



**CENTER FOR GLOBAL
HEALTH DELIVERY—DUBAI**
HARVARD MEDICAL SCHOOL



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Harvard Medical School Center for Global Health Delivery—Dubai Areas of Focus



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Diabetes and Obesity

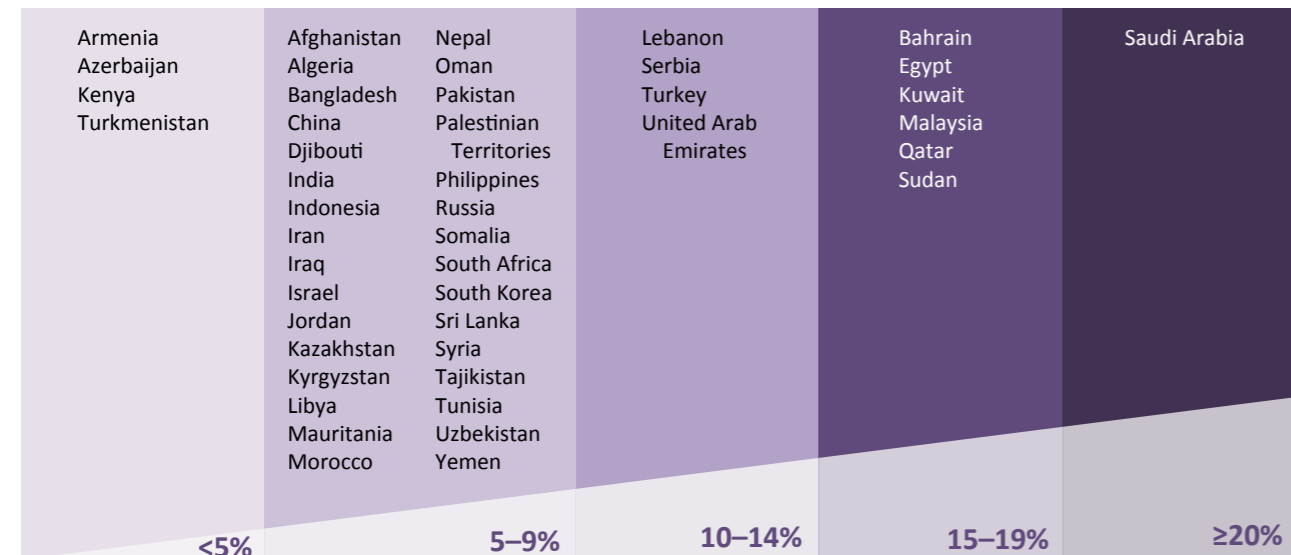
Diabetes and obesity, once considered diseases solely of high-income settings, are now a global epidemic.

DIABETES

Type 2 diabetes is caused by an ineffective use of insulin by the body (insulin resistance), and usually requires management with lifelong medication and/or insulin. Diabetes is associated with many other health problems, including cardiovascular disease, blindness, nerve damage, kidney failure, and lower limb amputation. Unfortunately, only half of people who have diabetes are aware that they have the disease. Type 2 diabetes has long been recognized as a chronic disease affecting older populations. However, this disease, which was once known as “adult onset diabetes,” is now affecting young adults and children.

In 2014, 9% of the world’s population had diabetes, and an estimated 5.1 million deaths were caused by diabetes in 2013. The Middle East/North Africa region has the highest rates of adult diabetes worldwide. Saudi Arabia is among the countries with the highest diabetes prevalence globally, with diabetes affecting 21% of its population in 2014. Several other countries in the Center’s region have concerning rates of diabetes as well: in Bahrain, Egypt, Kuwait, Malaysia, Qatar, and Sudan, diabetes affects at least 15% of the population. In the United Arab Emirates, around 10% of the population, representing over 1 million people, has diabetes.

Percent of population with diabetes mellitus in countries of the Center’s region



Data source: International Diabetes Federation

OBESITY

Obesity increases a person’s risk of hypertension, diabetes, stroke, cancer, and death. The causes of obesity are varied: genetics, diet, community environment and physical activity can all contribute.

Globally, around 13% of adults, or more than 600 million people, were obese in 2014. However, over 30% of the adult population is

obese in Bahrain, Kuwait, Lebanon, Libya, the United Arab Emirates, and Qatar; this corresponds to over 3 million obese adults in the United Arab Emirates alone. Among countries in the Center’s region, the highest rates of child obesity are observed in Kazakhstan, Syria, and Tajikistan, where more than 15% of people aged 2–19 are obese.

Estimated percent of adults (≥18 years old) who were obese (body mass index ≥30) in countries of the Center’s region in 2014



Data source: Institute for Health Metrics and Evaluation. No data available for Palestinian Territories.

