

this section you will learn about global patterns of health, mortality and morbidity

m at the moment deaf in the ears, hoarse in the throat, red in the nose, green in
: gills, damp in the eyes, twitchy in the joints and fractious in temper from a most
olerable and oppressive cold' (Charles Dickens 1812–70). We've all been there but
ch has improved in public health care since then but the emergence of new diseases
d changes in lifestyle, have kept the study of disease (epidemiology) high on the
itical agenda of most countries.

What does 'health' mean?

alth is your physical, mental and social well-being and
: just the presence of disease. This broad definition
how we feel' makes it difficult to compare the health
he global population. How do you compare work-
ated stress or mental illness in HDEs to physical
haustion of manual work in LDEs? There are many
erent indicators of health, including life expectancy.

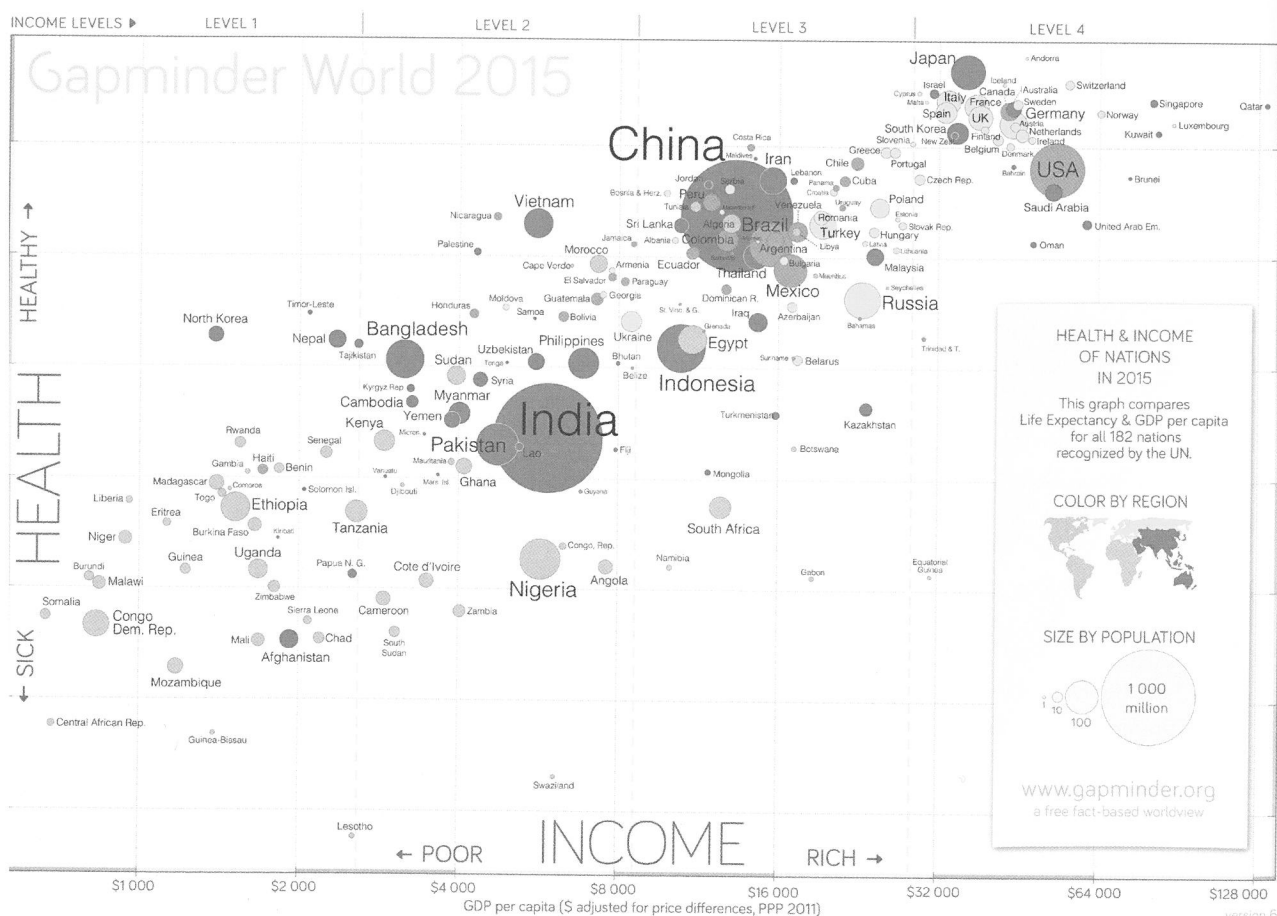
Mortality means death. The most common indicator of
rtality is death rate (see 4.17). **Morbidity** refers to
ess or poor health of a population. Indicators include:
Prevalence rate – the total number of cases of a disease
n a population at a given time divided by the total
population.

- ◆ **Incidence rate** – the rate or time at which persons become ill. It is usually used as a measure of numbers of new cases of an illness.

