Migrant Health: Infectious diseases in non-UK born populations in the UK

An update to the baseline report - 2011
Acknowledgements

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We gratefully acknowledge all those who contributed to this report including the clinicians, microbiologists, health advisors, scientists and administrative staff who collect data or contribute in other ways to surveillance of infections affecting migrant populations in the UK.

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Thanks to the following organisations for supplying data specifically for this report:
General Medical Council
Nursing & Midwifery Council.

Thanks to the UK Border Agency for providing Appendix D.

Thanks to Nick Andrews, HPA Statistics Unit, for statistical advice.

Citation
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Executive Summary

This is the Health Protection Agency’s second report on Migrant Health, and the first UK-wide report (the baseline report focused on England, Wales and Northern Ireland). Its key messages are as follows:

- Migrants comprise an increasing proportion of the UK population. In 2001, it was estimated that 8% of the total UK population were born abroad; in 2010 the figure was closer to 12%. This population comprises individuals from all over the world.

- The majority of long-term migrants to the UK are young people with plans to study or work, and they will have a similar range of health concerns to UK born people in the same age bracket.

- A small proportion of the non-UK born bear the greatest burden of infectious disease reported in the UK. In 2010, 73% of TB cases reported in the UK, almost 60% of newly diagnosed cases of HIV, and 80% of hepatitis B infected UK blood donors were born abroad (of those with country of birth information available).

- Some migrants may have more complex health needs than the UK born population, influenced by the burden of disease and living conditions in their country of origin, experiences during migration, their circumstances in the UK, as well as factors relating to ethnicity and cultural practices.

- Meeting the health needs of non-UK born people living in the UK is important both for individual and for public health reasons.

- Health risks to the non-UK born can continue for many years after arrival in the UK. For example, 77% of non-UK born TB cases in 2010 were diagnosed two or more years after arrival in the UK. Half of non-UK born men who have sex with men with a newly diagnosed HIV infection between 2001 and 2010 had probably acquired their infection within the UK.

- UK residents travelling to visit friends and relatives in their country of origin are the major risk group for UK reports of several important travel associated diseases. Where information was available, 61% of malaria cases reported in the UK in 2010 and 87% of enteric fever cases in England, Wales and Northern Ireland who had travelled abroad between 2007 and 2010, were visiting friends and relatives. Both of these diseases are preventable through pre-travel advice and appropriate prophylactic measures.

- Primary care practitioners play a vital role in early identification of infectious diseases. For example, data from sentinel surveillance of hepatitis shows that 65% of hepatitis B infections and 68% of hepatitis C infections reported between 2007 and 2010 through this scheme were diagnosed in primary care (by general practitioners, genitourinary medicine [GUM] clinics and other primary care services).

- Early identification of risk and diagnosis of infection can improve health outcome. For example, people diagnosed late with HIV have a ten-fold
increased risk of death within one year of diagnosis compared to those diagnosed promptly, yet in 2010, heterosexuals born outside the UK were more likely to be diagnosed late compared to those born in the UK.

- Practitioners are encouraged to consider their patients' country of birth when evaluating their risk exposures and to guide their differential diagnosis of presenting symptoms. For example, a higher proportion of non-UK born TB cases present with extra-pulmonary disease (54% compared to 31% in the UK born in 2010), which can have a variety of clinical presentations.

- Many UK practitioners may be unfamiliar with the clinical presentation of some infectious diseases that are rarely diagnosed in the UK. For example, Chagas disease has currently only been reported within the UK in a small number of migrants from South America and is likely to be under-diagnosed.

Several of the public health recommendations made in the baseline report are carried forward in this update, and need continued attention. These include the need for non-UK born communities to have access to culturally competent and language supported services, and the importance of considering health needs relevant to an individual’s country of birth. In response to its duty to protect the health of all sections of the community, the Health Protection Agency launched the online Migrant Health Guide (Appendix A) in 2011. This aims to assist primary care practitioners caring for people who have come to live in the UK from abroad. By supporting UK practitioners in this way, to recognise and appropriately manage the health needs of non-UK born people, the HPA aims to contribute to the reduction of the burden of infectious disease in the populations that are at highest risk.
Introduction

This report provides an update to the Migrant Health baseline report\textsuperscript{1} that was published in 2006 and contained data up to and including 2004. Here we present the next six years of data (2005-2010) and summarise trends and changes. Since this report is an update, please refer to the baseline report for any background information and surveillance methodology not included here, including classifications of countries in world regions. Some of these data have previously been published within specific infectious disease surveillance reports. However, we are bringing them together and where possible providing additional analyses relevant to migrant health. Some migrants may have risk factors for more than one infection, so it is important to take an integrated approach when considering the health needs of these populations.

As explained in the baseline report, the term ‘migrant’ is not consistently defined across data sources. In this report we frequently use the proxy of ‘non-UK born populations’ to represent migrant populations in the UK. This is not ideal since it includes both short-term migrants and those who have lived in the UK for many years, without taking into account their nationality or immigration status.

The immigration statistics presented here are derived from a range of sources as outlined in the information boxes contained within the migration chapter. They are presented to give a picture of the latest trends in migration to the UK, however, each of the sources has its limitations. Infectious disease surveillance data also have key limitations with respect to monitoring migrant populations and in this report we have tried to highlight this with respect to key fields in the ‘migrant health data completeness’ sections. Improving our surveillance data will allow us to monitor the trends and risk factors so that healthcare and information can be appropriately targeted.

Several factors can contribute towards increases or decreases in infectious disease cases reported amongst non-UK born populations, so data should be interpreted with caution. Potential explanations can include:

- Changes in the epidemiology of an infectious disease in a migrant’s country of origin.
- Changes in migration patterns.
- Pre/post entry screening practices.
- Standard of living conditions in the UK and associated risks of onward transmission.
- Access to healthcare in the UK.
- Level of case finding/diagnosis amongst different migrant groups in the UK.
- Frequency and duration of visits to friends and relatives in a migrant’s country of origin, and extent to which pre-travel advice is available/targeted appropriately.
- Reporting practices and changes to surveillance systems.

Although the greatest burden of infectious disease in the UK falls on the non-UK born population, the majority of migrants to the UK are young and healthy and do not pose an infectious disease risk to the general population.
Throughout this report we refer to the Migrant Health Guide as a source of guidance and information for primary healthcare practitioners. This online resource was developed by the Health Protection Agency in collaboration with many health professionals to address some of the issues raised in the baseline report. Further information about the guide is available in Appendix A.
Chapter 1. Recent trends in global and UK migration

Summary

- In 2010, international migrants comprised 3% of the world’s population.
- The UK is both one of the top ten receiving countries and top ten sending countries for migrants globally.
- Approximately 12% of people living in the UK in 2010 were born abroad; this has increased from 8% in 2001.
- Net migration to the UK in 2010 was 252,000, the highest calendar year figure on record.
- In 2010, 42% of long-term migrants to the UK with a known reason for migration arrived in the UK to study.
- The second most common reason for migrating to the UK long-term (for more than a year) in 2010 was to work.
- Migration to the UK from the European Union (EU) A8 accession countries has increased, peaking between 2006 and 2008 following changes to the EU.
- The top five countries of birth for migrants living in the UK in 2010 were India, Poland, Pakistan, Republic of Ireland, and Germany.
- The number of entrants to the UK registers of doctors and nurses with an overseas qualification has declined substantially in the last ten years.
- Applications received for asylum in the UK have also declined.
- In 2010, births to non-UK born mothers accounted for a quarter of all live births in England and Wales.
- The number of people travelling abroad to visit friends and relatives comprised 20% of those travelling abroad from the UK in 2010.

Global trends

In 2010, the total number of international migrants worldwide was estimated to be more than 215 million persons – approximately 3% of the world population. As the 21st century started, one in every 35 people was an international migrant. If all the international migrants in the world lived in the same place, they would comprise the fifth largest country.

Migration is influenced by factors that ‘push’ (e.g. socioeconomic conditions, civil war, natural disasters) and ‘pull’ (e.g. employment, education, family, lifestyle) people across the world. Several of these factors arise from the economic asymmetry that exists globally. Global south-south migration (migration between low income countries) is larger than migration from the south to high-income countries belonging to the Organisation for Economic Co-operation and Development (OECD). Net migration (the difference between immigration and emigration) for the last five years is shown in Figure 1. Although most sending countries are low income, several of them also have a net inflow of migrants.
Figure 1 Five-year estimates of net migration, 2006-2010

Data source: World Bank, United Nations Population Division, see Box 1.

Box 1. World Bank, United Nations Population Division: net migration³

Net migration is the net total of migrants during the period, that is, the total number of immigrants less the annual number of emigrants, including both citizens and non-citizens. Data are five-year estimates. To derive estimates of net migration, the United Nations Population Division takes into account the past migration history of a country or area, the migration policy of a country and the influx of refugees in recent periods. The data to calculate these official estimates come from a variety of sources, including border statistics, administrative records, surveys and censuses. When no official estimates can be made because of insufficient data, net migration is derived through the balance equation, which is the difference between overall population growth and the natural increase during the 1990-2000 intercensal period.
The UK is both one of the top ten receiving countries and top ten sending countries for migrants globally (Tables 1 and 2).

**Table 1 Top ten immigration countries, 2010**

<table>
<thead>
<tr>
<th>Rank</th>
<th>Country</th>
<th>Number of immigrants, millions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>United States</td>
<td>42.8</td>
</tr>
<tr>
<td>2</td>
<td>Russian Federation</td>
<td>12.3</td>
</tr>
<tr>
<td>3</td>
<td>Germany</td>
<td>10.8</td>
</tr>
<tr>
<td>4</td>
<td>Saudi Arabia</td>
<td>7.3</td>
</tr>
<tr>
<td>5</td>
<td>Canada</td>
<td>7.2</td>
</tr>
<tr>
<td>6</td>
<td>United Kingdom</td>
<td>7.0</td>
</tr>
<tr>
<td>7</td>
<td>Spain</td>
<td>6.9</td>
</tr>
<tr>
<td>8</td>
<td>France</td>
<td>6.7</td>
</tr>
<tr>
<td>9</td>
<td>Australia</td>
<td>5.5</td>
</tr>
<tr>
<td>10</td>
<td>India</td>
<td>5.4</td>
</tr>
</tbody>
</table>

Data source: Migration and Remittances Factbook 2011

**Table 2 Top ten emigration countries, 2010**

<table>
<thead>
<tr>
<th>Rank</th>
<th>Country</th>
<th>Number of emigrants, millions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mexico</td>
<td>11.9</td>
</tr>
<tr>
<td>2</td>
<td>India</td>
<td>11.4</td>
</tr>
<tr>
<td>3</td>
<td>Russian Federation</td>
<td>11.1</td>
</tr>
<tr>
<td>4</td>
<td>China</td>
<td>8.3</td>
</tr>
<tr>
<td>5</td>
<td>Ukraine</td>
<td>6.6</td>
</tr>
<tr>
<td>6</td>
<td>Bangladesh</td>
<td>5.4</td>
</tr>
<tr>
<td>7</td>
<td>Pakistan</td>
<td>4.7</td>
</tr>
<tr>
<td>8</td>
<td>United Kingdom</td>
<td>4.7</td>
</tr>
<tr>
<td>9</td>
<td>Philippines</td>
<td>4.3</td>
</tr>
<tr>
<td>10</td>
<td>Turkey</td>
<td>4.3</td>
</tr>
</tbody>
</table>

Money sent by migrants back to their countries of origin is an important source of funding for low income countries; recorded remittances in 2009 were nearly three times the amount of official aid globally and almost as large as foreign direct investment flows to low income countries. Women comprise around 49% of global migrants and 52% of migrants in Europe. These figures have remained relatively constant between 2005 and 2010.

The enlargements of the EU (see Appendix B for details) in 2004 and 2007 have contributed towards increased migration within the European region. However, return migration increased when economic conditions and job opportunities in migrant destination countries, such as the UK, deteriorated more than those in origin countries, such as Poland.

Overall, global migration appears to have slowed in response to the economic crisis. However, there is little evidence for a mass return of migrants. This may be, in part, because economic conditions are still preferable in many countries of destination. Tighter migration restrictions in host countries may also mean that migrants may prefer to stay rather than risk re-entry. That being said, the situation for migrants who have remained in their destination country has generally deteriorated since migrants
are often among the most vulnerable category of workers with respect to employment security.

By contrast there has been a sharp increase in the global number of international students. In 2009 there were 3.4 million international students, an increase of more than 70% since 2001. This migration is partly driven by the shortage of places on high-quality degree courses in students’ home countries, and the pressure to have an overseas qualification when applying for jobs. The UK is the second biggest destination for overseas students (after the USA), but this also includes students studying for a UK degree in their home country through partnerships or overseas UK university campuses.

As well as those who have voluntarily chosen to migrate for reasons such as work or study, the United Nations High Commissioner for Refugees (UNHCR) estimates that there were 43.7 million forcibly displaced people worldwide at the end of 2010, the highest number in 15 years. This includes an estimated 15.4 million refugees. Afghan (3 million) and Iraqi (1.7 million) refugees were the largest refugee groups in 2010. Afghans were located in 75 different asylum countries. Iraqis were located primarily in neighbouring countries. The majority of refugees (4/5) were living in low income countries. Refugees and asylum seekers made up 16.3 million, or 8% of international migrants in 2010.
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Migration statistics for the UK

UK overview
According to the 2001 Census, 8% of people living in the UK at that time were born abroad (see Box 2). Surveys estimate that this proportion is now closer to 12% (Annual Population Survey, see Box 3).

Estimated total long-term migration (LTIM) to the UK in the year January to December 2010 was 591,000 (Figure 2) (see Box 4). Net migration (the difference between immigration and emigration) into the UK in 2010 was 252,000, the highest calendar year figure on record. Declining emigration is the main driver for the increase in net migration\textsuperscript{10}. The peaks in 2004 and 2007 have been influenced by the widening of the EU, as detailed in Figure 3 and Appendix B.

Figure 2 Long-term international migration, 2001-2010

![Long-term international migration graph]

Data source: LTIM, see Box 4

Figure 3 Migration timeline, selected events (see Appendices B and C for further details)

May 2004: A8 countries join the EU
Jan 2007: A2 countries join the EU
Nationality, Asylum and Immigration Act 2002
Asylum and Immigration Act 2004
Immigration, Asylum and Nationality Act 2006
UK Borders Act 2007
Borders, Citizenship and Immigration Act 2009
Feb 2008: Launch of new points-based system for migrants from outside the EEA and Switzerland
Box 2. Census

The census provides a count of all people and households in the UK. The 2001 Census included those staying in the UK for six months or more. The Census is the most complete source of population data available. The latest available data are for 2001. The 2011 census results will be available in July/September 2012 (main tables) with non-standard census data to follow in 2013.

Box 3. Labour Force Survey (LFS) and Annual Population Survey (APS)

The Labour Force Survey is a quarterly sample survey of households living at private addresses in Great Britain. Its purpose is to provide information on the UK labour market. In the analysis of the data presented in this report a migrant is defined as someone whose country of birth is not the UK. The data presented here are based on the April-June 2010 survey.

