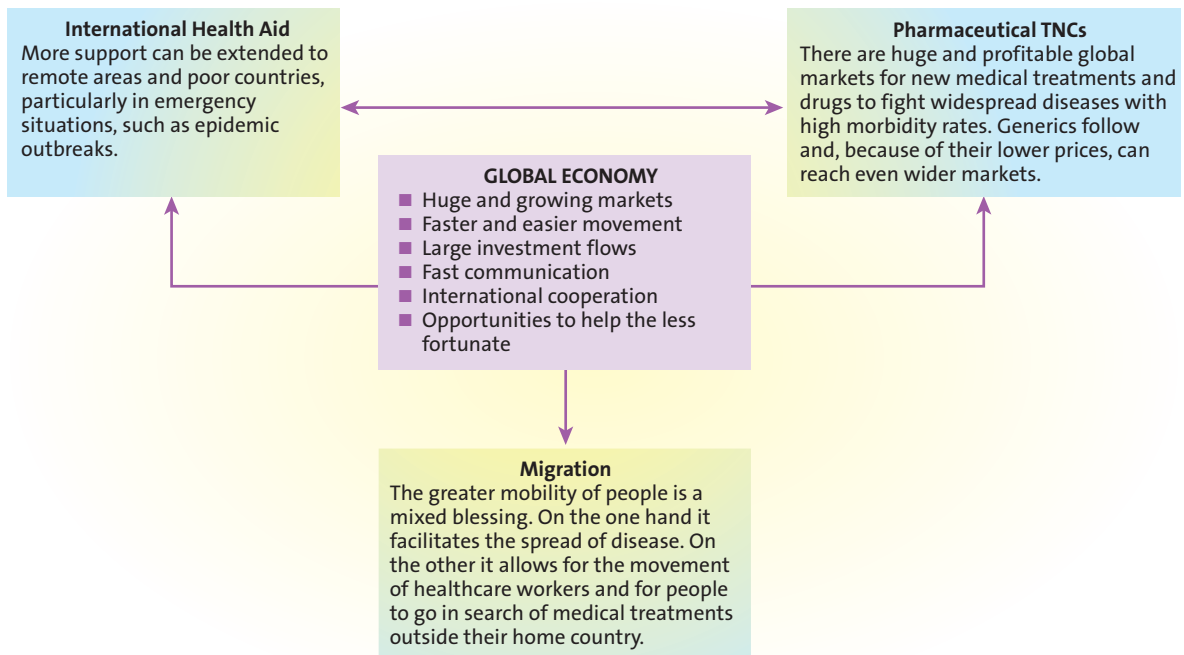


# Health and the global economy

We live in an age of **globalisation**. The countries of the world are becoming increasingly involved in an expanding **global economy**. Through the media of trade, investment and aid, countries are becoming increasingly dependent on each other. People, capital, goods and services are no longer constrained to the degree they once were by national frontiers. Great technological strides in transport and communication have facilitated these international transfers. Information can now be sent around the world within a matter of seconds, people and goods within a matter of hours or days. The net outcome of all this is that the world has become a ‘smaller’ place — the friction of distance has been significantly reduced. The emergence of the **global village** and global economy has had a number of impacts on health, and indeed on health risks. We will look at three of these — International Health Aid, Pharmaceutical TNCs, and Migration (Figure 5.1).

**Figure 5.1**  
*Health and the global economy*



# Pharmaceutical TNCs and generics

Of all the players in the global economy, the transnational corporations (TNCs) are among the most influential. Thanks to advances in transport and communication, TNCs are able to set up businesses in virtually any part of the world where there is some economic advantage to be gained, be it cheap labour, cheap raw materials or new markets. TNCs are renowned not just for the geographical spread of their operations but also for the breadth of their business interests. However, within the global community of TNCs there is a fairly conspicuous grouping focused on a relatively narrow range of activities collectively referred to as **pharmaceuticals**. These companies flourish thanks to the fact that health is a major global concern and that the treatment of health risks is a global need. In short, there are huge opportunities to be exploited in satisfying these concerns and needs. To tap into the markets associated with these opportunities, a TNC needs to invest heavily in **research and development (R&D)** and to come up with a new drug or treatment for specific health risks. The more widespread the distribution of a particular risk is and the higher its morbidity, the greater the potential profits.

