved mainly through reductions in mortality and morbidity due to communicable diseases, and reflect overall improvements in hygiene and infrastructure as well as access to basic health services. Overall, most MENA countries appear to have managed good health outcomes with lower levels of health spending. For example, infant survival rates are at or above what would be expected for countries with similar incomes (figure 1).⁹

Currently, most health services in the region are based on a curative model, which is becoming increasingly expensive to maintain and ineffective in addressing the emerging health challenges. For instance, while more than 80% of hospital beds are in the public sector in most MENA countries, hospital occupancy rates are less than 65%. Yet, many governments remain focused on expanding the infrastructure to meet the growing population without adequate attention to improving efficiency or evaluating the appropriateness of investments in the current stock of technology. Health-service delivery will need to be reconfigured to integrate the provision of preventive and promotion services.

Cross-cutting functions related to health-systems challenges in the region include poor availability of data because of weak disease-surveillance systems and very modest research and development capabilities, and the need to develop more relevant health-information systems and a strong public-health workforce. WHO's

Eastern Mediterranean Regional Office, in the early 2000s,³ found that disease-surveillance systems were mostly inadequate, with insufficient commitment to the systems, lack of practical guidelines, overwhelming reporting requirements, weak involvement of the private sector, lack of transparency, shortage of human resources, and poor analysis of data. This lack of the most basic data will have to be addressed if effective plans for public-health services for the future are to be put in place.⁴ Research and development funding in the region is the lowest in the world,¹⁰ with expenditure for the Arab world at 0.4% of GDP in 1996 compared with 1.26% for Cuba in 1995 and 2.9% for Japan in 1994. Investing in more effective health-information systems in the region should include developing local expertise in the collection, interpretation, presentation, and dissemination of data among the various stakeholders. Overall, the appropriateness of the current public-health education system and curriculum in higher institutions in the region to develop the needed workforce is in question.

The effectiveness of a public-health system will depend on the extent to which those who deliver the services are held accountable for their performance. Whilst many traditional public-health services are well-established in the MENA region, public-health functions, such as inter-sectoral policymaking, public information and education, and quality assurance, remain underdeveloped. This distinction between service and function is important because it has practical implications for financing and managing the system.¹¹ Public-health services are generally easier to manage, but the same is not the case for public-health functions which are linked to governance and require more complex coordination. MENA countries that score higher on the quality of public administration (a reasonable indicator of the overall quality of public-sector governance) tend to perform better in service-delivery outcomes, such as lower infant and maternal mortality, higher immunisation rates, and higher life-expectancy (figure 2).⁹

Weak performance by governments in the MENA region stems from weak governance. The failing of the delivery of the public-health service is attributed to weak public accountability but, more importantly, to the weak social accountability, which involves communities in the management and monitoring of services. The 2004 Arab Human Development Report notes that, for the Arab world, citizens' participation in government is weak, and

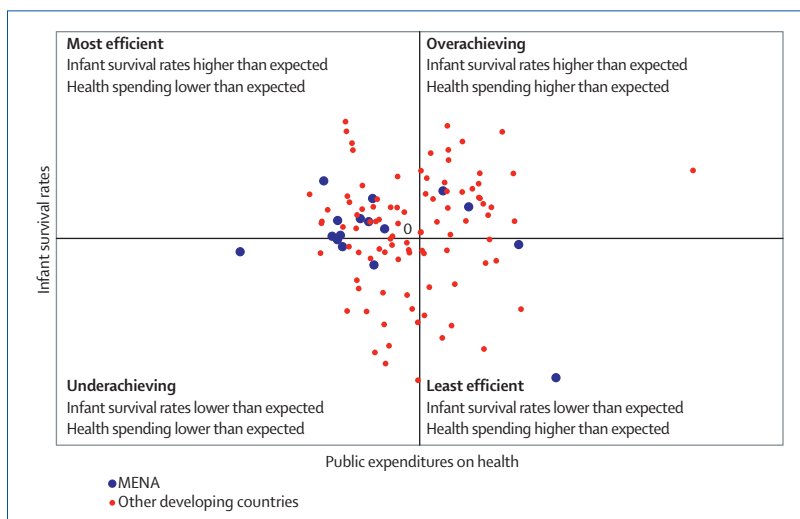


Figure 1: Infant survival and public-health expenditures⁹
The x-axis measures differences between actual public expenditures on health and predicted expenditures. Predicted rates are derived from world trends, representing public expenditure rates that would have been predicted given countries' income levels. The y-axis measures the difference between actual infant survival rates and predicted rates. The distance from the country point to each one of the axes measures the size of these differences.