Annual Population Survey

Box 4. Long-term international migration (LTIM) statistics and International Passenger Survey (IPS), Office for National Statistics (ONS)

These estimates are derived from the International Passenger Survey, Home Office data, estimates of flows between the UK and Irish Republic from Central Statistics Office, Dublin (up to 2007) and estimates of flows to and from Northern Ireland from the Northern Ireland Research and Statistics Agency (2008 onwards). Adjustments are also made for people whose intentions change with respect to their length of stay. The ONS uses the United Nations recommendation for defining an international long-term migrant; someone who changes his or her country of usual residence for a period of at least a year, so that the country of destination effectively becomes the country of usual residence.

International Passenger Survey
Survey data is collected via face to face interviews with passengers passing through ports and on routes into and out of the UK.
Forty-five per cent of long-term migrants to the UK in 2010 were female (LTIM, see box 4), a lower proportion than for Europe overall (52%). The majority of long-term migrants to the UK in 2010 (87%) were aged 15-44 years, representing a young, predominantly working age population (LTIM, see box 4). Data concerning working age persons (15-64 years) living in the UK in 2010 showed that 6% of the non-UK born had had any past health problem lasting more than a year compared with 9% of the UK-born (LFS, see box 3).

Of the long-term migrant passengers arriving in the UK in 2010, the largest group (51%) were intending to stay for 1-2 years (Figure 4).

**Figure 4 Intended length of stay for long-term international migrants arriving in the UK, 2001-2010**

![Figure 4](image)

Data source: LTIM, see Box 4

The regions where long-term migrants to the UK were intending to settle for selected years 2001-2010 can be seen in Figure 5. Whilst most migrants intend to settle in London and the South East, other regions of the UK are becoming more common destinations.
Figure 5 Long-term international migration to the UK by area of intended destination, 2001-2010

Note: Prior to 2008, factors made it particularly difficult to estimate international migration into and out of Northern Ireland so estimates are not shown for years 2001-2007.
Data source: LTIM (inflow), see Box 4
Countries of origin

World regions of last residence for long-term migrants to the UK are shown in Figure 6. The most dramatic trend in migration is seen in migrants from EU A8 countries, which sharply increased between 2003 and 2007. Migration from the Indian sub-continent has also increased in the last ten years.

Figure 6 World region of last residence for long-term international migrants arriving in the UK, 2001-2010

Notes:
African commonwealth (excluding South Africa) includes: Botswana, Cameroon, The Gambia, Ghana, Kenya, Lesotho, Malawi, Mauritius, Mozambique, Namibia, Nigeria, Seychelles, Sierra Leone, Swaziland, Tanzania, Uganda, Zambia and Zimbabwe
Data source: LTIM, see Box 4

The majority (68%) of the non-UK born population estimated to be living in the UK in 2010 were born outside the EU (Figure 7).
Figure 7 Estimated population resident in the UK, by country of birth, January 2010 to December 2010 (N=61,354,000)

Note: The EU13 includes the original 15 member states (see Appendix B), excluding the UK and Republic of Ireland which are shown separately.
Data source: Annual Population Survey, see box 3

The ten most common countries of birth of migrants resident in the UK have remained similar over the last six years, with the exception of Poland which, since 2008, has become the second most common country of birth (Table 3). Nigeria entered the top ten in 2007, displacing Kenya from the position of tenth most common country of birth.

Table 3 Ten most common countries of birth for the estimated non-UK born populations resident in the UK 2005-2010

<table>
<thead>
<tr>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
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<tbody>
<tr>
<td>India</td>
<td>India</td>
<td>India</td>
<td>India</td>
<td>India</td>
<td>India</td>
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<tr>
<td>Rep. of Ireland</td>
<td>Rep. of Ireland</td>
<td>Rep. of Ireland</td>
<td>Poland</td>
<td>Poland</td>
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<td>Poland</td>
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<td>USA</td>
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<tr>
<td>Poland</td>
<td>USA</td>
<td>Jamaica</td>
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</tr>
<tr>
<td>USA</td>
<td>Jamaica</td>
<td>Kenya</td>
<td>Rep. of Ireland</td>
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<td>Rep. of Ireland</td>
</tr>
<tr>
<td>Jamaica</td>
<td>Kenya</td>
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<tr>
<td>Kenya</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Data source: Annual Population Survey, see box 3
Reasons for migration
Formal study has increased as a reason for migrating to the UK amongst long-term international migrants, overtaking work-related reasons (definite job and looking for work combined) in 2009 (Figure 8). This partly reflects the steep increase in international students globally (see global overview). Forty-two percent of long-term migrants with a known reason for migrating arrived in the UK to study in 2010 compared to 19% in 2001. This proportional increase is also influenced by a decline in work-related migration to the UK, which is in part related to changes in immigration legislation (especially the points based system for migrant workers introduced in 2008), as well as the economic downturn.

Figure 8 Reason for migrating to the UK for migrants arriving 2001-2010 (LTIM)

The largest group of international students to the UK is from North America and Western Europe, with East Asia and the Pacific comprising the second largest group in 2009 (Figure 9).
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Figure 9 Students from abroad studying in the UK in 2009 by world region of origin (N=368,968)

Data source: UNESCO Institute for Statistics, see Box 5

In line with the trend seen in Figure 6, allocations of National Insurance numbers to overseas nationals from A8 countries also peaked in 2007/08 (Figure 10). National Insurance number registrations for Asian and Middle Eastern nationals steadily increased between 2004/05 and 2010/11.

Box 5. UNESCO (United Nations Educational, Scientific and Cultural Organization) Institute for Statistics

Based on its annual data collection, the UNESCO Institute for Statistics produces a range of indicators to track trends in tertiary education at the global, regional and national levels.
Figure 10 National Insurance number registrations to adult overseas nationals entering the UK, by year of registration and world area of nationality, 2002/03 to 2010/11

Box 6. National Insurance number (NINos) allocations to adult overseas nationals entering the UK

Migrants intending to work in the UK, regardless of how long they are intending to stay, need a National Insurance number. Migrants must apply as soon as they start work, but this may not necessarily be on immediate entry to the UK.
In 2010/11, the largest number of National Insurance number registrations to overseas nationals was to Polish nationals, followed by Indian nationals. Table 4 shows the top ten countries for overseas nationals registering with a National Insurance number in 2010/11.

**Table 4 National Insurance number registrations to overseas nationals for top ten countries of nationality in 2010/11**

<table>
<thead>
<tr>
<th>Country of nationality</th>
<th>Number of NiNo registrations (thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poland</td>
<td>81</td>
</tr>
<tr>
<td>India</td>
<td>74</td>
</tr>
<tr>
<td>Pakistan</td>
<td>41</td>
</tr>
<tr>
<td>Republic of Lithuania</td>
<td>41</td>
</tr>
<tr>
<td>Republic of Latvia</td>
<td>27</td>
</tr>
<tr>
<td>Spain</td>
<td>24</td>
</tr>
<tr>
<td>France</td>
<td>23</td>
</tr>
<tr>
<td>Italy</td>
<td>22</td>
</tr>
<tr>
<td>Romania</td>
<td>22</td>
</tr>
<tr>
<td>Nigeria</td>
<td>18</td>
</tr>
</tbody>
</table>

Worker Registration Scheme (WRS) applications (see Box 7) peaked slightly earlier, in 2006 (note: both Worker Registration Scheme and National Insurance number data includes applicants intending to stay in the UK for less than 12 months). Approved WRS applications declined 52% between 2006 and 2009, rising slightly in 2010 (Figure 11).

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**Box 7. Worker Registration Scheme (WRS)**

The Worker Registration Scheme was introduced in May 2004 and ended on 30 April 2011. A8 citizens (those from Czech Republic, Estonia, Latvia, Lithuania, Hungary, Poland, Slovenia and Slovakia) were required to register with the Workers Registration Scheme when they took up work with an employer. Self-employed workers were not required to register.
Figure 11 Approved applications for the Worker Registration Scheme by year of application, 2005-2010

Data source: Worker Registration Scheme, see Box 7
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Migrant healthcare workers
Several thousand healthcare workers migrate to work in the UK each year, though for both doctors and nurses these numbers have been decreasing.

In the UK, registrations of doctors with UK medical qualifications overtook those with non-UK medical qualifications in 2007 (Figure 12). Registrations of doctors with non-UK medical qualifications peaked in 2003; this was influenced by a change to a specific registration route. This can be seen in the peaks for South Africa and Australia in Figure 13.

Figure 12 Doctors registering for the first time in the UK by country of primary medical qualification, 2001-2010

Note: EEA includes Switzerland in this figure. Membership of the EEA changed between 2001 and 2010 with the expansion of the EU. Consequently some countries changed categories during that time. Data source: General Medical Council registrations of doctors, see Box 8

Footnote: Until 31 December 2003, doctors from universities in Australia, Hong Kong, New Zealand, Singapore, South Africa or the West Indies (and the University of Malaya before 1990), were treated differently, in accordance with Section 19 of the Medical Act, to other doctors who qualified outside the UK and EEA. Previous to the route change, doctors from universities in these countries had a direct route to full and provisional registration. The change meant that these doctors, like other international medical graduates, had to apply for limited registration in the first instance.
Figure 13 Entrants to the register of doctors in the UK from overseas by country of primary medical qualification for the top five countries of qualification 2001-2010

Data source: General Medical Council registrations of doctors, see Box 9

As seen in Figure 13, registrations from India declined following a peak in 2004. In 2010, the top five countries of primary medical qualification for doctors registering in the UK were Romania, India, Pakistan, Italy and Greece.

Entrants to the UK register of nurses and midwives with a qualification from overseas (excluding the EEA) declined dramatically between 2003/04 and 2008/09 and have remained below 1,200 since 2008-09 (Figure 14). Entrants to the register with a qualification from the EEA increased gradually from 2002/03 to 2010/11.

Box 8. General Medical Council\textsuperscript{18} registrations of doctors

The General Medical Council provided data concerning the number of doctors granted registration for the first time in the UK, by country of primary medical qualification. Registrations give doctors the potential to migrate and can indicate intention rather than directly representing the number of doctors who have arrived in the UK each year.
Migrant Health: Infectious diseases in non-UK born populations in the UK. An update to the baseline report - 2011

**Figure 14 Initial admissions to the register of nurses and midwives in the UK by country of qualification**

Note: EEA includes Switzerland in this figure. Membership of the EEA has changed during 2002-03 to 2010-11 with the expansion of the EU so some countries have changed categories during the time period.

Data source: Nursing & Midwifery Council, see Box 9

Substantial decreases were observed in registrants from the Philippines, India and South Africa in particular (Figure 15). In 2010/11, the top five countries from which the largest numbers of entrants to the register held qualifications were Ireland, Philippines, Romania, Portugal and Spain.

**Box 9. Entrants to the UK register of nurses and midwives**

The Nursing & Midwifery Council provided data concerning the number of nurses and midwives joining the UK register, by country of qualification.
Figure 15 Entrants to the register of nurses and midwives in the UK from overseas by country of qualification for the top five countries of qualification 2002/03 to 2010/11

Data source: Nursing & Midwifery Council, see Box 9

Globally, concerns have been raised about the medical ‘brain drain’ to high-income countries, which may result in weakening of health systems in countries of origin. WHO has developed a Global Code of Practice on the International Recruitment of Health Personnel to achieve an equitable balance of the interests of health workers, source countries and destination countries. In 2001, the Department of Health published a code of conduct on recruiting overseas staff, instructing NHS organisations not to actively recruit from low income countries due to concerns about the negative impact this could have on their healthcare systems. This code was revised in 2004 to allow independent sector organisations to sign up to its principles. The further fall in non-European nurses may be explained by changes to the Home Office National Occupation Shortage List (removing ‘general nursing’ from the list in 2006) and the introduction of the Overseas Nurses Programme in 2005, which aimed to improve consistency in preparing applicants for UK registration.
Asylum seekers
Applications for asylum in the UK have been most commonly received from people from Africa, the Middle East and the remainder of Asia (Figure 16); but they have decreased considerably since the early 2000’s. Asylum applications during the last decade were at their lowest in 2010 (17,790) following a peak in 2002 (84,130).

Figure 16 Applications received for asylum in the UK, excluding dependants, by world region of nationality, 2001-2010

Irregular migration
The statistics presented here do not include irregular migration which is very difficult to measure. Attempts to quantify the unauthorised resident population in the UK suggested 430,000 in April 2001. This is a conservative estimate; the total could range from 310,000 to 570,000.
Location in the UK
While the 2011 Census data is being processed, the following sources provide some estimates of where migrants are currently resident in the UK. As expected, the highest concentrations of migrants are found in London (Figure 17), but some other local authorities in the UK also have relatively high proportions of migrants.

a) Annual Population Survey data

Figure 17 Proportion of non-UK born UK residents by local authority, 2010, London inset

Note: for Northern Ireland only an overall estimate is presented
Data source: Annual Population Survey, see Box 3
b) GP registrations for people with previous country of residence overseas (Flag 4 status)

Approximately 600,000 people registered with a GP with Flag 4 status in England and Wales each year from 2007/08 to 2009/10. The largest proportion was in London (Figure 18).

Figure 18 Flag 4 GP registrations by regions in England and Wales, 2000-2010

Data source: Flag 4, see Box 11

Box 11. Patient registration Data System – New GP registrations – flag 4 status

Flag 4 records are provided to the Office for National Statistics from the Patient Register Data Service (PRDS). Flag 4s are codes within the PRDS system that indicate that someone who has registered with a general practitioner (GP) in England and Wales was previously living overseas and the time spent outside the UK was at least three months. A Flag 4 may be generated when an individual registers with an NHS GP and a) that individual was born outside the UK and enters England and Wales for the first time and registers, or b) the previous address of an individual is reported as outside the UK. These records do not indicate how long the patient has been in the UK, and some migrants may not register for GP services at all. Children as well as adults are included in these data. Flag 4 status will be lost if or when the migrant registers with a subsequent GP.
Local authorities with the highest numbers of Flag 4 registrations per 1,000 resident population between mid 2009 and mid 2010 were Newham (106), Tower Hamlets (57), Brent (52), Cambridge (51), and Oxford (48) (Figure 19). The figures for Cambridge and Oxford reflect the international student populations.

**Figure 19 Map of Flag 4 registrations in England and Wales by local authority mid-2009 to mid-2010, London inset**

Data source: Flag 4, see Box 11
Births to mothers born outside the UK accounted for a quarter (25.1%) of all live births in England and Wales in 2010, compared to 15.3% in 2001. In Northern Ireland in 2010, 12.6% of births were to mothers who were born outside the UK. In Scotland, this proportion was 13.9%. The rise in the number of births to non-UK born women can be attributed to the increase in the population of women born outside the UK, particularly at ages where fertility is highest, and the higher fertility levels displayed by non-UK born women in the UK compared with their UK born counterparts. The highest numbers of non-UK born mothers giving birth in 2010 in England and Wales were from Poland, Pakistan and India. The estimated total fertility rate in England and Wales for women born outside the UK was 2.45 children per woman, compared to 1.88 children per woman for women born in the UK.