The R&D associated with the search for new drugs and treatments is usually undertaken in developed countries, often on science parks with university links. Once a new drug has been developed, it is patented and then subjected to clinical trials. If those trials are successful in terms of efficacy and safety, then an application will be made for the drug to be used as an approved medication. Once that approval has been given, attention turns to setting up the necessary production units. How many units will be needed to service the forecast demand? Where best to locate them? The drug is then ready to be launched on the global market and the company can finally begin to recoup the vast sums of money spent on R&D.

## Case study 35

### THE TOP-TEN PHARMACEUTICAL COMPANIES

#### Healthcare is big business

Table 5.1 shows the top-ten pharmaceutical corporations in 2008. The USA is home to four of these — indeed 20 of the world's top 50 pharmaceutical companies have their headquarters there. Apart from the two shown in the table, the UK has only one other company (Shire) in the top 50. The table also confirms how very guarded these pharmaceutical companies are about revealing how much they are spending on R&D. It is this that produces breakthrough new drugs. There is much competition, so there is always immense pressure to have a new drug patented. Then follow medical trials, and if these are successful the drug will be approved for prescription to patients. Speed and secrecy are essential if a company is to keep ahead of its competitors and be first in the marketplace. It is this that ensures the profits that such companies need to pay out in dividends to investors and re-invest in the next round of research. R&D is incredibly expensive, and there is always the risk that much time and money can be wasted on dead-end research.

Rank by revenue	Company	HQ country	Total revenue (US\$ million)	Healthcare R&D (US\$ million)	Employees
1	Pfizer	USA	71 130	11 318	137 127
2	Johnson & Johnson	USA	63 747	No data	119 200
3	Bayer	Germany	48 149	3 770	108 600
4	Hoffmann–La Roche	Switzerland	43 970	No data	78 604
5	Novartis	Switzerland	41 460	No data	98 200
6	GlaxoSmithKline	UK	40 424	6 373	103 483
7	Sanofi-Aventis	France	40 328	No data	99 495
8	AstraZeneca	UK/Sweden	31 601	No data	67 400
9	Abbott Laboratories	USA	29 527	2 688	68 697
10	Merck & Co	USA	23 850	4 678	74 372

**Table 5.1**  
The top-ten pharmaceutical companies, 2008

Remember that the table shows only the top-ten pharmaceutical companies. There are many others playing an important part in the industry.

25

Using case studies

Research Shire, a smaller pharmaceutical TNC based in the UK, and produce a short report that takes into account its main activities and the locations in which it operates.

### Guidance

Visit: [www.shire.com](http://www.shire.com) and keep your report for reference when you read about international providers in Part 7.

Once a new drug has been launched on the global market and is doing well in terms of sales, other companies may begin to take an interest. **Generic** drugs are copies of brand-name drugs produced when the patent taken out by the original drug producer runs out. A generic must contain the same active ingredients as the original formulation and should be identical in terms of strength, dosage, administration and safety. For example, Viagra, which was developed by Pfizer, is now widely produced in generic form under such names as Sildenafil and Tadalafil. Not only that, but companies have developed slightly different drugs, such as Cialis and Levitra, that also treat sexual dysfunction.

