

## 4.3 Middle East and North Africa

The IDF Middle East and North Africa Region ranges from Iran in the North, Pakistan in the East, Sudan in the South and Morocco in the West.

Over the past three decades, major social and economic changes have transformed many of the countries in the region. Some Gulf States have undergone rapid economic growth and urbanisation, associated with reduced infant mortality and increasing life expectancy. Other countries in the region have seen a decrease in economic growth due to dramatic political changes<sup>2</sup>. The region has the greatest disparity in gross national income per capita, ranging from ID133,850 in Qatar to ID1,980 in Afghanistan<sup>1</sup>.

### Prevalence

Approximately 35.4 [24.3–47.4<sup>‡</sup>] million people, or 9.1% [6.3–12.2%<sup>‡</sup>] of adults aged 20–79, are living with diabetes in the Middle East and North Africa Region in 2015. Over 40.6% of these are undiagnosed.

Although 54.9% of all adults in the region live in urban areas, 67.0% of people with diabetes live in urban environments. The vast majority (83.9%) of the people with diabetes in the region are living in low- or middle- income countries.

#### At a glance

	2015	2040
Adult population (20–79 years)	387 million	635 million
<b>Diabetes (20–79 years)</b>		
Regional prevalence	9.1% [6.3–12.2% <sup>‡</sup> ]	11.4% [7.8–15.1% <sup>‡</sup> ]
Age-adjusted comparative prevalence	10.7% [7.4–14.2% <sup>‡</sup> ]	11.1% [7.7–14.9% <sup>‡</sup> ]
Number of people with diabetes	35.4 million (24.3–47.4 million <sup>‡</sup> )	72.1 million (49.7–96.0 million <sup>‡</sup> )
Number of deaths due to diabetes	342,000	-
<b>Health expenditure due to diabetes (20–79 years)</b>		
Total health expenditure, R=2*, USD	17.1 billion	31.0 billion
<b>Impaired glucose tolerance (20–79 years)</b>		
Regional prevalence	7.8% [4.4–12.6% <sup>‡</sup> ]	8.9% [5.2–14.3% <sup>‡</sup> ]
Age-adjusted comparative prevalence	8.6% [5.0–13.8% <sup>‡</sup> ]	8.8% [5.1–14.1% <sup>‡</sup> ]
Number of people with impaired glucose tolerance	30.2 million (17.1–48.6 million <sup>‡</sup> )	56.6 million (32.8–90.4 million <sup>‡</sup> )
<b>Type 1 diabetes (0–14 years)</b>		
Number of children with type 1 diabetes	60,700	-
Number of newly diagnosed children each year	10,200	-

\* See Glossary

‡ Uncertainty interval

Countries with high diabetes prevalence include Saudi Arabia (raw diabetes prevalence of 17.6%) and Kuwait (14.3%). Due to their different population structures, these countries both have an age-adjusted comparative prevalence of 20.0%. The countries with the largest number of adults with diabetes are Egypt (7.8 [3.8-9.0<sup>±</sup>] million), Pakistan (7.0 [5.1-10.0<sup>±</sup>] million) and Iran (4.6 [3.6-6.3<sup>±</sup>] million).

A further 30.2 million people in the region, or 7.8% of the adult population, are estimated to have impaired glucose tolerance and are therefore at high risk of developing diabetes. It is estimated that the number of people with diabetes in the region will double to 72.1 million by 2040.

Kuwait and Saudi Arabia also have some of the world's highest annual incidence rates of type 1 diabetes in children, with 37.1 and 31.4 new cases per 100,000 population, respectively. Saudi Arabia has 16,100 children with type 1 diabetes, by far the highest number in the region, and over a quarter of the region's total of 60,700.

## Mortality

Diabetes was responsible for 342,000 deaths in 2015. Over half (51.3%) of all deaths from diabetes in the region occurred in people under 60. These early deaths may be the result of a combination of factors: the rapidly changing environments and lifestyles in the region, late diagnoses and health systems that are not equipped to provide optimal management to the increasing numbers of people with diabetes.

## Health expenditure

Despite the high estimates of diabetes prevalence throughout the region, a total of only USD17.1 billion (R=2\*) to USD27.7 billion (R=3\*) (ID40.1 to ID65.6) was spent on diabetes healthcare in 2015. This is equivalent to approximately 15% of the total health budget. Health expenditure on diabetes in the region accounts for just 2.5% of global spending on the disease. This is expected to almost double by 2040 but will likely not be enough to adequately treat all people with the disease.