**Figure 20 Percentage of live births to foreign born mothers, local authorities, 2010, London inset**

Notes:
- For Northern Ireland only an overall percentage is presented, data are provisional.
- Counts for City of London and Isles of Scilly (not displayed) have been combined with those for Hackney and Cornwall respectively to preserve confidentiality.
- For consistency ‘non-UK’ includes Ireland in all figures

Data source: Birth registrations data, see Box 12
**Box 12. Birth registrations data**

Country of birth of the mother is recorded at birth registration. It is important to note that statistics about births to non-UK born mothers can only give a very rough indication of where women of child-bearing age are resident. It is not possible to deduce the number of non-UK born women living in an area from the number of births to non-UK born women (partly because fertility rates for different migrant groups differ). The country of birth classification does not distinguish short term migrants from those who have been resident in the UK for many years. Statistics are published separately for England and Wales\(^{27}\), Scotland\(^{28}\), and Northern Ireland\(^{29}\).

**Travel trends**

Several of the infectious diseases referred to in this report are associated with travel abroad (for example, malaria and enteric fevers) and, in particular amongst migrants travelling to visit friends and relatives (VFR) in their countries of origin. Figure 21 shows an increase in VFR travel since 2001, which declined slightly in 2009 and 2010, but to a lesser extent than travel for other reasons. In 2010 VFR travellers comprised 20% of those travelling abroad from the UK.

**Figure 21 Reasons for travelling abroad from the UK, 2001-2010**

![Figure 21 Reasons for travelling abroad from the UK, 2001-2010](image)

VFR=visiting friends and relatives

Data source: International Passenger Survey, see box 4
**Chapter 2. Tuberculosis**

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**Summary**

- The number of cases of TB reported in the UK increased from 6,864 in 2001 to 8,483 in 2010. This is predominantly due to increased numbers of cases reported in the non-UK born.
- In 2010, 73% of TB cases reported in the UK, with information available, were born abroad.
- The majority of non-UK born cases reported in the UK in 2010 were born in South Asia (57%), followed by sub-Saharan Africa (27%).
- Some 77% of non-UK born cases in 2010 were diagnosed two or more years after arrival in the UK.
- A higher proportion of non-UK born TB cases present with extra-pulmonary disease (54% compared to 31% in the UK born in 2010).
- The highest rates of TB in the UK-born are in ethnic minority groups.

**Sources of data**

England, Wales and Northern Ireland
Please see the HPA TB webpages\(^3\) and Tuberculosis in the UK: 2011 report\(^3\) for further information on the surveillance systems in place.

Scotland
Data for Scotland were provided by Health Protection Scotland.

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**Tuberculosis background information**

**Caused by:** *Mycobacterium tuberculosis* (bacteria)

**Global numbers:** In 2010 there were estimated to be 8.8 million (range, 8.5-9.2 million) incident cases of TB. The absolute number of TB cases has been falling since 2006\(^3\).

**Transmission:** Only pulmonary TB is infectious and the infection is usually spread through coughing, during close and prolonged contact for example within a household.

**Disease:** Approximately 5-10% of people who are infected with TB (but are not infected with HIV) become sick at some time during their life but the infection can remain latent for many years. People co-infected with HIV have a higher risk of disease. Typical symptoms of pulmonary TB include coughing for more than three weeks, coughing up blood in phlegm/mucus, weight loss, loss of appetite, high temperature or fever, night sweats, extreme tiredness or lack of energy. Extra-pulmonary TB may present in a multitude of different ways, including localised pain.
Global situation

Figure 1 Estimated global incidence of tuberculosis, 2010

Data source: Global tuberculosis control 2011, World Health Organization

Completeness of tuberculosis surveillance data relevant to migrant health
The proportions of records with information available in key data fields of relevance to migrant health for TB surveillance are shown in Figure 2.

Figure 2 Completeness of tuberculosis surveillance fields relevant to migrant health: UK, 2001-2010
UK epidemiology

The total number of TB cases reported in the UK increased by 24% between 2001 and 2010; most of this increase occurred between 2001 and 2005. This increase is mainly due to increased case numbers in the non-UK born. In the UK born population, case numbers and rates remained stable throughout the last decade (Figure 3). The proportion of cases reported in the non-UK born population increased from 62% in 2001 to 73% in 2010.

Figure 3 Tuberculosis case reports and rates by place of birth (where known), UK, 2001-2010

Data source: Health Protection Agency

In 2010, the majority of non-UK born cases with information available were born in South Asia (57%), followed by sub-Saharan Africa (27%) (Figure 4).
The number of cases from South Asia has steadily increased from 2001 to 2010 (Figure 5). Case reports from sub-Saharan Africa have been declining since 2005.

**Figure 5 Non-UK born tuberculosis cases by world region of birth (part 1), UK, 2001-2010**

Data source: Health Protection Agency
There have been increases in TB cases reported in the UK amongst those born in Central and East Europe in recent years, though the overall contribution to total case numbers is small (Figure 6).

**Figure 6 Non-UK born tuberculosis cases by world region of birth (part 2), UK, 2001-2010**

India and Pakistan were the two most common countries of birth of non-UK born TB cases in the UK in 2010 (Figure 7).
Figure 7 Number of cases of tuberculosis reported amongst non-UK born by country of birth for the top ten countries of birth of cases in 2010, UK, 2005-2010

Data source: Health Protection Agency
A higher proportion of non-UK born cases (54%) presented with extra-pulmonary TB in 2010 compared to UK born cases (31%) (Figure 8).

Figure 8 Tuberculosis case reports by site of disease (where site of disease is known) and place of birth for UK born and non-UK born cases and for the top ten most common countries of birth, UK, 2010

*with and without extra-pulmonary disease
Data source: Health Protection Agency
Some 77% of TB cases reported in 2010 were diagnosed two or more years after arrival into the UK (Figure 9).

**Figure 9 Non-UK born tuberculosis case reports by time since entry to the UK to tuberculosis diagnosis, UK, 2010**

77% of TB cases diagnosed two or more years after entry to the UK

Data source: Health Protection Agency
A higher proportion of extra-pulmonary cases are diagnosed several years after entry to the UK as opposed to the initial year of entry (Figure 10).

**Figure 10** Proportion of non-UK born tuberculosis cases presenting with extra-pulmonary disease by time since entry into the UK, UK, 2010

The age groups with the highest rates of TB in the UK born in 2010 were older adults, all of whom were of white ethnicity (Figure 11). A second peak was observed in the UK born aged 25-29 years predominantly among ethnic minority groups.

The highest rates of TB in the non-UK born in 2010 were in people aged 20-40 years mainly among those of non-white ethnicity (Figure 12).
Figure 11: UK born tuberculosis case reports by ethnic group and age, UK, 2010

Data source: Health Protection Agency

Figure 12: Non-UK born tuberculosis case reports by ethnic group and age, UK, 2010

Data source: Health Protection Agency
The highest rates of TB in the UK born are in ethnic minority groups (Figure 13). Amongst non-UK born people, decreasing rates of TB were observed in black Africans between 2004 and 2010.

**Figure 13 Rate of tuberculosis by ethnic group (where known) for UK and non-UK born cases, UK, 2004-2010**

Data source: Health Protection Agency

**Drug resistance**

Among cases reported in 2010 where place of birth was known, those born outside the UK had higher proportions of isoniazid resistance (7.0% versus 5.4%) and multi-drug resistance (1.6% versus 0.7%) compared to those who were born in the UK. However, there were regional variations across the UK. Isoniazid resistance was higher in the UK born in some areas of England, in particular London, due to the ongoing isoniazid-resistant outbreak associated with this population.

The majority of non-UK born cases reported in 2010 with any first-line drug resistance were born in South Asia (51%) and sub-Saharan Africa (22%), which reflects the distribution by world region of birth for all tuberculosis cases. However, the proportion resistant was much higher among those born in Eastern Europe (21%, 8/39) compared to those born in other world regions. Proportions of MDR and isoniazid resistance were higher in those with a previous history of treatment in both the UK and the non-UK born.
The majority of cases of extensively drug-resistant tuberculosis (XDR TB) reported in 2010 were non-UK born (11/16) with four from Eastern Europe.

**Treatment outcomes**

A higher proportion of non-UK born cases completed treatment than UK born cases in 2010 (86% versus 82%). This mainly reflects the different age and ethnic profile of UK born and non-UK born cases. UK born cases are more likely to be white and older and complete treatment relatively less often because of the higher general rate of mortality in older people. Eighty-eight percent of cases among the Pakistani ethnic group (irrespective of place of birth) completed treatment, 87% of cases of black African ethnicity, and 85% of cases of Indian ethnicity.

**Discussion**

Higher rates of TB in the UK than other European countries have previously been attributed to the high proportion of UK cases that occur in the non-UK born, coupled with a larger number of foreign nationals from countries with a very high incidence of TB. This continues to be the case; several of the trends in TB reports relate to changes in migration patterns over the last decade. As shown in Figure 6 of the migration chapter, migration to the UK from the Indian Sub-continent has increased in recent years and this is reflected in the increased numbers of TB cases reported amongst those born in South Asia. At the same time, and mirroring the trend in HIV cases, TB cases in people from sub-Saharan Africa have been declining since 2005. Although contributing only small numbers to the overall caseload, there have also been increases in the numbers of reported TB cases born in Central and East Europe. Several Eastern European countries are included within the 27 multi-drug resistant (MDR) TB high burden countries listed by the World Health Organization in 2008 so vigilance in this regard is important.

In 2010, in England, Wales and Northern Ireland, 4.9% (378/7658) of TB cases aged 15 and over were co-infected with HIV. This is a continuation of the downward trend observed since the proportion peaked at 9 per cent in 2003-2004. Co-infection has declined in line with general HIV and TB trends that reflect migration trends from sub-Saharan Africa. A co-ordinated approach to the clinical management and notification of these infections is essential to ensure appropriate care and public health action.

The higher rates of TB amongst older UK born adults of predominantly white ethnicity are likely to represent reactivation of latent TB acquired prior to the 1950’s when TB rates were high in the UK (before living conditions improved, mass BCG vaccination
was introduced and early diagnosis by X-ray followed by antibiotic treatment became commonplace). The higher TB rates in UK born ethnic minority groups compared to those of white ethnicity is likely to be due to transmission in communities that have contact with highly endemic countries or people travelling to and from those countries. The UK born cases aged 0-4 years will include some children of parents who have recently arrived from highly endemic countries. However, the greatest burden of TB in children in the UK falls on non-UK born children (37 per 100,000 amongst non-UK born compared to 3 per 100,000 UK born during 1999-2006), especially those born in Africa\textsuperscript{37}. The overall age distribution in the non-UK born reflects the fact that migrants to the UK are predominantly a young, working-age population.

Cases diagnosed several years after arrival in the UK represent a combination of cases of reacti vated latent infection (demonstrated by strain-typing to be the predominant cause\textsuperscript{38}), those with new infection (either acquired in the UK or during return visits to country of origin), and some with late diagnosis. Extra-pulmonary TB is associated with being born abroad and entry into the UK more than a year before diagnosis; migrants who acquire their TB prior to arrival in the UK may present with reactivation of TB at an extra-pulmonary site\textsuperscript{39}. Extra-pulmonary disease is generally not infectious and can present in a myriad of ways that can be easily missed. The proportion of extra-pulmonary TB cases increased in England and Wales between 1999 and 2006 from 48\% to 53\%, and was associated with a rise in the proportion of non-UK born cases. Common extra-pulmonary sites included extrathoracic lymph nodes, and the pleura and intrathoracic lymph nodes.

Delays in starting TB treatment in England between 2000 and 2005, have been found to be associated with greater deprivation for those of black African and Indian/Pakistani/Bangladeshi ethnicity, as well as greater deprivation for those who had recently arrived in the UK\textsuperscript{40}. This may be related to language barriers, lack of knowledge of or access to health services, or issues related to immigration status. It is important that practitioners maintain high vigilance for TB in at risk populations and test appropriately.

**New guidance**
Guidance on the clinical diagnosis and management of tuberculosis, and measures for its prevention and control was issued by the National Institute for Health and Clinical Excellence (NICE) in March 2011\textsuperscript{41}.
Chapter 3. HIV

Summary

- In 2010 there were 6,658 individuals newly diagnosed with HIV in the UK.
- Sixty-five percent of new HIV diagnoses between 2001 and 2010, with country of birth known, were among those born abroad.
- Amongst newly diagnosed people born outside the UK, 80% probably acquired their infection heterosexually.
- Africa was reported as the region of birth for the majority (87%) of heterosexual non-UK born new diagnoses. Forty-eight per cent of African born-heterosexuals reported South Eastern Africa as their region of birth.
- Between 22-30% of men who have sex with men (MSM) diagnosed with HIV between 2001-2010 were born abroad; Europe (excluding the UK) was the most frequently reported region of birth (42%) amongst those born abroad.
- In 2010, 85% of heterosexual black Africans living with a diagnosed HIV infection were receiving antiretroviral therapy; among those with a CD4 count <350 cells/mm³ this figure was 89%. These figures are similar to other risk groups.
- People diagnosed late (CD4 count <350 cells/mm³) have a ten fold increased risk of death within one year of diagnosis compared to those diagnosed promptly. Heterosexuals who were born outside of the UK were more likely to be diagnosed late compared to those born in the UK (63% vs. 50%).

HIV background information

Caused by: Human Immunodeficiency Virus

Global numbers: An estimated 34 million people were living with HIV at the end of 2010 (up 17% from 2001). The number of new HIV infections has been declining since the late 1990s, and there has been a reduction in the number of AIDS-related deaths due to the significant expansion of access to antiretroviral therapy.

Transmission: Sexual transmission, sharing or use of contaminated equipment during injecting drug use, tattooing and body piercing, mother to child transmission during birth or breastfeeding, needle-stick or other sharps injuries, receipt of infected blood or blood products in countries where screening does not take place or is inadequate.

Disease: HIV disrupts normal immune function by infecting and destroying cells which are vital in co-ordinating an immune response. This makes the body increasingly susceptible to opportunistic infections. When an HIV-infected person presents with particular indicator diseases they are said to have progressed to AIDS (Acquired Immune Deficiency Syndrome).
Sources of data

The data presented in this chapter has several sources:

- New HIV/AIDS diagnoses and deaths in the UK.
- Survey of Prevalent HIV Infections Diagnosed (SOPHID) in the UK.
- CD4 surveillance scheme in the UK.
- Prevalence of previously undiagnosed HIV amongst those attending sentinel Genitourinary Medicine (GUM) clinics in England, Wales and Northern Ireland (only available up to 2009).
- Unlinked anonymous seroprevalence of newborn infant dried blood spots (only available for London).

Further information about these surveillance systems can be found on the HPA HIV webpages.

Global situation

Figure 1 Estimated global HIV prevalence, adults 15-49 years, 2009

Data source: UNAIDS Report on the Global AIDS Epidemic - 2010
Note: Where 2009 data were not available, 2008 figures were used.