The advantage of a generic drug is that it is considerably cheaper than the original drug. The principal reason for the relatively low price is that competition increases among generic producers when successful drugs are no longer protected by patents. Companies incur fewer costs in creating the generic drug, and are therefore able to maintain profitability at a lower cost to consumers. Generic manufacturers do not incur the cost of drug R&D, and instead are able to reverse-engineer known drug compounds to allow them to manufacture bio-equivalent versions. Generic manufacturers also do not bear the burden of proving the safety and efficacy of the drugs through clinical trials, since these have already been conducted by the brand-name company. There are, however, concerns about generics, Do they always

follow the original formulations exactly? Or are the formulations changed to make drugs simpler and cheaper to produce? Any such changes could, of course, easily affect the efficacy of the drug.

## Case study 36 BANGALORE

### Generics galore

Bangalore (population 5.3 million) in central southern India is renowned as an attractive city in which to live and work, thanks to its many gardens and pleasant climate. In the 1980s Bangalore became the location for the first major foreign investment in high technology in India (Texas Instruments). Its residential attractiveness and the cheapness of its well-educated labour have since drawn other TNCs to the city. As a consequence, during the 1990s Bangalore became India's most important centre for a number of industries, including biotechnology, aerospace and information technology. It is now recognised as the IT hub of India and often described as the Garden City. Recently, Bangalore has begun to emerge as a global player in the world of pharmaceuticals. Although some of the world's leading pharmaceutical companies, including AstraZeneca, have a presence in the city, it is building its reputation as a manufacturer of **generics**.

India's top generic maker, Cipla, has its main manufacturing facility in Bangalore. It has been a major producer of generic Viagra and also produced Tamiflu, an antiviral drug to be used for protection against swine flu (*Case studies 38 and 57*). But there are many other generic companies here. The costs of the generic drugs produced are so low that many LICs can afford them. For this reason, Bangalore has become an important node in the 'globalisation' of generic medicines and the global fight against disease. Producing cheaper versions of the latest drugs offers hope in the fight against HIV/AIDS in the less developed parts of the world. It is small wonder that Bangalore is now the third largest and the fastest-growing major metropolis in India.

*Bangalore has the reputation of being the generic drug capital of the world. Its rise to prominence illustrates the significance of chance events and non-economic factors.*

The pharmaceutical companies are among the beneficiaries of the global economy. They are capitalising and thriving on providing treatments for a diversity of health risks in a fast-growing global population. Many of these risks have global distributions; they vary in terms of the degree to which they are life-threatening. Behind the pharmaceutical TNCs are the opportunistic companies that produce generic copies of drugs that are in particularly great demand. In short, there is much money to be made in medications in this age of the global economy.

### 26 Using case studies

#### Question

Examine the arguments for and against the use of generics.

#### Guidance

On the positive side, think of the benefits of relative cheapness and access. On the negative side, think of possible risks associated with their use.

# International health aid

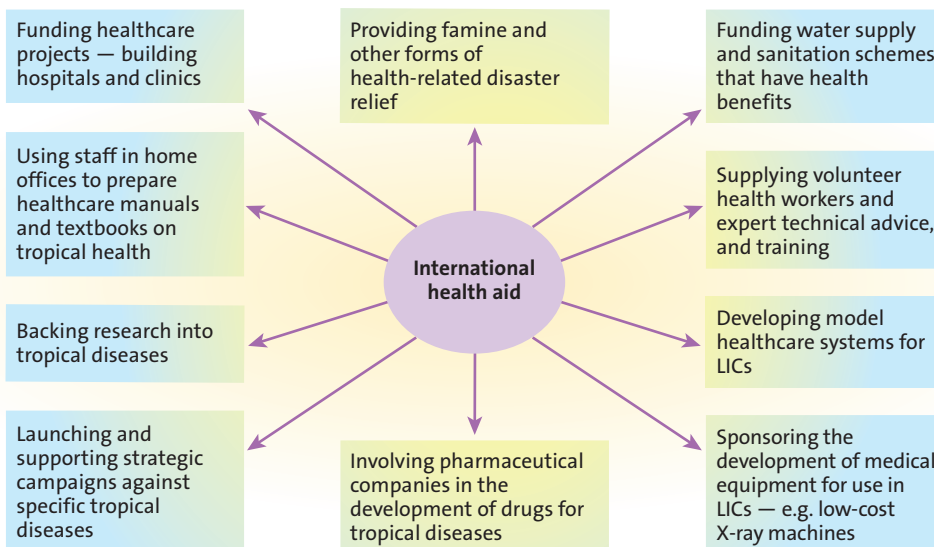
While the growth of the global economy has produced great opportunities for companies to produce drugs for the treatment of the global sick, it has also made it much easier for organisations (governmental and non-governmental) to provide healthcare for the sick in particularly poor countries. Information about emergency situations is quickly transmitted, while modern transport makes possible a speedy delivery of international health aid.