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Infectious Diseases

While many infectious disease deserve attention globally, two that are particularly concerning among the countries of the Center’s region are tuberculosis and hepatitis C.

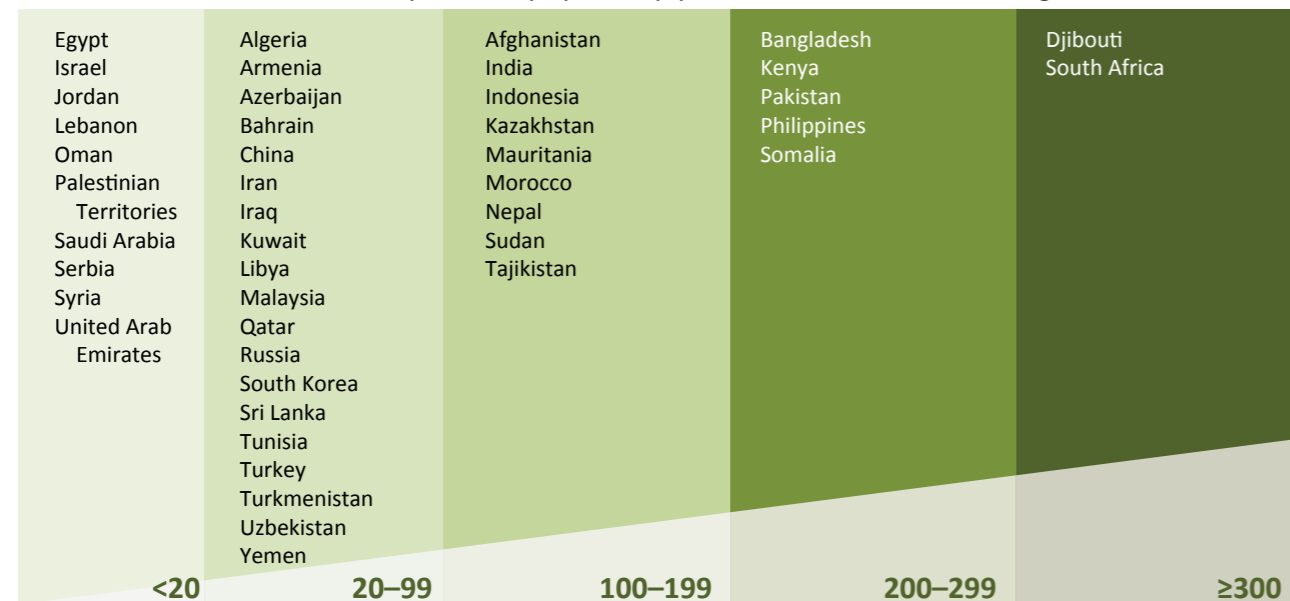
TUBERCULOSIS

Tuberculosis, a disease caused by bacteria and transmitted through the air, kills more people worldwide than any infectious disease other than HIV/AIDS. In 2013, an estimated nine million people became ill with tuberculosis, and 1.5 million people died from tuberculosis. An estimated one million children suffered from the disease, with only a third of them diagnosed. Effective treatment for tuberculosis has existed for decades, but rising levels of drug resistance are making tuberculosis harder and more expensive to treat.

Among the countries of the Center’s region, Bangladesh, Djibouti, Pakistan, the Philippines, Somalia, and South Africa have the highest incidences rates of tuberculosis, each with more than 200 new cases annually for every 100,000 people in the population.

Globally, drug-resistant tuberculosis is a particularly serious problem in Eastern European and Central Asian countries. In Kazakhstan, Kyrgyzstan, Russia, and Uzbekistan, around 20–30% of new tuberculosis patients have multidrug-resistant tuberculosis, which is resistant to the two most effective anti-tuberculosis medications.

Estimated number of tuberculosis cases per 100,000 people in the population in countries of the Center’s region in 2013



Data source: World Health Organization

HEPATITIS C

The hepatitis C virus attacks the liver and can cause both mild and severe illness. Once infected, some people are able to eliminate the virus without treatment, while others develop chronic infection, which can lead to cirrhosis or liver cancer. Around 130–150 million people worldwide have chronic hepatitis C infection. While treatment for hepatitis C is not always necessary, effective antiviral medication exists. However, for many people, the cost of treatment is currently prohibitive.

Globally, around 3% of the population is estimated to be infected with hepatitis C virus. The Middle East/North Africa region and the Central and East Asia regions have higher prevalences of hepatitis C virus infection than other parts of the world. Incomplete information exists on the prevalence of infection in individual countries of the Center’s region.