According to UK National Guidelines for HIV Testing 2008, HIV testing should be routinely offered and recommended to all men and women known to be from a country of high HIV prevalence (>1%).
Completeness of HIV surveillance data relevant to migrant health

The proportions of completeness in key data fields of relevance to migrant health collected through HIV new diagnoses surveillance are shown in Figure 2. Ethnicity was reported for 99% of people living with HIV (collected by SOPHID) and this proportion remained stable over time. However, SOPHID does not collect information on country of birth.

Figure 2 Completeness of HIV new diagnoses surveillance fields relevant to migrant health: UK, 2001-2010

Note: Data for 2010 are expected to improve with late reporting. Completeness of country of birth varies by sexual orientation, with MSM having lower completion rates (74%) compared to heterosexuals (83%).

UK epidemiology

New HIV diagnoses, AIDS and deaths

In 2010, there were 6,658 individuals (4,510 men and 2,147 women, 1 sex unknown) newly diagnosed with HIV in the UK. This is a 0.5% increase from the total newly diagnosed in 2009 (6,625), and represents an 18% decline from a peak of 7,844 diagnoses in 2005.

Country of birth was reported for 77% (53,983/69,657) of newly diagnosed individuals between 2001 and 2010, of whom 65% (35,345) were born abroad. The trend of new diagnoses among non-UK born individuals reflects that among all new diagnoses – rising from 2,466 diagnoses in 2001 to a peak of 4,058 diagnoses in 2005 and declining to 2,999 in 2010 (Figure 3). Both the number of AIDS diagnoses and deaths among non-UK born HIV-diagnosed individuals has remained stable over the past decade (Figure 3). Deaths among non-UK born HIV-diagnosed individuals accounted for just under half (48%, 2,108/4,417) of all deaths (all causes) among HIV-diagnosed individuals reported in the UK between 2001 and 2010.
Figure 3 New HIV and AIDS diagnoses and deaths among non-UK born individuals: UK, 2001-2010

Amongst non-UK born individuals with a probable route of infection reported between 2001 and 2010, the majority (80%; 27,917/34,821) probably acquired their infection heterosexually (9,659 men and 18,258 women), followed by men who have sex with men (MSM) (15%; 5,265) (Figure 4). Transmission through injecting drug use, blood and blood products, and mother-to-child transmission represented 1.8%, 0.5% and 2.1% of new diagnoses amongst non-UK born individuals, respectively. In contrast an estimated 67% (12,254/18,198) of UK born people probably acquired their infection through sex between men, followed by heterosexual contact (27%; 4,895).
Figure 4 New HIV diagnoses by exposure group among non-UK born and UK born individuals: UK, 2001-2010

Data source: New HIV diagnoses and deaths

HIV treatment and care
In 2010 there were 69,424 individuals living with a diagnosed HIV infection in the UK. Of these, 43% (29,647/69,424) acquired their infection through sex between men, 49% (34,312) through heterosexual contacts and 2% (1,565) through injecting drug use.

The number and proportion of black and other ethnic minority individuals living with diagnosed HIV infection increased from 39% (9,463/24,670 of those with ethnicity known) in 2001 to 48% (32,803/68,786 of those with ethnicity known) in 2010 (Figure 5).
Migrant Health: Infectious diseases in non-UK born populations in the UK. An update to the baseline report - 2011

**Figure 5 Distribution of people living with diagnosed HIV infection by ethnic group: UK, 2001 and 2010**

Where ethnicity was reported in 2010, 65% (22,312/34,126) of HIV-diagnosed heterosexuals were black African, 22% (7,348/34,126) were white and 4% (1,361) were black-Caribbean. In contrast, 88% (25,852/29,426) of MSM living with diagnosed HIV in 2010 were white, 1.3% (393/29,426) were black African, and 2% (615/29,426) were black Caribbean.

**Heterosexual men and women**

*New HIV diagnoses in heterosexual men and women born abroad*

Of the 39,773 heterosexuals newly diagnosed in the UK between 2001 and 2010, 82% (32,812) had a country of birth reported. Where information is available, 85% (27,917/32,812) were born abroad. This proportion has decreased slightly from 88% between 2001 and 2005 to 82% between 2006 and 2010. Over the past decade (2001-2010), two thirds of reports of non-UK born heterosexuals newly diagnosed were among women. Over this period, the median age at HIV diagnosis for non-UK born heterosexual women was 32 years (interquartile range (IQR): 27-38 years), rising from 31 years in 2001 to 35 years in 2010. In contrast, the median age at diagnosis for non-UK born heterosexual men was 36 years (IQR: 31-42 years) rising from 34 years in 2001 to 39 years in 2010.

Among non-UK born heterosexuals who were newly diagnosed with HIV between 2001 and 2010 in the UK, 87% (24,399/27,917) reported Africa as their region of birth. This proportion has decreased over time from 91% in 2001 to 81% in 2010. Between 2001 and 2010, 48% of African born heterosexuals reported South Eastern Africa as their region of birth followed by Eastern African (17%) and Western Africa (16%) (Figure 6). The majority (90%) of African born heterosexuals reported their ethnicity as black and Africa as their probable region of infection. Approximately two thirds of all
heterosexuals born abroad were diagnosed with HIV within three years of arrival into the UK (information available on 65% of cases).

Figure 6 New HIV diagnoses among heterosexual men and women by African region of birth, and abroad excluding Africa: UK, 2001-2010

Besides Africa, regions of birth reported by non-UK born heterosexuals between 2001 and 2010 included: Latin America and the Caribbean 4.2% (1,160/27,917), Europe (excluding the UK) 4.0% (1,114) and Asia 3.7% (1,024). The proportion of heterosexuals born in European countries (excluding UK) has increased in the past decade, from 2.7% (406) between 2001 and 2005 to 5.5% (708) between 2006 and 2010. Similarly, the proportion of heterosexuals born in Asia also increased from 2.7% (401) to 4.8% (623). The majority of new HIV diagnoses in heterosexuals born in Latin America and the Caribbean were of black Caribbean ethnicity (79%, 919), with those born in Europe being of white ethnicity (77%, 859) and those born in Asia of mixed/other (57%, 578) or Indian/Pakistani/Bangladeshi ethnicity (34%, 346).

HIV treatment and care of heterosexual men and women
Among the 34,312 heterosexuals living with a diagnosed HIV infection in 2010, 37% (12,745) were men and 63% (21,567) were women. Equivalent figures were 32% and 68% among black-African heterosexuals, 53% and 47% among white heterosexuals and 40% and 60% among black Caribbean heterosexuals. The median age of white heterosexuals living with a diagnosed HIV infection in 2010 was 44 years, compared to 40 years among black Africans and 42 years among black Caribbeans.

In 2010, 80% of white heterosexuals living with a diagnosed HIV infection were receiving antiretroviral therapy (ART), compared to 85% of black African heterosexuals and 78% of black Caribbean heterosexuals. National treatment guidelines recommend that patients start ART when their CD4 count falls below 350 cells/mm³. Among white heterosexuals who had a CD4 count <350 cells/mm³ in 2010,
87% were receiving ART, similar to that among black African and among black Caribbean heterosexuals (89% and 85%, respectively).

**Men who have Sex with Men (MSM)**

New HIV diagnoses in MSM born abroad

Of the 24,226 MSM diagnosed in the UK between 2001 and 2010, 72% (17,519) had a country of birth reported, of whom 22-30% were born abroad. The median age at diagnosis between 2001 and 2010 for non-UK born MSM was 33 years (IQR: 28-39 years) compared with 36 years (IQR: 29-43 years) among UK born MSM.

Among non-UK born MSM newly diagnosed with HIV between 2001 and 2010, Europe (excluding UK) was the most frequently reported region of birth (42%), followed by the Latin America and the Caribbean (19%), Africa (13%), Asia (11%) and other world regions (15%) (including North America and Australasia).

HIV treatment and care of MSM

In 2010, 29,647 MSM were living with a diagnosed HIV infection in the UK. The median age of white MSM in 2010 was 43 years, compared to 40 years among black African MSM and 39 years among black Caribbean MSM.

In 2010, where information was available, 81% of white MSM, 76% of black African MSM and 72% of black Caribbean MSM were receiving ART. Among white MSM who had a CD4 count <350 cells/mm$^3$ in 2010, 85% were receiving ART. This figure was also 85% for both black African and black Caribbean MSM.

**Injecting drug users (IDU)**

New HIV diagnoses in IDUs born abroad

Of the 1,629 IDUs newly diagnosed in the UK between 2001 and 2010, 74% (1,208) had a country of birth reported, of which 52% (626) were born abroad. The median age at diagnosis over the period for non-UK born IDU was 33 years (IQR: 28-39 years).

Among IDUs born abroad, 77% (484/626) were born in Europe (more than half were born in Southern Europe) and 75% (467/621) were of white ethnicity.

HIV treatment and care of IDUs

In 2010, 1,565 IDUs were living with a diagnosed HIV infection in the UK. The majority (88%, 1,362) were of white ethnicity, 2% (36) of black-African ethnicity and 1% (18) of black-Caribbean ethnicity. Among all IDUs living with a diagnosed HIV infection, 83% were receiving ART.

**Late HIV diagnosis**

Late diagnosis is defined as having a CD4 count <350 cells/mm$^3$ within 91 days of HIV diagnosis. Individuals diagnosed late in the UK have a ten fold increased risk of death within one year of HIV diagnosis compared to those diagnosed promptly (4.0% vs. 0.4%).

Between 2001 and 2010, 79% (54,246) of all newly diagnosed adults aged 15 and over) had a CD4 cell count reported. In 2010, heterosexuals born outside of the UK
were more likely to be diagnosed late compared to those born in the UK (63% vs. 50%) (Figure 7). By region of birth, the highest proportion of heterosexuals diagnosed late in 2010 were those born in Asia (67%), compared with 64% among those born in Africa and 60% among those born in Latin America and the Caribbean. In 2010, MSM born in Asia were more likely to be diagnosed late (51%) compared to MSM born in the UK (41%) and Africa (37%) (Figure 7).

Figure 7 Late diagnosis (<350 cells/mm³) of HIV infection by country/region of birth and probable route of infection: UK, 2010

In the past decade, the proportion of late HIV diagnosis among newly-diagnosed adults (aged 15 and over) who were born outside the UK has fallen from 66% in 2001 to 54% in 2010. Between 2006 and 2010, adults who were born outside the UK and were diagnosed late were nine times more likely to die within a year of their HIV diagnosis than those born outside the UK with higher CD4 counts (3.7% compared to 0.4%) (Figure 8).
Figure 8 Prompt\(^1\) and late\(^2\) HIV diagnosis among non-UK born with associated short-term mortality\(^3\): UK, 2001-2010

\(^{1}\text{Prompt diagnosis: CD4 count } \geq 350\text{ cells/mm}^3 \text{ within 91 days of diagnosis}\\
^{2}\text{Late diagnosis: CD4 count } < 350\text{ cells/mm}^3 \text{ within 91 days of diagnosis}\\
^{3}\text{Percentage of patients known to have died within a year of diagnosis}

Data source: CD4 Surveillance Scheme
Previously undiagnosed infection

HIV prevalence among GUM clinic attendees
The highest levels of previously undiagnosed infection observed for heterosexuals were in those born in sub-Saharan Africa. The prevalence amongst Sub-Saharan African heterosexuals decreased from 4.3% between 2000 and 2004 to 2.3% between 2005 and 2009 (Figure 9a). For MSM, the highest levels of previously undiagnosed infection were observed in Caribbeans (Figure 9b).

Figure 9a Prevalence of previously undiagnosed HIV by country/world region of birth among heterosexuals attending sentinel GUM clinics in England, Wales and Northern Ireland, 2000-2009

Figure 9b Prevalence of previously undiagnosed HIV by country/world region of birth among MSM attending sentinel GUM clinics in England, Wales and Northern Ireland, 2000-2009

Error bars show 95% confidence intervals
Data source: Previously undiagnosed HIV in Genitourinary Medicine (GUM) clinics
Footnote: Previously undiagnosed HIV infection includes those diagnosed at the clinic visit as well as those who remained unaware of their infection, but excludes those that were diagnosed earlier.
HIV prevalence among women giving birth in London

The highest prevalence of HIV throughout the period 2001 to 2010 amongst women giving birth in London was amongst women born in sub-Saharan Africa (2.11% (472/22,343) in 2010 compared to 0.05% (66/134,096) for UK born women) (Figure 10). In particular, higher prevalences were observed in women from East and Central Africa (2.84%, 249/8,783 and 3.04%, 46/1,514 respectively in 2010) (Figure 11). A relatively high prevalence of HIV continues to be observed among women born in Central America and the Caribbean (0.49%, (6/1,225) in 2010).

Figure 10 HIV prevalence\(^1\) among women giving birth by country/world region of birth, London\(^2\), 2001-2010

1. Includes previously diagnosed, those diagnosed through antenatal screening and those remaining undiagnosed.
2. Data are from women giving birth in London and the surrounding areas only.

Data source: Unlinked anonymous seroprevalence of newborn infant dried blood spots
Figure 11 HIV prevalence\(^1\) among women giving birth in London\(^2\) by sub-Saharan African region of birth, 2001-2010

1. Includes previously diagnosed, those diagnosed through antenatal screening and those remaining undiagnosed.
2. Data are from women giving birth in London and the surrounding areas only.

Data source: Unlinked anonymous seroprevalence of newborn infant dried blood spots

**Discussion**

The decline in new HIV diagnoses nationally is largely due to the reduction in new diagnoses amongst individuals infected heterosexually abroad, specifically heterosexuals infected in sub-Saharan Africa. This is related to a decrease in migration to the UK from this part of the world. The decrease in the prevalence of undiagnosed HIV in GUM clinics may reflect higher HIV testing uptake over the years. The increase in the number of people living with diagnosed HIV partly reflects improvements in antiretroviral therapy over the last ten years.

Late HIV diagnosis amongst the non-UK born is a serious issue due to the higher short-term mortality rate amongst these cases compared to those diagnosed promptly. Overall, 90% of people who died within a year of HIV diagnosis between 2000 and 2009 were diagnosed late\(^46\). Late diagnosis also means that a person has remained unaware of their HIV status for many years, increasing the risk of onward transmission. Prompt HIV diagnosis prevents further HIV transmission by ensuring that a patients' viral load is low (through regular monitoring and/or administering antiretroviral therapy where clinically appropriate) and providing earlier opportunities for partner notification and behaviour change counselling.
The decline in the number of non-UK born individuals diagnosed late since 2005 is encouraging, but there is room for improvement. Missed opportunities for diagnosis in primary care in the UK have been identified. For example, a study of newly diagnosed HIV positive Africans attending 15 HIV treatment centres across London between April 2004 and February 2006 found that 50% of participants presented late to HIV services. In the year prior to HIV diagnosis, 76.4% (181/237) had seen their GP, 38.3% (98/256) had attended outpatient services, and 15.2% (39/257) inpatient services, representing missed opportunities for earlier HIV diagnosis. In addition, barriers such as low perception of individual risk, stigma, perception of HIV as an ‘immediate death sentence’, and institutional barriers to healthcare can result in late presentation and poor utilisation of HIV services.