Global patterns of health

The most deadly diseases have high prevalence and high incidence rates – in other words, much of the population is infected and the disease is spreading quickly. Without intervention, the disease is likely to become widespread in the country (**epidemic**), even affecting multiple countries or continents (**pandemic**).

- ✓ **Figure 1** Comparison of life expectancy and GDP per capita for 182 countries of greater than 100 000 population



Health in world affairs: Ebola

The first case of Ebola was recognised in West Africa in 1976. When this highly infectious disease was reported in Guinea in March 2014, few in the developed world gave it much attention. The epidemic that followed, however, brought the disease to public consciousness and to world affairs.

The spread over time and space (or spatial diffusion) of the disease is significant (Figure 2). The **index case** of Ebola in 2014 was traced to a toddler in Guinea who had died in 2013. The disease then quickly spread to Liberia, Sierra Leone and elsewhere in West Africa. Several European countries, including the UK, have all treated patients who contracted the virus from the almost **endemic** region of West Africa. In the first 12 months of the epidemic, Ebola killed more than 10 000 people.

While the World Health Organisation (WHO) was criticised for an initial slow response time, volunteers from around the world risked their lives to help treat victims. Conversely, images of medical response teams in space-age-looking biohazard suits, combined with sensational news headlines and poor understanding, created mild hysteria. Amid fears of an outbreak in the UK, demand soared for biohazard suits. Emergency meetings of **COBRA** produced contingency plans to protect the UK, including increased screening of travellers from West Africa (Figure 3).

It is in Africa that lives have been most changed. Ebola is passed on through close contact with the bodily fluids of those infected. As governments appealed for international help, quarantine and isolation were encouraged. Schools across West Africa were closed for six months, Christmas was all but cancelled and individuals became suspicious of their neighbours in case they were infected. Further outbreaks of Ebola are likely in the future, and it remains to be seen if the global community is better prepared.

In January 2016, the WHO declared Liberia, the last of the countries to be infected, 'Ebola-free'. Liberia suffered 4809 deaths from the disease – over 40 per cent of the global death toll.

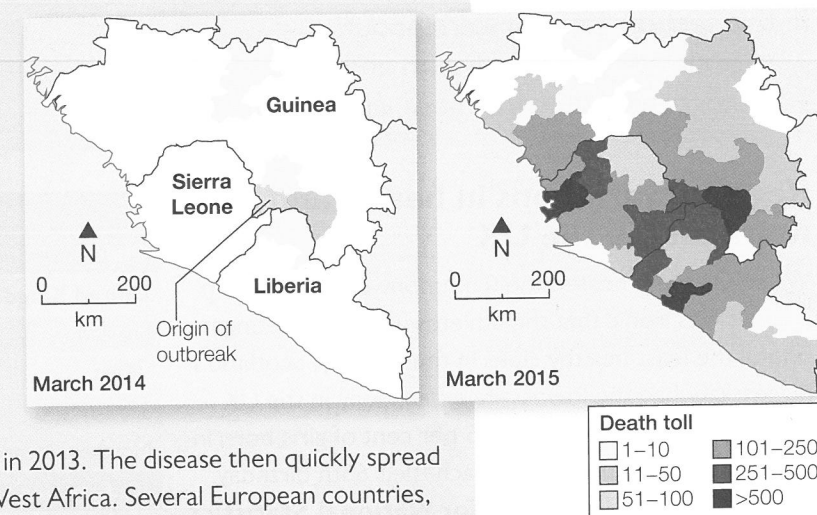


Figure 2 Spread of Ebola in West Africa (March 2014–March 2015)

Ebola in West Africa

Information for the public

If you have returned from **Guinea, Liberia or Sierra Leone** or **cared for someone with Ebola** in the past 21 days

and

You have a **fever** or **feel unwell**

Without touching anyone, **tell a member of staff** or **call 111**



Ebola facts:

- the risk of Ebola to the UK public is very low
- people with early symptoms (such as fever or sore throat) are unlikely to spread Ebola
- Ebola is not spread through the air
- however, someone with Ebola can be infectious if they are suffering from diarrhoea, vomiting or bleeding

Figure 3 Ebola campaign poster, Public Health England

ACTIVITIES

- Look at Figure 1.
 - Comment on relationships (correlations) shown on the scattergraph.
 - Suggest reasons for the correlations identified.
- Go to the Gapminder website and try creating your own different scattergraphs using the data (click on 'Data' and 'Visualise'). Examine the relationships between different indicators of health and wealth. What happens to the way the data is presented if you switch from a *linear* to a *logarithmic* scale on the x or the y-axis, or both? Which type of scale best presents any correlation or trend most effectively?
- Using evidence from Figure 2, describe the spatial diffusion of Ebola.
- Comment on the usefulness of the information shown in Figure 3. (Search the internet for 'Ebola poster'.)
- Why was more not done to control the disease before it became an epidemic in spring 2014?

STRETCH YOURSELF

'In order to change we must be sick and tired of being sick and tired.' Discuss this statement with reference to health and world affairs.