## INTERNATIONAL HEALTH AID

### Case study 37

#### Meeting emergencies and the dearth of healthcare

As the global economy has grown, so too has the amount of health aid given by HICs to mainly LICs. Not only has the amount of aid increased, but thanks to modern transport and communications, so too has its spatial distribution. Even the populations of the most inaccessible poor areas are beginning to benefit. It is estimated that aid from international health organisations pays for less than 5% of the total healthcare costs of the developing world. However, such organisations do much more than provide funding for healthcare projects. Figure 5.2 shows the various ways and forms in which they deliver health aid.



**Figure 5.2**  
Forms of international health aid

There are three main types of organisation providing international health aid:

- **multilateral** — for example, the WHO (*Case study 52*)
- **bilateral** — for example, the United States Agency for International Development (USAID)
- non-governmental or voluntary — for example, Médecins Sans Frontières (*Case study 53*)

It is important to note that in the very poorest countries, the percentage of healthcare costs donated by the developed world is considerably greater than the 5% average. According to the World Bank, in sub-Saharan Africa (excluding South Africa) aid from donor countries averages 20% of total health expenditure, and for five countries — Burundi, Chad, Guinea-Bissau, Mozambique and Tanzania — donor aid pays for more than 50% of the total health bill.

*International health aid is delivered by a mix of governmental and non-governmental agencies. It is also delivered by means of two main types of arrangement — multilateral and bilateral.*

### Question

Explain the difference between 'multilateral' and 'bilateral' aid and give examples of each within the realms of healthcare.

### Guidance

Check the websites of the WHO and USAID: [www.who.int](http://www.who.int) and [www.usaid.gov](http://www.usaid.gov)

## Migration

One of the most obvious features of economic globalisation is the greatly increased mobility of people, thanks mainly to modern means of transport. The three main movers of people are:

- the search for work (economic migration)
- the transaction of business between locations, domestic and international
- leisure and recreation (tourism)

These and other population movements have the ability to spread infectious diseases at an incredible speed over considerable distances. Air travel is a particular villain of the piece. This is well illustrated by the spread of swine flu (*Case study 38*).