As well as the risk of exposure to HIV infection prior to arrival in the UK, it is important to be aware of the ongoing risk of infection in the UK, and the importance of HIV prevention, both to prevent transmission in the UK, and during travel abroad. Thirty-seven percent of the newly diagnosed HIV-positive Africans described in the study by Burns et al (2008) had had a previous negative HIV test, 32.5% of these within the UK. The ongoing risk of transmission in the UK was also highlighted in a study that found that between a quarter to a third of HIV-positive African residents in the UK, and nearly half of HIV-positive African men who have sex with men, may have acquired their HIV infection in the UK. The finding for MSM is similar to the results presented here (half of the MSM cases born abroad probably acquired their infection within the UK, 67% of whom were of white ethnicity). Although not specifically described in the data presented in this chapter, widening of the EU in 2004 and 2007 and the resulting increase in migration from the new accession countries has resulted in increased attendance at GUM clinics by migrants from these countries. A study of Central and Eastern European MSM found that they were at greater risk of sexually transmitted infections following migration to the UK, so infections may increasingly be seen in this population; it is important that health promotion and information about available services is appropriately targeted.

New guidance
In 2011, the National Institute for Health and Clinical Excellence (NICE) published guidance for increasing the uptake of HIV testing among MSM and black African communities. The guidance takes further the recommendations made by BHIVA in advocating the development of local strategies for testing in the two higher-risk groups, which are MSM and black Africans living in the UK. It also emphasizes the importance of providing culturally-aware, confidential testing services, developed in collaboration with the relevant community and provided by well-trained staff.
Chapter 4. Sexually Transmitted Infections

Summary (England)

- The proportion of sexually transmitted infections (STIs) in non-UK born populations in England varies by infection, ranging from 11% of genital warts to 30% of syphilis infections in 2010 (amongst those with country of birth known).
- Overall in 2010, non-UK born cases comprised 12% of heterosexual male cases of sexually transmitted infection, 12% of female cases, and 27% of cases amongst men who have sex with men.
- The most commonly reported world region of birth for non-UK born cases of STIs in 2010 was Europe, followed by sub-Saharan Africa.

Sources of data

STI data were provided by the Genitourinary Medicine Clinic Activity Dataset (GUMCAD)\textsuperscript{56}. Data are available from 2009 onwards for England only.

Completeness of STI surveillance data relevant to migrant health

In 2010, ethnicity and country of birth were available for 93% and 91% of reports received through GUMCAD respectively.

Sexually Transmitted Infections background information

Caused by: *Treponema pallidum* (Syphilis – bacteria), *Neisseria gonorrhoeae* (Gonorrhoea – bacteria), Herpes simplex virus types 1 and 2 (genital herpes), human papillomavirus (genital warts), *Chlamydia trachomatis* (chlamydial infections – bacteria)

Global numbers: 448 million new infections of curable sexually transmitted infections (syphilis, gonorrhoea, chlamydia and trichomoniasis [a parasitic infection not included in this section]) are estimated to occur annually in adults aged 15-49 years\textsuperscript{55}.

Transmission: sexual

Disease: The main acute syndromes associated with STIs are: urethral discharge, genital ulcers, inguinal swellings (bubo), scrotal swelling, vaginal discharge, lower abdominal pain, neonatal eye infections (conjunctivitis of the newborn). Complications include chronic infection and serious delayed consequences such as infertility, ectopic pregnancy, cervical cancer, congenital infections and the untimely death of infants and adults.
Epidemiology in England

Overall, 19% of STI episodes reported (for both 2009 and 2010), where country of birth was known, were in the non-UK born. This proportion varied by STI, as shown in Table 2.

Table 2. STIs diagnosed in a GUM clinic reported by type of infection and proportion in the non-UK born, England, 2009-2010

<table>
<thead>
<tr>
<th>Sexually Transmitted Infection</th>
<th>Total number of episodes 2009</th>
<th>Proportion of episodes reported in non-UK born* 2009</th>
<th>Total number of episodes 2010</th>
<th>Proportion of episodes reported in non-UK born* 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Syphilis</td>
<td>2,846</td>
<td>28%</td>
<td>2,624</td>
<td>30%</td>
</tr>
<tr>
<td>Gonorrhoea</td>
<td>15,978</td>
<td>20%</td>
<td>16,531</td>
<td>21%</td>
</tr>
<tr>
<td>Genital Herpes**</td>
<td>27,564</td>
<td>14%</td>
<td>29,703</td>
<td>14%</td>
</tr>
<tr>
<td>Chlamydia</td>
<td>99,982</td>
<td>13%</td>
<td>93,934</td>
<td>14%</td>
</tr>
<tr>
<td>Genital warts**</td>
<td>77,900</td>
<td>11%</td>
<td>75,615</td>
<td>11%</td>
</tr>
</tbody>
</table>

*for cases with known country of birth
**first episode
Data source: GUMCAD

Overall in 2010, 38% of non-UK born cases of sexually transmitted infections were born in Europe and 21% in sub-Saharan Africa; the distribution is similar for all five sexually transmitted infections shown in Figure 1.

Figure 1 Non-UK born STI cases by type of infection and world region of birth, for those with region of birth known, England, 2010

Data source: GUMCAD
In 2010, 46% of non-UK born cases were female compared to 52% of UK born cases. Overall in 2010, non-UK born cases comprised 12% of heterosexual male cases of sexually transmitted infection, 12% of female cases, and 27% of cases amongst men who have sex with men (Figure 2).

Figure 2 STI episodes by transmission route for UK and non-UK born, England, 2010

Data source: GUMCAD

Discussion

More than 30 different pathogens can be transmitted sexually. This chapter focuses only on five relatively common infections. The distribution of the non-UK born by region of birth presented here reflects both the prevalence of sexually transmitted infections in all areas of the world, and the ongoing risk of infection after migration to the UK. Data for England have shown that the highest rates for sexually transmitted infections are in urban areas, reflecting concentrations of the population who are at greatest risk (young heterosexual adults and men who have sex with men)\(^56\). A number of recent studies have highlighted the sexual health risks to new migrants from A8 and A2 European Union accession countries\(^51,52,59\). Sexual health promotion is relevant to all sexually active people and should also be incorporated into pre-travel health consultations.

Availability of translated materials

Patient information leaflets about sexually transmitted infections in English and some other languages can be accessed via the Migrant Health Guide.

Further information about sexually transmitted infections

HPA STI pages\(^57\)

Migrant Health Guide (Appendix A)
Chapter 5. Hepatitis B

Summary

- A total of 521 acute hepatitis B (HBV) infections were reported in England in 2010.
- In 2010, approximately two-thirds of UK blood donors testing positive for markers of HBV infection were of non-white ethnicity; those of non-white ethnicity comprise 3% of all UK blood donors.
- Sixty per cent of UK blood donors testing positive for markers of HBV infection in 2010 were born in Africa or Asia.
- The proportion of all individuals testing positive for HBsAg as part of sentinel surveillance from 2007 to 2010 was 1.6%. This proportion varied by ethnic group as follows: other and/or mixed ethnic origin (9.3%), black or black British (7.0%), Asian or Asian British (2.8%), white or white British (0.9%).
- Between 2007 and 2010, 65% of individuals testing positive for HBV infection through the sentinel surveillance scheme were diagnosed in primary care (includes general practitioners, genitourinary medicine [GUM] clinics and other primary care services).

Sources of data

Surveillance data are presented from three sources:
- Available routine laboratory reports of acute HBV infections in England coupled with epidemiological data collected from Health Protection Units
- Blood-borne Infections in UK Blood Donors
- Sentinel Surveillance of Hepatitis in England

The sentinel surveillance analysis includes data from 21 of the 27 sentinel centres that contributed complete data to the scheme between 2007 and 2010. This represents the longest continual data collection period for the largest number of centres participating in the study.
Migrant Health: Infectious diseases in non-UK born populations in the UK. An update to the baseline report - 2011

Global situation

Figure 1 Estimated global distribution of chronic hepatitis B virus infection, 2006

For many countries, estimates of the prevalence of hepatitis B surface antigen (HBsAg), a marker of chronic HBV infection, are based on limited data and might not reflect current prevalence in countries that have implemented childhood hepatitis B immunisation. In addition, HBsAg prevalence might vary within countries by subpopulation and locality.

Data source: Weinbaum et al 200864.

Completeness of hepatitis B surveillance data relevant to migrant health

Routine laboratory reporting
Country of birth and ethnicity are not routinely collected through national laboratory reporting of HBV in England.

UK blood donors
In 2010, ethnic group was reported for 95% (852,993/898,469) of all blood donors. Country of birth is collected for UK blood donors but the proportion with complete information is not known.

Sentinel surveillance
Names were available for 73.5% (141,640/192,664) of all individuals tested as part of the sentinel surveillance study in 2010 and were used, in addition to self reported ethnicity, to assign individuals to broad ethnic groups using automated ethnicity classification algorithms including Onomap65 and Nam Pehchan66.
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Epidemiology in England and amongst UK blood donors

A total of 521 acute hepatitis B cases were reported in England in 2010. The incidence of reported acute hepatitis B in England in 2010 was 0.99 per 100,000. The incidence of reported acute hepatitis B in England has decreased slightly over the last three years, from 1.21 per 100,000 in 2008\(^67\). The prevalence of chronic hepatitis B infection in the UK is estimated to be 0.4%\(^68\).

UK blood donors

There were 898,469 UK blood donors in 2010; 97% of those with information available were of white ethnicity.

In 2010, 91 blood donors tested positive for markers of HBV infection, equivalent to 3.5 per 100,000 donations. The majority (93%, 85/91) of these infections were chronic and among new blood donors, equivalent to a rate of 37.9 infections per 100,000 new donations. The remaining 7% (6/91) were acute infections, most of which (5/6) were in repeat donors.

Ethnic group was reported for 98% of HBV infected donors in 2010. Of those with ethnic group reported, approximately one third of individuals were white, a quarter Asian, 20% black African, and 13% Chinese (Figure 2).

Figure 2 Ethnicity of blood donors confirmed HBV positive in 2010, for those with information known (N=89)

![Pie chart showing the distribution of ethnic groups: White 36%, Asian 26%, Black African 20%, Chinese 13%, Other 5%]

Data source: Blood-borne Infections in UK Blood Donors

Country of birth was reported for 84/91 infected donors; 60% were born in Africa or Asia (Figure 3).
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Figure 3 Country or world region of birth of HBV-infected UK blood donors in 2010, for those with information known (N=84)

Data source: Blood-borne Infections in UK Blood Donors

Risk exposure information was available for 73/91 infected donors, three quarters of whom reported infection associated with an endemic country including mother to infant transmission, family household contact or being born in, or to parents from, an endemic country.

Sentinel surveillance of HBV testing

Between 2007 and 2010, 687,321 individuals were tested for HBsAg (hepatitis B surface antigen, a marker of HBV infection) in the network of 21 laboratories that contributed data consistently for the four year period, of whom 1.6% (n=11,155) tested positive. The proportion of HBsAg positive infections that were classified as acute decreased from 11.4% in 2007 to 7.3% in 2010.

A total of 525,042 individuals tested through the sentinel surveillance scheme for HBsAg were classified as belonging to a broad ethnic group. The majority of these were of white or white British ethnicity (79.0%), a further 14.3% were of Asian or Asian British ethnicity, 4.0% of other or mixed ethnicity, and 2.7% of black or black British ethnicity. The ratio of males to females tested was stable over time, with the proportion of males tested ranging from 47.4% to 49.6%.

The total number of individuals tested each year through the sentinel surveillance scheme increased by 11.4% between 2007 and 2009, then decreased slightly in 2010. An overall increase in testing was seen for all ethnic groups between 2007 and 2010 (Figure 4).

The overall annual number of individuals testing positive for HBsAg declined each year between 2007 and 2009, and levelled off in 2010. Among individuals of Asian or Asian British and those of white or white British ethnic origin, the proportion positive decreased between 2007 and 2010 (Figure 4). The proportion positive varied by
ethnic group, with the highest proportion positive between 2007 and 2010 among those of other and/or mixed ethnicity (9.3%), followed by those of black or black British ethnicity (7.0%), then Asian or Asian British (2.8%). Individuals of other and/or mixed ethnicity are likely to include some individuals of North African, Middle Eastern, and Eastern European origin. The lowest proportion positive were among those of white or white British ethnicity (0.9%).

Figure 4 Number tested for HBV and proportion positive by ethnic group, 2007-2010

Data source: Sentinel Surveillance of Hepatitis testing

Individuals of white or white British ethnicity tested for HBsAg between 2007 and 2010 were older with an average age of 42.4 years compared to 34.5, 34.6 and 33.5 years among those of Asian or Asian British, black or black British, and other and/or mixed ethnicities, respectively. The average age of those individuals testing positive was lower than the average age of those tested for each ethnic group.

Between 2007 and 2010, 65% of individuals testing positive for HBV infection through the sentinel surveillance scheme were tested in primary care; 58% whom were tested by GPs, and 32% in a genitourinary medicine (GUM) clinic (Figure 5). The proportion testing positive that were diagnosed in primary care was similar for all groups with ethnicity assigned (range 53-64%). Of those testing positive in primary care, more than 78% of infections in Asian or Asian British, black or black British origin, and other and/or mixed ethnic origin were diagnosed by general practitioners compared to 70% of infections in those of white or white British origin (13% of white or white British individuals testing positive in primary care were tested in genitourinary medicine (GUM) settings).
Discussion

In the absence of a comprehensive national enhanced surveillance scheme for laboratory confirmed HBV infections, the information obtained from UK blood donors and as part of the sentinel surveillance study gives us a valuable indication of the risk profiles of those infected with HBV in the UK. It is worth bearing in mind, however, that the number of positive blood donors is small, as these are a self-selecting low risk population. There are also limitations with assigning countries of origin using surname mapping, though this method has been demonstrated to be robust at the population level\textsuperscript{70}. The findings described in the baseline report, that annually the majority of chronic hepatitis B infections in the UK are among migrants from a country with an intermediate or high prevalence of chronic hepatitis B, who are likely to have acquired the infection in childhood, are still relevant. The findings presented here concur with previous studies undertaken in this field showing a strong association between evidence of exposure to hepatitis B and being born in either Africa or Asia\textsuperscript{68}.

The estimated prevalence of chronic HBV infection in the UK is still estimated to be 0.4% based on the 1999 publication by Gay et al.\textsuperscript{68} but this varies for different ethnic groups and amongst those born in endemic countries. More recently a study was undertaken in East London, West London, Walsall, Sandwell and Bradford to
determine the prevalence of chronic viral hepatitis in people of South Asian ethnicity living in England\textsuperscript{71}. The prevalence amongst those born in Bangladesh and Pakistan was in line with World Health Organization estimates for HBV that describe the Indian sub-continent as 'intermediate endemicity', with an estimated prevalence 2-8%. However, the estimate for India was lower; suggesting that prevalence estimates in the country of birth cannot simply be extrapolated to give an accurate picture of the prevalence of this disease in migrants in the UK.

Increases in testing for HBV, shown in the data presented in this chapter, are likely to reflect increased awareness of hepatitis B infection. The data presented in this chapter highlight the importance of primary care and in particular general practice in testing and diagnosing HBV in minority ethnic populations.