## Data sources

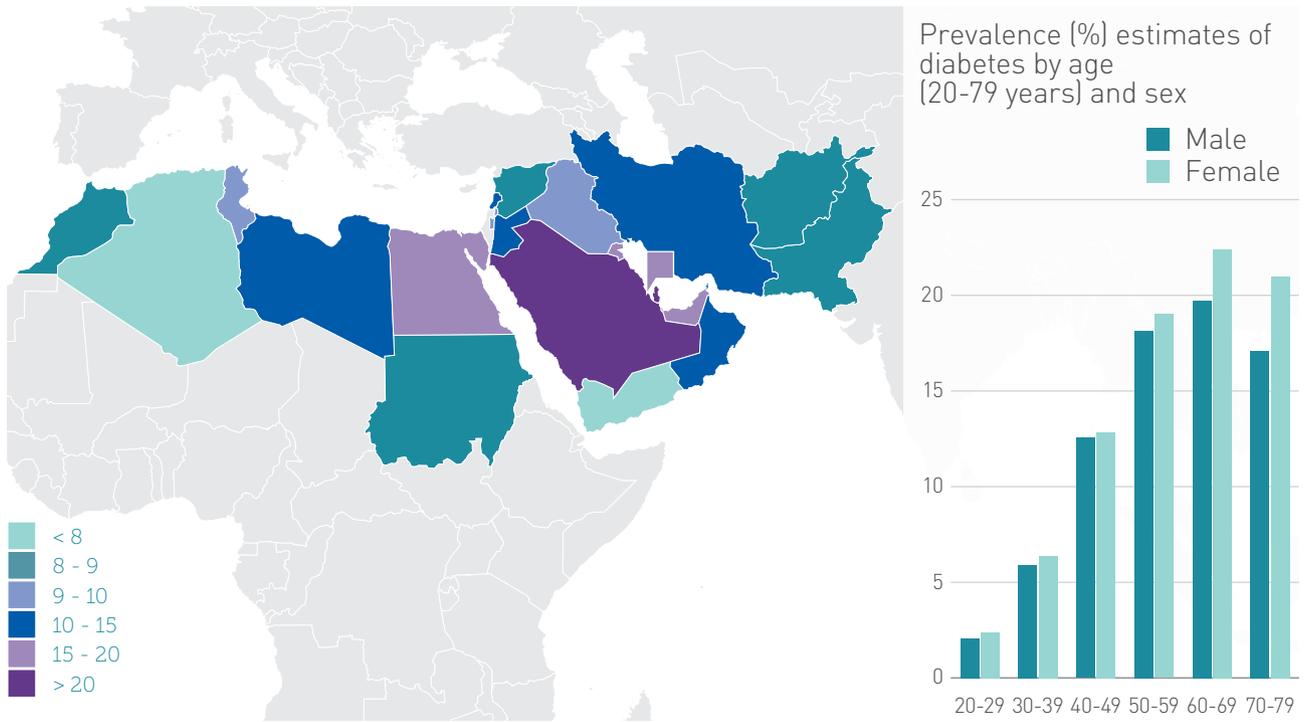
A total of 30 sources from 16 countries were used to estimate diabetes prevalence in adults for the 21 countries in the region. Only Kuwait had a nationwide study conducted within the last five years. Algeria, Jordan, Oman, Pakistan, Saudi Arabia, the State of Palestine and the United Arab Emirates had estimates partly based on oral glucose tolerance tests. Diabetes prevalence figures for the remaining countries may be underestimates.

Estimates for type 1 diabetes in children were derived from studies in Algeria, Egypt, Islamic Republic of Iran, Jordan, Kuwait, Libya, Oman, Pakistan, Qatar, Saudi Arabia, Sudan and Tunisia.

The Middle East and North Africa Region poses a particular challenge for estimating diabetes prevalence because a large proportion of the resident population in many countries consists of migrants and refugees. As a result, studies that include only national citizens can make only a limited contribution to the overall picture of diabetes for the whole country.

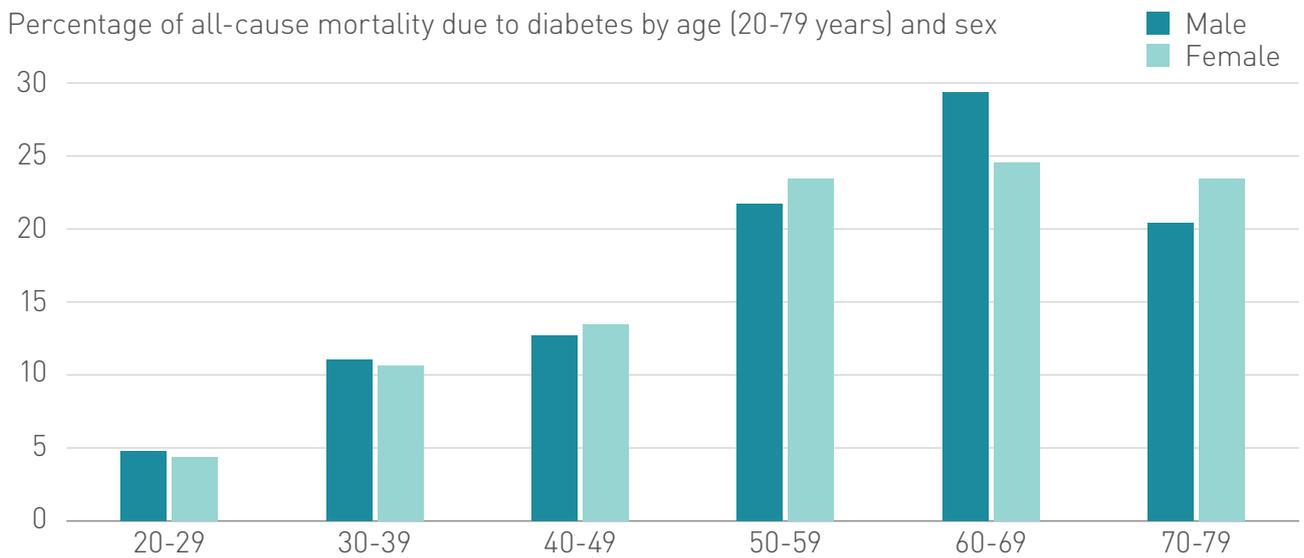


**Map 4.3** Prevalence\* (%) estimates of diabetes (20-79 years), 2015



\* comparative prevalence

**Figure 4.3** Mortality due to diabetes, Middle East and North Africa Region, 2015



Death due to diabetes by age



52% under the age of 60

**341,891 total deaths due to diabetes**  
(205,314 women, 136,577 men)