### Case study 38

#### THE 2009 SWINE FLU PANDEMIC

##### A spectacular diffusion

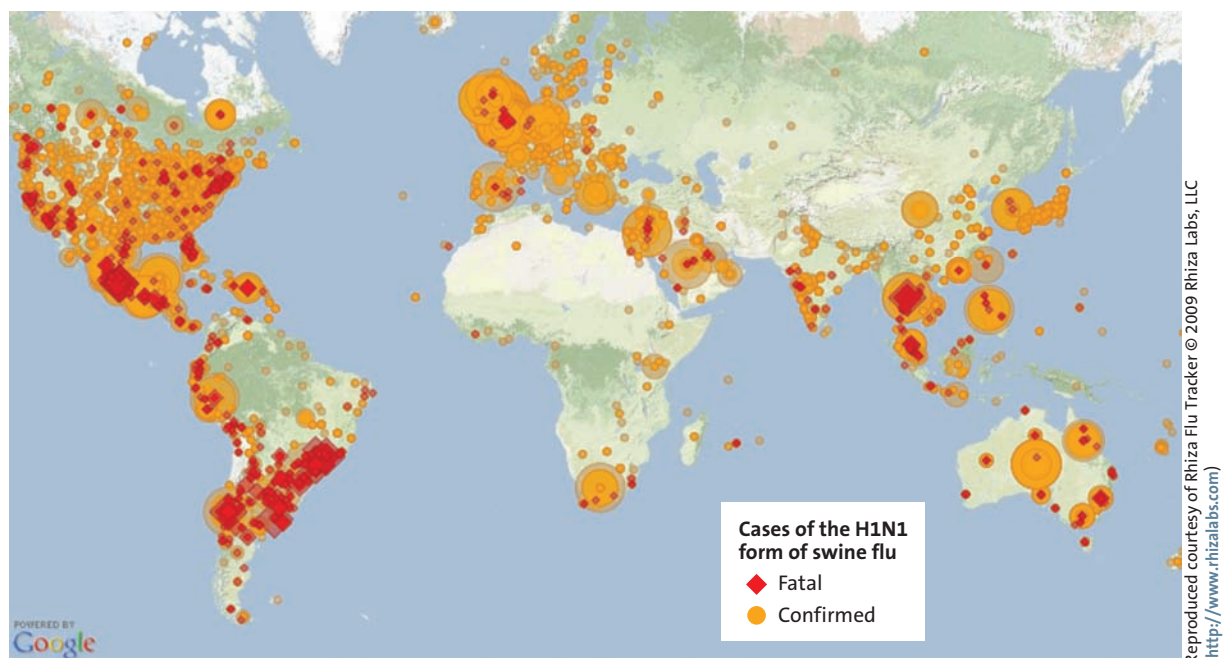
The H1N1 form of swine flu is one of the descendants of the strain of influenza that caused the 1918–19 flu pandemic, referred to as Spanish flu. As well as persisting in pigs, the descendants of the 1918 virus have continued to circulate among humans ever since, contributing to the normal seasonal epidemics of influenza. Although direct transmission from pigs to humans is very rare, the retention of influenza strains in pigs after these strains have disappeared from the human population might make pigs a reservoir where influenza viruses can persist, later emerging to re-infect humans once human immunity to these strains has waned.

The illness is generally mild, except in some cases for people in higher risk groups, such as pregnant women and people suffering from asthma, diabetes, heart disease or a weakened immune system. The virus spreads via coughing, sneezing or touching contaminated surfaces and then touching the nose or mouth. Symptoms, which last up to a week, are similar to those of seasonal flu, and can include fever, sneezing, sore throat, cough, headache, and muscle or joint pains. To avoid spreading the infection, it was recommended that those with symptoms stay at home from school, work and crowded situations, such as concerts and sports fixtures.

The 2009 outbreak of swine flu was first identified in Mexico City on 19 March. Within 4 months, the outbreak had become a pandemic involving 180 000 cases scattered literally across the globe (Figure 5.3). The speed of its diffusion can only be explained by the speed of modern transport and the huge volume of global passenger traffic. It really needed only one carrier of the virus to fly from Mexico City to, say, London for the virus to be quickly transmitted to and through a high-density urban population. This would happen, for example, at work, at school, in the supermarket or on public transport.

By October 2009, the swine flu pandemic had caused around 4500 deaths. By comparison with the 1918–19 outbreak, the 2009 swine flu was of little consequence. The earlier pandemic was highly lethal and was believed to be responsible for up to 100 million deaths worldwide. The great majority of deaths were the result of secondary bacterial pneumonia. The influenza virus damaged the lining of the bronchial tubes and lungs of victims, allowing common bacteria from the nose and throat to infect their lungs. Nonetheless, in the face of the threatened swine flu pandemic health authorities throughout the world were more than anxious to embark on large-scale vaccination programmes — just in case the H1N1 virus mutated and turned really

**Figure 5.3**  
*Spread of swine flu in 2009*



nasty. See *Case study 57* for more information about the ways in which governments and business prepared for this possibility.