In 2009, the Advisory Group on Hepatitis (AGH) published a report entitled ‘Case-finding for hepatitis B and C virus infection in minority ethnic populations in the United Kingdom’\textsuperscript{72}. The report highlights that although HBV and HCV currently cause a relatively small number of deaths and hospital admissions, these numbers are expected to rise substantially over the next few years, particularly in minority ethnic communities (there is little evidence of significant onward transmission of HBV and HCV to the UK general population). Case-finding in minority ethnic populations is therefore recommended.

\textbf{New guidance}

The Royal College of General Practitioners’ (RCGP) guidance for the prevention, testing, treatment and management of hepatitis C in primary care (which contains some guidance relating to hepatitis B testing), was published in 2007\textsuperscript{73}. New recommendations for the treatment of chronic hepatitis B are available on the NICE website\textsuperscript{74}. 

\begin{table}[h!]
\centering
\begin{tabular}{|c|c|}
\hline
\textbf{Availability of translated materials} & \\
\hline
Patient information about hepatitis B in a range of languages published by the British Liver Trust, Hepatitis B foundation UK, and the Department of Health can be accessed via the Migrant Health Guide. & \\
\hline
\textbf{Further information about hepatitis B} & \\
\hline
Migrant Health Guide (Appendix A) & \\
\hline
HPA hepatitis B page\textsuperscript{69} & \\
\hline
\end{tabular}
\caption{Additional resources for hepatitis B information.}
\end{table}
Chapter 6. Hepatitis C

Summary

- An average of 7,652 hepatitis C (HCV) infections were reported by laboratories in England each year between 2005 and 2010.
- Half of UK blood donors testing positive for markers of HCV infection in 2010 were born in the UK, 29% were born in Europe and 17% in Asia.
- The main risk group for HCV infection in the UK is injecting drug use, but globally other transmission routes are more common. Risk factors for UK blood donors included (amongst others) injecting drug use, possible blood contact and nosocomial.
- The proportion of all individuals testing positive for markers of HCV infection as part of sentinel surveillance in 2010 varied by ethnic group, with the highest proportion positive among those of white or white British ethnicity (2.6%), followed by Asian or Asian British (2.4%), other and/or mixed ethnicity (1.9%) and black or black British (1.4%).
- Between 2007 and 2010, 68% of individuals testing positive for HCV infection through the sentinel surveillance scheme were tested in primary care (includes general practitioners, genitourinary medicine [GUM] clinics and other primary care services).

Sources of data

Surveillance data are presented from three sources:
- National laboratory reports of hepatitis C
- Blood-borne Infections in UK Blood Donors

The sentinel surveillance analysis includes data from 21 of the 27 sentinel centres that contributed complete data to the scheme between 2007 and 2010. This represents the longest continual data collection period for the largest number of centres participating in the study.
Global situation

Figure 1 Estimated global prevalence of hepatitis C infection, 2004

Data source: This map has been reproduced using data from Lavanchy et al 2009.

Completeness of hepatitis C surveillance data relevant to migrant health

Routine laboratory reporting
Country of birth and ethnicity are not routinely collected through national laboratory reporting of HCV in the UK.

UK blood donors
In 2010, ethnic group was reported for 95% (852,993/898,469) of all blood donors. Country of birth is collected for UK blood donors but the proportion with complete information is not known.

Sentinel surveillance
Names were available for 78.3% (126,954/162,119) of all individuals tested as part of the sentinel surveillance study in 2010 and were used, in addition to self reported ethnicity, to assign individuals to broad ethnic groups using automated ethnicity classification algorithms including Onomap and Nam Pehchan.

Epidemiology in England and amongst UK blood donors
An average of 7,652 hepatitis C infections were reported by laboratories in England each year between 2005 and 2010. The predominant risk factor for acquisition of infection was injecting drug use.
UK blood donors

There were 898,469 UK blood donors in 2010, 97% of those with information available were of white ethnicity.

In 2010, 80 UK blood donors tested positive for markers of hepatitis C infection, with 89% (72/80) detected among new donors, equivalent to 33.3 infections per 100,000 donations from new donors and 0.4 infections per 100,000 donations from repeat donors. The rate of positive donations detected among new donors in the UK has declined overall since 1991, when testing for antibodies to HCV was first introduced, and has remained at a low level since 2004.

Ethnic group was reported for 98% of HCV infected donors in 2010. Of those with ethnic group reported, 82% were of white ethnicity, 16% were Asian, and 1% black African (Figure 2).

Figure 2 Ethnicity of blood donors confirmed HCV positive in 2010, for those with information known (N=78)

Data source: Blood-borne Infections in UK Blood Donors

Country of birth was reported for 66/80 infected donors; half were born in the UK (Figure 3).

Risk exposures were reported for 56/80 infected donors. Risks factors included injecting drug use (n=15), possible blood contact (n=18; including tattooing or piercing [n=7], nosocomial infection [associated with low income countries, n=10] and occupational exposure [n=1]). Nine donors reported heterosexual sex as their route of exposure.
Figure 3 Country or world region of birth of HCV-infected UK blood donors in 2010, for those with information known (N=66)

Sentinel surveillance of HCV testing

Between 2007 and 2010, 579,825 individuals aged over one year old were tested for markers of HCV infection in 21 of the 27 sentinel centres that contributed complete data during the study period, of whom 3.1% (n=17,899) tested positive.

A total of 447,298 individuals tested through the sentinel surveillance scheme for HCV were classified as belonging to a broad ethnic group. The majority were of white or white British origin (81.3%), a further 13.2% were of Asian or Asian British origin, 3.1% were of other and/or mixed origin, and 2.4% were of black or black British origin. The ratio of males to females tested was stable over time, with the proportion of males tested ranging from 51.5% to 53.1%.

The total number of individuals tested through the sentinel surveillance scheme increased year on year between 2007 and 2009, then declined in 2010. An overall increase in testing was seen for all ethnic groups (apart from those of unknown ethnic origin) between 2007 and 2010 (Figure 4).

The overall annual number of individuals testing positive for markers of HCV infection declined each year between 2007 to 2010; the proportion positive declined from 4.0% in 2007 to 2.5% in 2010. The number of individuals of Asian or Asian British origin and white and white British origin testing positive declined year on year (Figure 4). The number of individuals of black or black British origin and other and/or mixed ethnic origin testing positive varied slightly each year; few positive individuals were identified in these groups. The proportion positive varied by ethnic group, with the highest proportion positive in 2010 among those of white or white British ethnicity (2.6%), followed by Asian or Asian British (2.4%), other and/or mixed ethnicity (1.9%) and
black or black British (1.4%) (Figure 4). Individuals of other and/or mixed ethnicity are likely to include some individuals of North African, Middle Eastern, and Eastern European origin.

**Figure 4 Number tested for markers of HCV infection and proportion positive by ethnic group, 2007-2010**

Data source: Sentinel Surveillance of Hepatitis testing

Individuals of white or white British ethnicity tested for markers of HCV infection between 2007 and 2010 were older, with an average age of 44.0 years compared to 36.2, 36.3 and 35.5 years among those of Asian or Asian British, black or black British, and other and/or mixed ethnicities, respectively. The average age of those individuals testing positive was higher than the average age of those tested for all ethnicities apart from white or white British where the mean age of those positive was lower than the age of those tested.

Between 2007 and 2010, 68% of individuals testing positive for HCV infection through the sentinel surveillance scheme were tested in primary care; of whom 45% were diagnosed by general practitioners, 18% in prison services, 17% at genitourinary medicine (GUM) clinics) and 17% at drug dependency services (Figure 5). The proportion testing positive that were diagnosed in primary care was similar for all groups with ethnicity assigned (range 59-64%). Of those testing positive in primary care, more than 71% of those of Asian or Asian British, black or black British, and other and/or mixed ethnic origin were diagnosed by a general practitioner compared to 58% of those of white or white British ethnic origin (23% of those of white or white British ethnic origin testing positive in primary care were tested in drug and drug dependency settings). The majority of individuals with unknown ethnic group (91%) were tested in primary care, of whom 52% were tested in GUM clinics and 37% in prison services; names were rarely available for individuals tested in these settings.
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Figure 5 Health service settings for HCV testing and numbers of positive, 2007-2010

Note: Further detail about the health service settings detailed in Figure 5 is available in the HCV Annual Report 2007-2010. Data source: Sentinel Surveillance of Hepatitis testing

Detailed data tables of all of the analyses presented in this sentinel surveillance chapter can be found in the annual report of hepatitis C testing in 2010.

Individuals of West African origin
To help quantify the risk of infection in other ethnic groups with an increased risk of infection in their country of origin, a pilot study was launched to investigate the prevalence of hepatitis C among Africans living in London. This study involves testing a number of individuals from the African community to help inform the need for further larger studies or targeted screening programmes. This is a collaborative study between the South East London Health Protection Unit and HPA Colindale. Preliminary findings should be available for the next report of Hepatitis C in the UK in 2012.

Discussion
In the UK the main risk groups for hepatitis C infection are injecting drug users. Migrants who have been exposed in their country of origin are also at risk. Globally, HCV is most prevalent in South East Asia, Africa and South America. In these regions of the world exposure to HCV most commonly occurs through nosocomial transmission (exposure to contaminated blood, unsterilised needles, etc.); these exposures have also been identified for some infected UK blood donors as described in this chapter.
In the absence of a comprehensive national enhanced surveillance scheme for HCV infections, the information obtained from UK blood donors and as part of the sentinel surveillance study gives us a valuable indication of the risk profiles of those infected with HCV in the UK. It is worth bearing in mind, however, that the number of positive blood donors is small, and there are limitations with assigning countries of origin using surname mapping, though this method has been demonstrated to be robust at the population level.\(^\text{70}\)

The increased testing amongst Asian and Asian British and white or white British ethnic groups observed in the sentinel surveillance data presented in this chapter may reflect increased awareness. The decline in the proportion positive may reflect the need for more targeted testing.

The prevalence of markers of HCV amongst people of south Asian ethnicity living in England (East London, West London, Walsall, Sandwell and Bradford) was estimated to be 1.6%.\(^\text{71}\) This varied by place of birth for those of south Asian ethnicity born in the UK (0.4%), India (0.2%), Bangladesh (0.6%) and Pakistan (2.7%).

Ethnic minority populations have been shown to be more likely than whites to experience an admission or to die from severe liver disease as a result of hepatitis C infection.\(^\text{79}\) This could be attributed to ethnic minority populations having a higher prevalence of hepatitis C and/or experiencing a poorer prognosis because of differential access to health services, longer duration of infection\(^\text{80}\) or the prevalence of co-morbidities.

As described in the hepatitis B chapter, in 2009 the Advisory Group on Hepatitis (AGH) published a report entitled ‘Case-finding for hepatitis B and C virus infection in minority ethnic populations in the United Kingdom’.\(^\text{72}\) Although HBV and HCV currently cause a relatively small number of deaths and hospital admissions, the report warns that these numbers are expected to rise substantially over the next few years, particularly in minority ethnic communities (there is little evidence of significant onward transmission of HBV and HCV to the UK general population). Case-finding in minority ethnic populations is therefore recommended.

**New guidance**

RCGP guidance for the prevention, testing, treatment and management of hepatitis C in primary care, first edition 2007.\(^\text{73}\) This guidance includes frequent travel abroad (e.g. those visiting families in low income countries) as a risk factor for infection.
Chapter 7. Malaria

Summary

- An average of 1,614 cases of malaria were reported each year in the UK between 2005 and 2010. However, malaria is significantly under-reported in England so the true figure may be closer to twice this number."".  
- The majority (77%) of malaria cases diagnosed in the UK between 2005 and 2010, with country of birth known, were born abroad.  
- In 2010 the most commonly reported countries of birth were Nigeria (26%), UK (22%), Ghana (12%) and India (11%).  
- Of all malaria cases reported in the UK in 2010 with available information, 61% were visiting friends and relatives in their country of origin.  
- Eighty-five per cent of those with available information in 2010 had not taken any malaria chemoprophylaxis.

Sources of data

The data presented here were provided by the Health Protection Agency’s Malaria Reference Laboratory (MRL). A case of malaria is defined as a notified case in which parasites are proven by laboratory investigation, either by light microscopy of blood or more recently by molecular methods. Further information is available on the HPA’s malaria webpage.""
Global situation

Figure 1 Countries or areas at risk of malaria transmission, 2010

This map is intended as a visual aid only and not as a definitive source of information about malaria endemicity.
Data source: © WHO 2011. All rights reserved.

Completeness of malaria surveillance data relevant to migrant health

The proportions of records with information available in key data fields of relevance to migrant health are shown in Figure 2.
Migrant Health: Infectious diseases in non-UK born populations in the UK. An update to the baseline report - 2011

Figure 2 Completeness of malaria surveillance fields relevant to migrant health, UK, 2001-2010

UK epidemiology

In the last six years since the baseline report (2005-2010), an average of 1,614 malaria cases has been reported each year, a decline on the 1,844 average per year reported 2001-2004\(^8\)\(^4\). An average of seven deaths from malaria was reported each year between 2005 and 2010. Cases caused by \(P. falciparum\) alone comprised 72-79% of the total cases during 2005-2010. Fifty-seven percent of \(P. falciparum\) cases 2005-2010 were reported from the London area. In the same period, 36% of \(P. vivax\) cases were reported from London and 8% from the West Midlands with the remainder spread around the country*.

Countries of birth of UK cases

Cases of malaria reported in people born in Africa fluctuated between 379 and 613 between 1987 and 2010. In contrast, cases in people born in South Asia declined dramatically from 1997 and remained under 100 between 1999 and 2009, rising to 146 in 2010. Cases in European-born people declined from 2000 to 2009, but increased in 2010 (Figure 3).

*Note: These UK areas are based on ‘county’ assigned in the MRL database rather than HPA regions.
Between 2005 and 2010, 77% of cases (where known) were born outside the UK, an increase on the 70% reported from 1987 to 2004. The majority (61%) of cases between 2005 and 2010 were born in Africa (Figure 4). This proportion has increased as the number born in Europe has decreased (Figure 3). In 2010 the most commonly reported countries of birth were Nigeria (26%), UK (22%), Ghana (12%) and India (11%); these were also the most commonly reported countries of birth in 2004.

Data source: Malaria Reference Laboratory

Figure 4 Cases of malaria diagnosed in the UK from 2005-2010 by world region of birth (N=4,761, with known region of birth), and reason for travel if known

Born in Indian subcontinent
N=528 with reason for travel known
41% VFR*
2% holiday travel
1% business travel
55% new entrant/visitor/student from overseas
<1% other

Born in Europe
N=1,100 with reason for travel known
34% VFR*
29% holiday travel
22% business travel
3% new entrant/visitor/student from overseas
12% other

Born in Africa
N=2,737 with reason for travel known
72% VFR*
1% holiday travel
1% business travel
25% new entrant/visitor/student from overseas
1% other

*VFR=visiting friends and relatives in country of origin
Data source: Malaria Reference Laboratory
Most cases of malaria occur in people visiting friends and relatives in their country of origin or the country of origin of their family. The reason for travel was known in 64% of all cases in 2010, of these 7% were classified as new entrants to the UK, and 61% were visiting family in their country of origin. This represents an increase from the 56% of cases visiting friends and relatives in their country of origin in 2004, and a decrease in the proportion of new entrant cases (11% in 2004). The proportion visiting friends and relatives in their country of origin is higher for those born in Africa (72% of cases born in Africa 2005-2010 were visiting friends and relatives, Figure 4).