Estimated prevalence of hepatitis C virus infection in 2005, by geographic region

Geographic region	Countries in the Center’s region included in geographic region	Estimated percentage of population with hepatitis C virus infection in 2005
High-income Asia Pacific	South Korea	1.4%
Central Asia	Armenia, Azerbaijan, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan	3.8%
East Asia	China	3.7%
South Asia	Afghanistan, Bangladesh, India, Nepal, Pakistan	3.4%
Southeast Asia	Indonesia, Sri Lanka, Malaysia, Philippines	2.0%
Central Europe	Serbia	2.4%
Eastern Europe	Russia	2.9%
Western Europe	Israel	2.4%
Middle East/North Africa	Algeria, Bahrain, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Palestinian Territories, Qatar, Saudi Arabia, Syria, Tunisia, Turkey, United Arab Emirates, Yemen	3.6%
East Sub-Saharan Africa	Djibouti, Kenya, Somalia, Sudan	2.0%
South Sub-Saharan Africa	South Africa	2.1%
West Sub-Saharan Africa	Mauritania	2.8%
Global		2.8%

Adapted from: Mohd Hanafiah et al. Hepatology, 2013.

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Mental Health

The category of mental disorders encompasses a wide range of conditions, from schizophrenia to autism to eating disorders. Estimating the number of people with mental disorders is difficult since diagnosis is complicated, diagnostic criteria may be different in different countries, and many people with mental disorders never seek treatment for these issues. Limited information exists on the burden of important mental disorders such as schizophrenia and post-traumatic stress disorder in the countries of the Center’s region.

DEPRESSION

Depression is the most common mental disorder and a major cause of disability worldwide. Several countries in the Center’s region were estimated to have rates of depression that were significantly higher than the global average in 2010. These include: Bahrain, Iran, Jordan, Kuwait, Libya, Qatar, Russia, Sudan, Syria, Tunisia, Turkey, the United Arab Emirates, and Yemen.

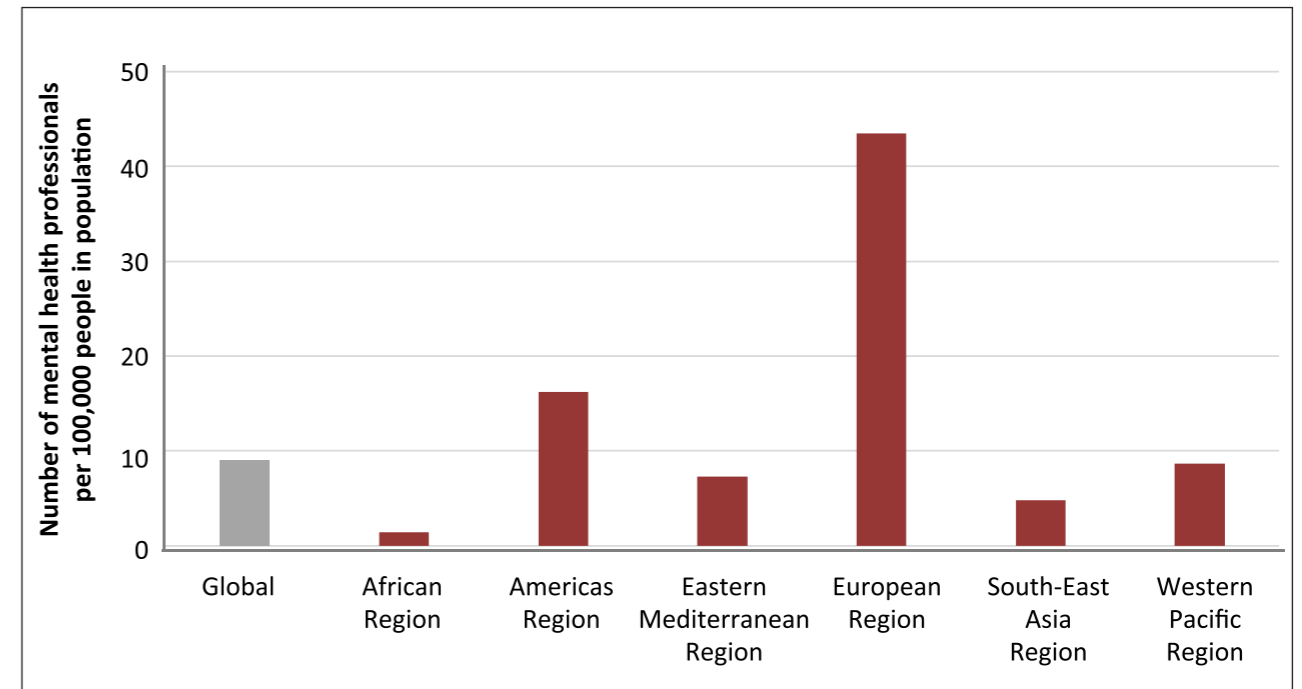
EATING DISORDERS

Eating disorders such as anorexia nervosa and bulimia nervosa are caused by a complex variety of factors. They are characterized by severe trouble with eating habits and weight regulation, and often accompany other mental disorders. Females are more likely than males to be affected, and adolescents and young women are at highest risk. The number of people, especially women, with eating disorders appears to be increasing in Asia and the Middle East; in a recent survey, eating disordered attitudes were observed in 30–40% of adolescent girls in several major cities in the Middle East.