*The 2009 outbreak of swine flu is interesting in that this contagious disease quickly reached the status of a pandemic (thanks to international movement of people) and yet it affected relatively few people, and still fewer cases proved either serious or fatal.*

Perhaps some of the migrants responsible for transmitting swine flu were themselves workers in the healthcare industry. They too would be taking advantage of the access to foreign employment opportunities created by economic globalisation. The next case study is just a microcosm of the global market for employment in health.

## Case study 39

### HEALTHCARE WORKERS HEADING FOR THE UK

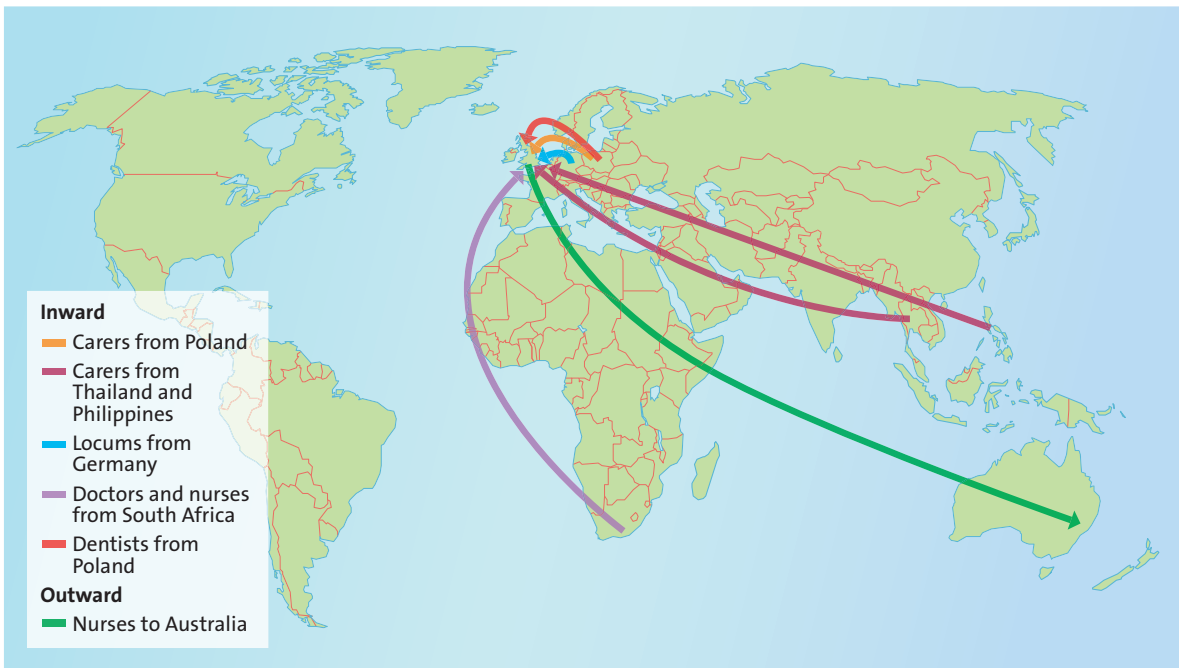
#### It's an ill wind...

Both the NHS and the private medical sector in the UK are relying increasingly upon the services provided by foreign workers. This case study looks at just three types of healthcare migrant.

#### Locums from the EU

A locum is a doctor who covers for a regular doctor when that doctor is absent, or when a medical practice or hospital is short-staffed. The use of locums in the UK has increased significantly, since most regular doctors no longer work nights or at weekends. Today, the NHS has, on average, 3500 locum doctors working in hospitals on any given day, while there are another 6000 covering GPs. Most of the locum hospital doctors are supplied by private agencies. On the other hand, most GP locums are self-employed, and since no agency fee is involved they are able to offer their services at competitive

**Figure 5.4**  
*The movement of healthcare workers into and out of the UK*



rates. More than 5000 of the locums currently in the UK come from former Eastern bloc countries.