nor are governments held accountable for their performance.¹² In terms of participatory governance, there is a substantial lag between MENA countries and other regions.¹⁰ This type of governance structure limits the role of the private sector and non-governmental organisations, which are key stakeholders in the implementation of an effective public-health system. The limited interaction between governments and civil society are factors that are likely to reduce the social dividend by not meeting the population's rising expectations.

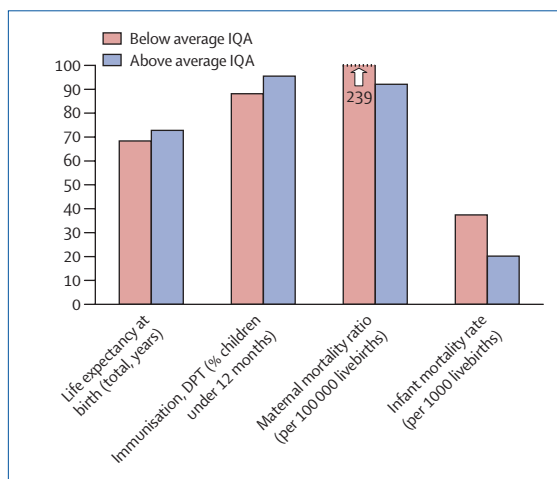


Figure 2: Better governance matters for health outcomes in MENA
Figure shows averages for those countries with data. Below or above average index of quality of administration (IQA) is average of countries scoring lower or higher than overall MENA average on IQA.⁹Y-axis denotes (left to right): age, percent children immunized, maternal mortality ratio, infant mortality rate.

The changing epidemiological profile of the population will bring about a profound shift in the demand and supply of health services. Diagnosis and treatment of non-communicable diseases and acute injuries often involve complex and costly interventions, and the rapid pace of innovations in technology is continually expanding the spending horizon. On average, the countries in the region are spending around 5% of gross domestic product on health care, but some countries, such as Lebanon and Jordan, are already expending 11.5% and 9.3%, respectively. In the coming decade, the MENA countries will face a strong upward pressure on health spending—in terms of spending per head and total spending due to population growth—that may well outpace economic growth rates.

Higher spending will not necessarily translate into effective results, especially if investments are not well managed or directed towards cost-effective technologies. Inefficient spending on health will have a substantial negative impact on economic growth and human capital development, acting as a drag on labour productivity, adding fiscal pressure on limited governmental budgets, and reducing governments' ability to target public resources for vulnerable groups. There is also an active and growing private-health sector which remains largely unregulated and whose roles are often not well-defined within economic development plans. New institutional capacities and governance structures are needed to establish an enabling regulatory environment that promotes the growth of an efficient, safe, and viable private-health sector.

Household out-of-pocket spending accounts for nearly half the total health-spending in the MENA region. This heavy dependence signifies that many individuals and households have little financial protection (insurance) against illness. There are significant gaps in health coverage in most MENA countries, particularly in rural areas and among those who work in jobs that are not in the formal sectors, such as the civil service or organised private-sector work, in which employers are not obliged to provide benefits to workers and their families. Investments in health systems will need to be closely linked with the development of well-targeted social safety-nets to ensure adequate protection against the impoverishing effects of ill health.

In an era of globalisation, developing effective public-health systems needs to be viewed as a global public good,

because an ineffective system in one country can affect the health of people in other countries even if they have effective systems. Being a public good, public health will require governmental ownership and action. For countries of the MENA region, the rate of transition is outpacing the rate of adaption by public-health systems. The challenges are long term and will require long-term planning. This process should begin with a thorough assessment of the current system at individual country level and identification of the changes required to address the challenges. The proposed changes must be responsive, have efficient and equitable delivery mechanisms, involve multisectoral partnerships, and have governmental commitment. Whilst the challenges are intricate, the MENA region has the ingredients for addressing them and achieving its full potential.

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We declare that we have no conflict of interest.

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