**Age and ethnicity**

In 2010, of the 1,707 cases with available data, 67% were male (this proportion was 60% in 2004). For cases born in Africa, 64% were male compared to 77% of cases born in the Indian sub-continent. Between 2005 and 2010, 60% of the malaria cases were aged 15-44 years, and 10% were aged less than 15 years. Of the cases in children (under 15 years) with a known ethnicity, most (81%) were black African or of black African descent, nine cases (1%) were white British. Of the cases aged 15-44 years, 71% of cases were of black African ethnicity or black African descent compared to 9% who were white British (Figure 5); these proportions were similar in 2004.

**Figure 5 All cases of malaria by age group and ethnicity, UK, 2005-2010**

Data source: Malaria Reference Laboratory

The majority of UK-born cases of malaria between 2005 and 2010 with information available were of white British ethnicity (59%), with the remainder comprising those of black African ethnicity (30%), Indian sub-continent (7%) and other ethnicities (Figure 6).
Figure 6 UK-born cases of malaria by ethnicity, where known, UK, 2005-2010 (N=1,083)

Data source: Malaria Reference Laboratory

Cases of malaria diagnosed in the UK by species and region of acquisition: 2010
As for 2004, the countries of acquisition in 2010 reflect the countries of birth of malaria patients. The majority of P. falciparum cases were acquired in Africa, in particular West Africa, and the majority of P. vivax cases acquired their infection in Asia.

Malaria chemoprophylaxis
Among all patients with malaria in 2010, where the history of chemoprophylaxis was obtained, 850/997 (85%) had not taken any chemoprophylaxis. Of those taking chemoprophylaxis, this was not always the recommended regime for their region of travel and not all patients took their prophylaxis regularly. A similar situation was reported in 2004 (77% of cases had not taken prophylaxis).

Malaria drug resistance
The WHO recommends that all countries should use combination therapies, preferably containing artemisinin derivatives for the treatment of falciparum malaria. Further up-to-date details on treatment regimens can be found on the HPA website. Clinicians treating malaria are recommended to consult these guidelines or specialist centres because antimalarial drug resistance patterns are constantly changing, and new drugs for treatment are being considered for licensing.

Discussion
Trends in malaria cases in the UK are complex to interpret because they are influenced by several factors including changes in global malaria trends, change in migration patterns, changes in travel habits, and changes in the uptake of malaria chemoprophylaxis. In addition, malaria surveillance data in non-endemic areas...
underestimates the true number of imported cases. A capture-recapture study (using data from the MRL and Hospital Episode Statistics) for English data between July 2003 and December 2004 found that MRL surveillance system captured 56% of all cases and 66% of all *P. falciparum* cases\(^91\). A similar study from the Netherlands showed that their laboratory notification system captured 56.4% of malaria cases\(^89\). A capture-recapture of Scottish imported malaria cases from four study sites reported between 2006 and 2008, estimated that 93% of the total cases reported to Health Protection Scotland and MRL were reported to MRL\(^90\).

The decline in cases born in South Asia observed from 1997 may be partly due to improved vector control in Asia\(^91\). In addition, travellers visiting friends and relatives are increasingly staying in urban settings where local control measures have been most effective in reducing local transmission of malaria\(^92\).

The key risk group for malaria cases reported in the UK continues to be travellers visiting friends and relatives in their country of origin, mainly in West Africa and India. Surveys conducted amongst South Asians in 1994 and 2004 found that basic knowledge of malaria transmission and diagnosis amongst those surveyed was poor across both years\(^93\). Barely half of survey participants recognised dusk/night as particularly dangerous for malaria transmission, or stated the need to be protected from insect bites by repellents or bed nets. A focus group study amongst 44 volunteers of African origin living in South London\(^94\) found several issues with respect to uptake of prophylaxis in this group. These issues included perceptions of malaria as low threat, non-serious and easily treatable, a belief that they were vaccinated or somehow not at personal risk, concerns about side effects of the drugs, dislike of the taste and disbelief by some participants of the drug’s effectiveness. Further issues included the cost of drugs, waiting times for appointments, uncertainty regarding appropriate medication, difficulties remembering complex drug regimes, a lack of understanding of the rationale for continuing the drugs after return to the UK and the practice of leaving drugs for relatives in Africa. The group suggested that the best way of informing the African community about the risks of malaria was through verbal communication rather than leaflets.

**New guidance**

Guidelines for Malaria Prevention in Travellers from the United Kingdom\(^95\).
Chapter 8. Enteric fevers

Summary

- On average, 512 cases of enteric fever were reported each year in the UK between 2007 and 2010.
- Approximately half of all cases are caused by *Salmonella* Typhi and half by *S. Paratyphi* A, B and C.

England, Wales and Northern Ireland:
- 63% of cases reported during 2007-2010, where country of birth was known, were born abroad; 79% of whom were born in the Indian sub-continent.
- The majority (74%) of UK born enteric fever cases with information available were of Indian sub-continent ethnicity.
- 87% of cases who had travelled abroad from the UK, with a known reason for travel, were visiting friends and relatives.
- The three most common countries of travel were India, Pakistan and Bangladesh, accounting for approximately 83% of cases that travelled abroad from the UK between 2007 and 2010.

Sources of data

**England, Wales and Northern Ireland**
Laboratory reports from the Salmonella Reference Unit (SRU) at Colindale were extracted from Labbase 2001-2006 using earliest specimen date. From 2007 onwards data were extracted directly from the SRU database using date received in the laboratory. Enhanced surveillance data for enteric fever were available for 2007 onwards. For data from 2007 onwards, travel history was obtained from enhanced surveillance forms and, where a surveillance form was not available, travel history data were supplemented by SRU data, if available.

**Scotland**
Data for Scotland were provided by Health Protection Scotland.
Global situation

Figure 1 Estimated global incidence of typhoid fever, 2004

[Map showing global incidence of typhoid fever]


Completeness of enteric fever surveillance data relevant to migrant health

The proportions of records with information available in key data fields of relevance to migrant health are shown in Figure 2.

Figure 2 Completeness of enteric fever surveillance fields relevant to migrant health, England, Wales and Northern Ireland, 2007-2010

*The travel abroad field (foreign visitor/new entrant/travelled abroad from the UK/no travel abroad/not stated) is used in these data as a proxy for UK resident (i.e. those who were known to have travelled from the UK and returned, or not travelled at all are classed as UK residents). A new field has been added to the enhanced surveillance form about UK residency – this will be available for 2011 data onwards.
UK epidemiology

On average between 2001 and 2004, 395 cases of enteric fever were reported in the UK each year. Between 2005 and 2010, the average was 508.

Between 2007 and 2010, 1,978 cases were reported in England, Wales and Northern Ireland by SRU of which 1,673 (85%) had enhanced surveillance forms returned (Table 1).

Table 1. Laboratory confirmed enteric fever cases, and those with enhanced surveillance forms returned by serovar, UK, 2007-2010

<table>
<thead>
<tr>
<th></th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>England, Wales and Northern Ireland</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total laboratory confirmed</td>
<td>482</td>
<td>523</td>
<td>458</td>
<td>515</td>
</tr>
<tr>
<td>Salmonella Paratyphi A</td>
<td>208</td>
<td>237</td>
<td>185</td>
<td>212</td>
</tr>
<tr>
<td>Salmonella Paratyphi B</td>
<td>16</td>
<td>18</td>
<td>25</td>
<td>16</td>
</tr>
<tr>
<td>Salmonella Paratyphi C</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Salmonella Typhi</td>
<td>255</td>
<td>268</td>
<td>248</td>
<td>287</td>
</tr>
<tr>
<td>Both Salmonella Paratyphi A and Salmonella Typhi</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Enhanced surveillance form received (%)</td>
<td>406 (84%)</td>
<td>412 (79%)</td>
<td>391 (85%)</td>
<td>464 (90%)</td>
</tr>
<tr>
<td><strong>Scotland laboratory confirmed cases</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salmonella Paratyphi (type not known)</td>
<td>8</td>
<td>11</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>Salmonella Typhi</td>
<td>8</td>
<td>5</td>
<td>12</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total UK laboratory confirmed cases</strong></td>
<td>498</td>
<td>539</td>
<td>479</td>
<td>532</td>
</tr>
</tbody>
</table>

Population distribution

The highest proportion of UK cases reported between 2007 and 2010 were diagnosed in London (40%), followed by the West Midlands (12%), the South East (11%), Yorkshire and the Humber (8%), and North West (8%), with the remainder spread elsewhere in England, Wales (33 cases), Scotland (70 cases) and Northern Ireland (7 cases).

Enhanced surveillance data, England, Wales and Northern Ireland

From this point onwards data are presented using data from enhanced surveillance forms for England, Wales and Northern Ireland only. Data is aggregated for 2007-2010, total N=1,673. Of those with a known place of birth (N=1,394), 872 (63%) were born abroad (Figure 3).
Figure 3 Enteric fever cases by place of birth and residence, England, Wales and Northern Ireland, 2007-2010 (N=1,394 with known place of birth)

Data source: Enhanced surveillance of enteric fevers

Of non-UK born cases with a known reason for travel, 78% had travelled abroad from the UK. The majority of UK born cases (74%), with information available, were of Indian sub-continent ethnicity (Figure 4).

Figure 4 UK-born enteric fever cases by ethnicity, England, Wales and Northern Ireland, 2007-2010 (N=504 with known ethnicity)

Data source: Enhanced surveillance of enteric fevers
Between 2007 and 2010, 687 enteric fever cases reported in England, Wales and Northern Ireland were born in the Indian sub-continent (79\% of those known to be born abroad) (Figure 5).

**Figure 5 Region of birth for non-UK born cases, England, Wales and Northern Ireland, 2007-2010 (N=872)**

Data source: Enhanced surveillance of enteric fevers

The largest numbers of non-UK born enteric fever cases in England, Wales and Northern Ireland are reported in migrants born in India, reflecting the relatively large number of Indian migrants living in the UK. However, the incidence rates amongst India, Pakistan and Bangladesh-born migrants are similar (approx 2 per 10,000), Figure 6.
Figure 6 Number of cases of enteric fever adjusted for missing data and incidence amongst people living in the UK born in India, Pakistan and Bangladesh, 2007-2010 (Denominator: Annual Population Survey, see Box 3)

Note: The Annual Population Survey provides an estimate of the number of people, by country of birth, living in the UK each year. Case numbers for each country of birth include the categories from the 'travel abroad' field in the surveillance form that we would expect to be included within the denominator, i.e. both new migrants and those that have lived in the UK for several years (categories from 'travel abroad' field; new entrants, those with no travel, those travelling abroad from the UK). An adjustment has been made to take account of case data for which country of birth and/or migration status is not known. Error bars indicate 95% confidence intervals.

Data source: Enhanced surveillance of enteric fevers

The majority (60%) of cases travelling abroad from the UK were aged 15-44, 46% of these cases were female. A higher proportion of cases travelling abroad from the UK of non-white ethnicity were children; 26% <15 years compared to 4% <15 years for those of white ethnicity (Figure 7). This may indicate families of non-white ethnicity travelling abroad together.
Figure 7 Age group and ethnicity for cases travelling abroad from the UK, England, Wales and Northern Ireland, 2007-2010
(Age not known for two cases, therefore N=1,345)

Data source: Enhanced surveillance of enteric fevers

Of those travelling abroad from the UK, 87% of those with reason for travel known (Figure 8) were visiting friends and relatives. Both UK and non-UK born cases of Indian, Pakistani, and Bangladeshi ethnicity most commonly travelled back to countries of their ethnic origin (Tables 2 and 3).

Figure 8 Reason for travel for those with reason for travel known, England, Wales and Northern Ireland, 2007-2010 (N=1,621 main pie)

Data source: Enhanced surveillance of enteric fevers
Table 2. Country of travel* by ethnicity for non-UK born cases, who had travelled abroad from the UK, England, Wales and Northern Ireland, 2007-2010, N=668 (some travelled to more than one country)

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>India</th>
<th>Pakistani</th>
<th>Bangladesh</th>
<th>Asian other</th>
<th>Black African</th>
<th>Other/mixed</th>
<th>Not stated</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>India</td>
<td>293</td>
<td>2</td>
<td>-</td>
<td>14</td>
<td>-</td>
<td>18</td>
<td>9</td>
<td>336</td>
</tr>
<tr>
<td>Pakistan</td>
<td>2</td>
<td>141</td>
<td>-</td>
<td>3</td>
<td>-</td>
<td>3</td>
<td>1</td>
<td>150</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>1</td>
<td>-</td>
<td>85</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>86</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>10</td>
<td>-</td>
<td>4</td>
<td>-</td>
<td>15</td>
</tr>
<tr>
<td>Nigeria</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>12</td>
<td>-</td>
<td>-</td>
<td>12</td>
</tr>
<tr>
<td>Nepal</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>9</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>11</td>
</tr>
<tr>
<td>Other countries</td>
<td>(N=44)</td>
<td>5</td>
<td>5</td>
<td>1</td>
<td>11</td>
<td>20</td>
<td>39</td>
<td>4</td>
</tr>
<tr>
<td>Country not stated</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>305</td>
<td>149</td>
<td>87</td>
<td>48</td>
<td>32</td>
<td>66</td>
<td>14</td>
<td>701</td>
</tr>
</tbody>
</table>

*country listed if more than ten cases in total
Data source: Enhanced surveillance of enteric fevers

Table 3. Country of travel* by ethnicity for UK born cases of non-White British ethnicity who had travelled abroad from the UK, England, Wales and Northern Ireland, 2007-2010, N=377 (some travelled to more than one country)

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>India</th>
<th>Pakistani</th>
<th>Bangladesh</th>
<th>Asian other</th>
<th>Black African</th>
<th>Other/mixed</th>
<th>Not stated</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pakistan</td>
<td>4</td>
<td>150</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>6</td>
<td>3</td>
<td>163</td>
</tr>
<tr>
<td>India</td>
<td>125</td>
<td>2</td>
<td>-</td>
<td>4</td>
<td>-</td>
<td>5</td>
<td>3</td>
<td>139</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>2</td>
<td>2</td>
<td>51</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>57</td>
</tr>
<tr>
<td>Other countries</td>
<td>(N=14)</td>
<td>6</td>
<td>5</td>
<td>2</td>
<td>1</td>
<td>7</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Country not stated</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>137</td>
<td>159</td>
<td>54</td>
<td>5</td>
<td>7</td>
<td>14</td>
<td>14</td>
<td>390</td>
</tr>
</tbody>
</table>

*country listed if more than ten cases in total
Data source: Enhanced surveillance of enteric fevers

UK born enteric fever cases were approximately twice as likely to have sought travel advice compared to non-UK born cases (RR=1.98, p<0.001) (Figure 9). UK born cases of white British ethnicity were 1.66 times more likely to seek advice than UK born cases of non-white British ethnicity (p<0.001). A similar pattern is seen for those who received typhoid vaccination, though this question is less complete (36% ‘not stated’ compared to 29% not stated for the pre-travel advice field).
Figure 9 Pre-travel advice for cases who travelled abroad from the UK (assumed UK residents) by place of birth and ethnicity, England, Wales and Northern Ireland, 2007-2010

Data source: Enhanced surveillance of enteric fevers

Discussion

The increase in the average number of cases reported between 2005 and 2010 compared to between 2001 and 2004 is likely to be due to increased travel, particularly amongst those visiting friends and relatives (Figure 21, migration chapter). The start of the enhanced surveillance scheme for enteric fevers in 2007 has enabled more detailed profiling of key risk groups among cases reported in England, Wales and Northern Ireland. Enteric fever cases reported in England, Wales and Northern Ireland are predominantly amongst those born in the Indian subcontinent, and those born in the UK with Indian subcontinent ethnicity. Cases most commonly acquire their infection during visits to friends and relatives in their countries of origin.