A row erupted in 2009 over the competency of foreign locums after an outspoken consultant claimed that some of them are clueless about what is expected of them by the NHS. The issue was raised with the European Commission following the case of a German doctor whose patient died after he gave him an overdose of a painkiller on his first UK weekend shift as a locum GP. Clearly, there are risks associated with the use of foreign locums, due to language difficulties and differences in both medical training and practices.

### Doctors and nurses from South Africa

The advantage of recruiting doctors and nurses from South Africa is that there are no language difficulties and the professional training is very similar in both countries. Since the 1990s the NHS has successfully recruited large numbers of staff from South Africa. Doctors and nurses have been more than willing to make the move because of concerns about personal security and because of relatively low salaries. As far as is known, those workers have fitted in well in both our hospitals and general practices. However, this migration has had a downside. South Africa has been seriously drained of its medical professionals to the extent that the very existence of its healthcare systems has been threatened. In 2003, 5880 health and medical personnel from South Africa registered in the UK. In that same year, the governments of the UK and South Africa were forced to draw up an agreement restricting the number of workers entering the UK. Underlying that agreement was the recognition that the UK should not be poaching qualified

**Figure 5.5**  
Since the 1990s, the NHS has recruited large numbers of staff from South Africa — as far as is known these workers have fitted in well in both hospitals and general practices



Gary Calton/Alamy

medical staff from a less developed country faced by a number of serious health risks, the most significant being a very high HIV/AIDS morbidity rate.

### Care assistants from Poland

A shortage of care workers in the UK has prompted charities and local authorities to turn to Poland to recruit staff for their elderly care homes. Since EU borders opened up in May 2004 to include another ten countries, there have been enhanced opportunities for both workers in those new member states and UK employers. After years of finding it difficult to recruit suitable UK staff, a certain amount of campaigning in Poland soon resulted in an inward flow of young carers. In the main, our care homes have been pleased with their Polish recruits. They are well qualified, have a strong work ethic and are sensitive to the needs of the elderly. There is a downside to this particular healthcare migration. Many of the workers are temporary economic migrants. They intend to return home to Poland after a few years. The return of care workers is beginning to gather pace, since rates of pay are low and there are more and better jobs to be had back home as the Polish economy picks up. In addition, some care homes have been guilty of exploiting and abusing the rights of these workers.

*The UK's sick and elderly are generally the beneficiaries of this influx of foreign health workers. However, there are some risks that are to do with language and levels of qualification. But the most serious concern is that the arrival of these workers in the UK is depriving other countries of their skills.*

28

Using case studies

Research the outflows of healthcare workers from the UK in terms of their destinations and the particular skills involved.

#### Guidance

You might prepare a global map that complements Figure 5.4. The skill categories might be: surgeons and consultants; nurses; care workers; administrators.

*Case study 37* was about aid organisations distributing healthcare to needy parts of the world. The next case study illustrates almost the opposite situation of people going in search of medical treatment in a foreign country, perhaps because that country offers treatment that is prompter, cheaper or of a higher quality than can be obtained at home. The desire for non-urgent cosmetic surgery is a common driving force.

Case study 40

## MEDICAL TOURISM

### Travel in search of health

Medical tourism (also known as medical travel or global healthcare) is a term used by travel agencies and the mass media to describe the rapidly growing practice of travelling across international boundaries to obtain healthcare.

Each year, long NHS hospital waiting lists and the high cost of private medicine are persuading around 100 000 UK citizens to become medical tourists. They go abroad for

a variety of treatments — infertility, dental, cosmetic and orthopaedic. Orthopaedic treatment includes such things as hip and knee replacements. The costs of a hip replacement in ten countries are shown in Table 5.2. Given the £8000 cost of private treatment in the UK, much money can be saved by having the operation abroad. Even allowing for the costs of travel and a week's accommodation, there are still great savings to be made on the total package. Notice that not all medical tourism destinations are in HICs — India, Malaysia and Tunisia are all popular, for example.