SYSTEM CAPACITY

The number of health professionals (e.g., nurses, social workers, psychiatrists) working in the area of mental health is used to estimate a system’s capacity to confront, prevent and treat mental disorders. Globally, there are approximately nine mental health professionals for every 100,000 people; however, there is large regional variation, with over 40 mental health professionals for every 100,000 people in Europe, but fewer than 10 mental health professionals for every 100,000 in Africa, the Middle East, and Asia. Not surprisingly, the countries in the Center’s region vary greatly in their mental health system capacity. In 2011, Bahrain, Iran, Pakistan, and Russia all had more than 50 mental health professionals for every 100,000 people. In contrast, Bangladesh, India, Indonesia, Kenya, and Nepal had less than one mental health professional for every 100,000 people. The United Arab Emirates had 3.4 mental health professionals for every 100,000 people.

Estimated number of health professionals in the mental health sector per 100,000 people in the population in 2014



Adapted from: World Health Organization, Mental Health Atlas 2014.

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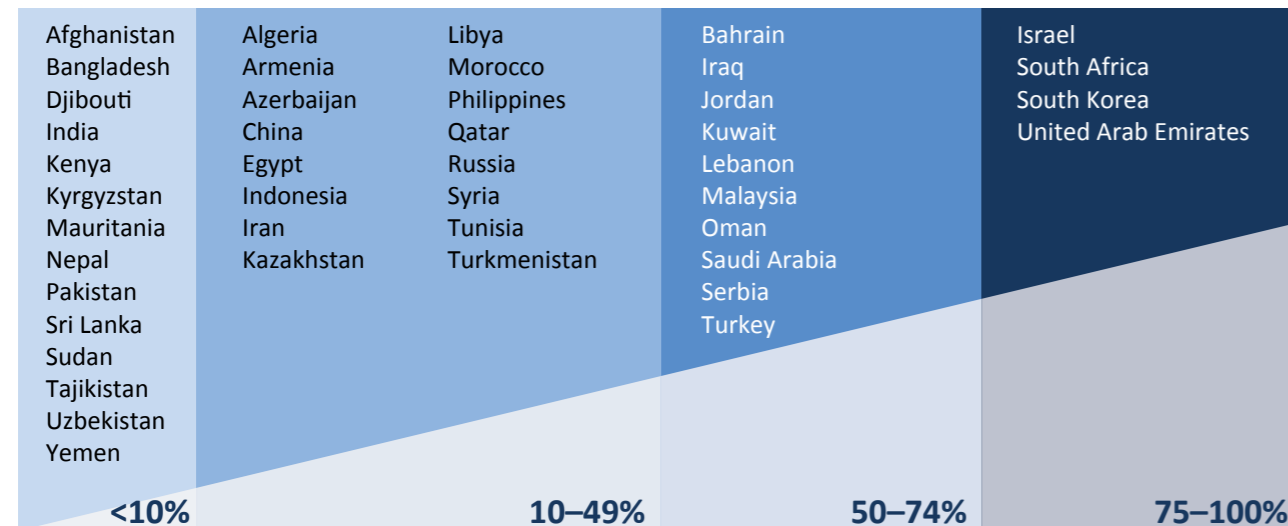
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Access to Surgical Care

One method of measuring a country's health system capacity is to examine patients' ability to access surgery when they need it. This includes emergency surgeries and operations necessary to treat ongoing or chronic conditions. Access to care is difficult to quantify, as the true number of people who require surgery in a given country is unknown, and the ease with which people are able to access surgical care depends on a variety of factors. However, estimates of the proportion of the population with access to surgical care have been made based on indicators that represent a country's surgical infrastructure, safety of surgical facilities, geographic proximity of patients to surgical facilities, and affordability of surgical procedures.

In the United Arab Emirates, roughly three quarters of the population is estimated to have access to surgical care. The Center's region contains countries where over 90% of the population is estimated to have access to surgical care (Israel and South Korea), as well as countries where less than 10% of the population is estimated to have access (Afghanistan, Bangladesh, Djibouti, India, Kenya, Kyrgyzstan, Mauritania, Nepal, Pakistan, Sri Lanka, Sudan, Tajikistan, Uzbekistan, and Yemen).

Percentage of population estimated to have access to surgical care



Data source: Program in Global Surgery and Social Change

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