**Table 5.2** A comparison of the costs of having a hip replacement, 2007

Country	Treatment price	Treatment saving	Package saving
Bulgaria	£2000	87%	69%
Cyprus	£4100	49%	43%
France	£5689	29%	23%
Germany	£5296	34%	26%
Hungary	£4450	44%	40%
India	£3547	56%	49%
Malaysia	£2205	72%	60%
Tunisia	£3000	63%	56%
Turkey	£4725	41%	36%
UK	£8000	—	—

Over 50 countries have identified medical tourism as a national industry. However, **accreditation** and other measures of quality vary widely across the globe, and there are risks and ethical issues that make this method of accessing medical care controversial. Also, some destinations may become hazardous or even dangerous for medical tourists to contemplate.

It is perhaps worth noting that in Cuba medical tourism is a state activity. Medical treatments are traded in exchange for resources that the country needs. For example, an intergovernmental agreement allows people from Venezuela to be treated in exchange for oil.

*The greater mobility of people encouraged by modern transport may be responsible for the more rapid spread of contagious disease (Case study 38), but it does have an upside. It allows people, at least those with money, to seek healthcare in foreign countries, but strictly within the private sector.*

29

Using case studies

**Produce a two-column table that identifies the benefits and costs of medical tourism.**

### Guidance

Think first in terms of the benefits and risks to the patient, then broaden your thinking to consider possible social and ethical issues.

# The global downturn

A booming global economy has encouraged the expansion of pharmaceutical companies, international healthcare aid and medical tourism. However, what have been the impacts of the more recent downturn (the so-called **credit crunch**) on health and health risks around the world? Perhaps the reduction in migration volumes (for example, of business trips and tourism) has put a brake on the speed with which diseases are spread from one country to another. Have the pharmaceutical companies had to reduce their R&D and levels of production, close factories and make staff redundant? The next case study looks at just one, perhaps unsuspected side-effect in the poorer parts of the developing world.

## Case study 41 THE CREDIT CRUNCH KILLS

### A side-effect of the global downturn

The global downturn of 2008–09 arguably hit the developed world rather harder than the developing world, what with the crashing of banks, the loss of savings and jobs, houses repossessed and so on. However, in 2009 the head of the WHO warned that the poorer parts of the developing world were also experiencing a particularly painful

**Figure 5.6**  
The 'credit crunch'



www.CartoonStock.com

backlash. This took the form of a marked increase in female and infant mortality rates. The reasons for this were as follows:

- The credit crunch was reducing the willingness and/or ability of the high-income countries to make donations in support of aid programmes, such as those aimed at improving maternal care and cutting infant mortality rates in the developing world.
- In many parts of the developing world, there is a heavy reliance on **remittances**. This is money sent back home to their families by migrant workers in the developed world. Remittances were declining significantly, as these migrant workers were facing unemployment or a cut in working hours and wages. Normally, much of that money is spent on food, so when the supply of money and food runs out, the risks of malnutrition are increased. Malnutrition is particularly lethal for mothers and their babies.

*This case study illustrates the nature of the global village, with its links and interconnections.*

Part 5 has aimed to illustrate a few of the ways in which health and health risks are linked to the global economy. While that economy booms, there is the prospect of a general increase in health and the quality of healthcare, as pharmaceutical companies produce new and better treatments and international aid organisations lead the fight against disease and help the most needy parts of the world. However, when that economy falters, it is the people in those same parts of the world whose health suffers most.

30

Using case studies

**Discuss with your fellow students other possible ways in which the global recession might have had an impact on health and health risks.**

### Guidance

You might distinguish between **(1)** the developing and developed worlds and **(2)** infectious and non-infectious diseases.