Typhoid fever can be prevented by vaccination with the Vi polysaccharide vaccine, which protects against typhoid but not paratyphoid\textsuperscript{98}. Good hygiene practices are essential to prevent both infections.

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Availability of translated materials

Patient information leaflets about typhoid in English, Bengali, Gujarati, Punjabi and Urdu can be accessed via the Migrant Health Guide.

Further information about enteric fevers

Migrant Health Guide (Appendix A)

HPA typhoid page\textsuperscript{99}

National Travel Health Network and Centre (NaTHNaC): country-specific travel advice\textsuperscript{88}
Chapter 9. Chagas disease (American trypanosomiasis)

Summary

- Six cases of Chagas disease were reported in the UK in 2010.
- Chagas disease has only rarely been reported in the UK and all cases identified (with information available) have been in migrants from South America.
- Based on migration data and known prevalence of disease in endemic countries it is likely that this disease is currently significantly under-recognised in the UK.

Sources of data

Data on the cases of Chagas disease in the UK presented are collected by the Health Protection Agency from the Hospital for Tropical Diseases (HTD), London, UK and National Health Service Blood and Transplant (NHSBT), London, UK. Additional data for Scotland were provided by Health Protection Scotland.
Global situation

Figure 1 Global risk areas for Chagas disease, 2005

Vector-borne transmission is confined to the Americas, mainly rural areas in parts of Mexico, Central America, and South America.

Data source: Estimación Cuantitativa de la Enfermedad de Chagas en Las Américas (OPS/HDM/CD/425-06101)

UK epidemiology

Between 1987 and 2010, 33 laboratory-confirmed cases of American trypanosomiasis were reported in the UK by HTD and NHSBT, and two cases by Health Protection Scotland (Table 1). All infections, with information available, were in migrants from South America and were presumed to be vector-borne. Of those with a specific country of origin known, 67% were from Bolivia. Three of the cases listed in Table 1 were detected via National Blood Service screening; the rest were identified through clinical suspicion.
Table 1. Cases of imported Chagas diseases diagnosed in the UK, 1987-2010

<table>
<thead>
<tr>
<th>Country of origin</th>
<th>Number of cases HTD and NHSBT, 1987-2010</th>
<th>Number of cases reported by Health Protection Scotland 1987-2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Bolivia (Plurinational State of)</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>Brazil</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Chile</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Colombia</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Ecuador</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Uruguay</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Venezuela (Bolivarian Republic of)</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>South America (country not specified)</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>33</strong></td>
<td><strong>2</strong></td>
</tr>
</tbody>
</table>

Discussion

Global population movements mean that cases of Chagas disease are increasingly being recognised in countries in Europe, predominantly those with strong historical links to countries in South and Central America.

It is estimated that the number of infected cases in Europe exceeds 80,000, with more than 3,900 laboratory-confirmed cases during the past ten years in Belgium, France, Italy, Spain, Switzerland and the UK\textsuperscript{103}. Sporadic cases have also occurred in other European countries.

Various studies have attempted to estimate the true burden of Chagas disease in the UK, based on the number of Latin American migrants living in the UK, and the estimated prevalence rate. A recent European study estimated that more than 99% of expected cases in UK migrants were not diagnosed\textsuperscript{104}.

Availability of translated materials

The Centers for Disease Control and Prevention (USA) has published information online about Chagas disease in English and Spanish. Details can be accessed via the Migrant Health Guide.

Further information about Chagas disease

Migrant Health Guide (Appendix A)

HPA Chagas disease page\textsuperscript{102}
Chapter 10. Other infections

The baseline report contained a chapter on ‘other infections’. Some of these infections now have a dedicated chapter in this report due to recent developments in the availability of surveillance data (hepatitis C, enteric fevers, sexually transmitted infections) or because of a recent international focus (Chagas disease). For most of the other infections listed below we have limited country of birth and/or ethnicity-specific data. Therefore, we are not providing a specific update to the data presented in the baseline report. Below are links to the relevant pages of the HPA website where further general surveillance data on these infections can be found. Some specific analyses by ethnicity are available for hepatitis A and E and can be found in the Sentinel Surveillance of Hepatitis annual reports.105

Gastrointestinal infections (bacterial and protozoan)
http://www.hpa.org.uk/Topics/InfectiousDiseases/InfectionsAZ/GastrointestinalDisease/

Soil-transmitted helminths (geohelminths)
http://www.hpa.org.uk/Topics/InfectiousDiseases/InfectionsAZ/TravelHealth/EpidemiologicalData/GastrointestinalInfections/travHelminths/

Hepatitis A
http://www.hpa.org.uk/Topics/InfectiousDiseases/InfectionsAZ/HepatitisA/
Ethnicity analysis is available from the Sentinel Surveillance of Hepatitis.62

Hepatitis E
http://www.hpa.org.uk/Topics/InfectiousDiseases/InfectionsAZ/HepatitisE/
Ethnicity analysis is available from the Sentinel Surveillance of Hepatitis.62

Polio
http://www.hpa.org.uk/Topics/InfectiousDiseases/InfectionsAZ/Polio/

Arthropod borne disease (dengue fever, filariasis)
http://www.hpa.org.uk/Topics/InfectiousDiseases/InfectionsAZ/TravelHealth/EpidemiologicalData/ArthropodBorneInfections/

Measles, mumps, rubella
http://www.hpa.org.uk/Topics/InfectiousDiseases/InfectionsAZ/Measles/
http://www.hpa.org.uk/Topics/InfectiousDiseases/InfectionsAZ/Mumps/
http://www.hpa.org.uk/Topics/InfectiousDiseases/InfectionsAZ/Rubella/

Diphtheria
http://www.hpa.org.uk/Topics/InfectiousDiseases/InfectionsAZ/Diphtheria/

Meningococcal disease
http://www.hpa.org.uk/Topics/InfectiousDiseases/InfectionsAZ/MeningococcalDisease/

Schistosomiasis
http://www.hpa.org.uk/Topics/InfectiousDiseases/InfectionsAZ/Schistosomiasis/
Chapter 11. Summary of data completeness for fields particularly relevant for migrant health

In each of the individual infectious disease chapters we have reported trends in the completeness of surveillance data fields that are particularly relevant for migrant health. Here we summarise the 2010 data for the main diseases of interest (Table 1).

Table 1. Proportion of data completeness for selected surveillance fields relevant to migrant health, 2010, UK surveillance data unless otherwise stated

<table>
<thead>
<tr>
<th>Disease</th>
<th>Ethnicity</th>
<th>Country of birth</th>
<th>Year of arrival in the UK for those born abroad</th>
<th>Country of usual residence/Travel abroad (enteric fever)**</th>
</tr>
</thead>
<tbody>
<tr>
<td>TB</td>
<td>95%</td>
<td>98%</td>
<td>85%</td>
<td></td>
</tr>
<tr>
<td>HIV (new diagnoses)</td>
<td>92%</td>
<td>79%</td>
<td>60%</td>
<td></td>
</tr>
<tr>
<td>HIV (SOPHID)</td>
<td>99%</td>
<td>Not collected</td>
<td>Not collected</td>
<td></td>
</tr>
<tr>
<td>Hepatitis B</td>
<td>See footnote*</td>
<td>See footnote*</td>
<td>Not collected</td>
<td></td>
</tr>
<tr>
<td>Hepatitis C</td>
<td>See footnote*</td>
<td>See footnote*</td>
<td>Not collected</td>
<td></td>
</tr>
<tr>
<td>STI (England)</td>
<td>93%</td>
<td>91%</td>
<td>Not collected</td>
<td></td>
</tr>
</tbody>
</table>

**Travel-associated infections**

<table>
<thead>
<tr>
<th>Disease</th>
<th>Ethnicity</th>
<th>Country of birth</th>
<th>Year of arrival in the UK for those born abroad</th>
<th>Country of usual residence/Travel abroad (enteric fever)**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malaria</td>
<td>92%</td>
<td>51%</td>
<td>Not collected</td>
<td>64%</td>
</tr>
<tr>
<td>Enteric fevers (England, Wales, Northern Ireland)</td>
<td>85%</td>
<td>78%</td>
<td>60%</td>
<td>89%**</td>
</tr>
</tbody>
</table>

*Country of birth and ethnicity are not routinely collected through national hepatitis B and C surveillance in the UK, but are available for infected UK blood donors. In addition, names were available for 74% and 78% of all individuals tested as part of the sentinel surveillance study for hepatitis B and C respectively in 2010 and were used, in addition to self reported ethnicity, to assign individuals to broad ethnic groups using automated ethnicity classification algorithms including Onomap and Nam Pehchan.

**The travel abroad field (foreign visitor/new entrant/travelled abroad from the UK/no travel abroad/not stated) is used within the enhanced surveillance of enteric fevers as a proxy for UK resident (i.e. those who were known to have travelled from the UK and returned, or not travelled at all are classed as UK residents). A new field has been added to the enhanced surveillance form about UK residency – this will be available for 2011 data onwards.

Improving the quality of these data enables more accurate interpretation of the surveillance data and hence the development of more targeted public health actions. The range in the data completeness reported by the different surveillance systems demonstrates the level of completeness that could be achieved by all. Hopefully, this will encourage the improvement of systems for which data is currently less complete.
Chapter 12. Public Health Recommendations

One of the key recommendations made in the baseline report was for the development of resources to support practitioners in managing the health issues of non-UK born patients. In response to this recommendation, the HPA developed an online Migrant Health Guide (www.hpa.org.uk/migranthealthguide) that was launched in January 2011 (Appendix A).

The guide reinforces many of the other recommendations made in the baseline report and which are still relevant:

- Non-UK born communities should have access to culturally competent and language supported services.
- Collection of country of birth information in primary care should be improved; this information can help when considering what health conditions someone may be at risk from.
- When seeing new migrant patients practitioners should assess the range of their needs, including where appropriate those associated with infectious diseases. A migrant’s health needs may involve more than one infectious disease so a co-ordinated approach is invaluable. The Migrant Health Guide provides both a checklist to extend the standard new patient check for migrant patients and country specific advice on infectious disease risks.
- Healthcare practitioners should ensure that migrants are offered full immunisation according to the UK schedule.
- Relevant guidelines for the management and control of infectious diseases should be followed. Primary care practitioners have an important role in infectious disease control in the non-UK born.
- Risk of infectious disease to the non-UK born should be considered on an ongoing basis not just when they first arrive in the country.
- The benefits of seeking pre-travel advice and awareness of the risks of infections such as malaria and enteric fevers, particularly in those visiting friends and relatives needs to be raised in at risk communities.

In 2008 the World Health Assembly (WHA) made a number of recommendations for member states in its resolution on migrant health. Areas covered by the recommendations included:

- Monitoring migrant health.
- Policy and legal frameworks.
- Migrant sensitive health systems.
- Partnerships, networks and multi country frameworks.
In line with this resolution, recommendations for further public health actions include:

- Review of UK progress against the WHA resolution.

- Improvements to routine surveillance systems to include improved capture of information on country of birth, ethnicity and migration status, e.g. date of arrival in the UK.

- Further prevalence studies of the disease burden in migrants to help inform policy development.

- Assessment of the impact on health of migrants of policy in both health (e.g. NHS entitlements) and non-health areas (e.g. asylum policy).

- Sharing of best practice in delivery of appropriate services with engagement of affected communities in their development.

- Development of and participation in intra- and international networks to share data and innovation in the field of migrant health.
Appendix A: The Migrant Health Guide

The Migrant Health Guide (www.hpa.org.uk/migranthealthguide) was launched by the Health Protection Agency in January 2011. The guide was developed with input from many individual primary care practitioners and is endorsed by both the Royal College of General Practitioners and the Royal College of Nursing. It aims to be a one-stop shop that is easy to use in a standard ten minute consultation, bringing together for the first time into one place a host of information and resources, while also providing key messages for the busy practitioner. It aims to address the health needs of migrants to the UK promptly and effectively through raising the awareness of, and supporting, the practitioners who care for them.

It is organised in four main sections;

- General information; covering language interpretation services, cultural competence and understanding, entitlements to NHS care, spirituality, religion and health beliefs, and vulnerable migrants.
- Countries A-Z; with information specific to around 130 individual countries of origin of migrants to the UK, with each arranged in five subpages covering general background about the country, infectious diseases, nutritional and metabolic concerns, children’s health and women’s health.
- Health topics; with guides to a range of infectious diseases and other health concerns and including, where available, patient resources in English and other languages.
- Assessing migrant patients; with information and a checklist for assessing the health needs of new migrant patients as well as information on assessing patients with symptoms.

If you have any comments or would like further information about the guide please email tmhs@hpa.org.uk
Appendix B: Key changes to the European Union

The EU comprised 15 member states from 1995 to 2004. They were Germany, France, Italy, the Netherlands, Belgium, Luxembourg, Denmark, Ireland, UK, Greece, Spain, Portugal, Austria, Finland and Sweden.

Eight countries of Central and Eastern Europe, the A8 countries, joined the EU in 2004 – the Czech Republic, Estonia, Latvia, Lithuania, Hungary, Poland, Slovenia and Slovakia. Cyprus and Malta also became members.

In 2007, the EU expanded to 27 member states when Bulgaria and Romania, the A2 countries, were incorporated.

Croatia, the Former Yugoslav Republic of Macedonia and Turkey are candidates for future membership.

Nearly all European Economic Area (EEA) and Swiss nationals are free to enter and live in the UK without the need to apply for permission, though those from a new EU member state (accession states) may need to register or ask permission to work in the UK. 


Further information on the history of the European Union can be found at http://europa.eu/abc/history/index_en.htm
Appendix C: Key changes in UK legislation affecting migration

(changes since the 2006 baseline publication)

UK Borders Act 2007
This Act is “part of a package of measures to underpin the Border and Immigration Agency which consists of new powers, a substantial increase in enforcement resource and exploitation of identity technology, in particular to tackle illegal working.”
Full details can be found on the Office of Public Sector Information website:

Borders, Citizenship and Immigration Act 2009
“An Act…brought forward to strengthen border controls, by bringing together customs and immigration powers, and to ensure that newcomers to the UK earn the right to stay.”
Full details can be found on the Office of Public Sector Information website:
Appendix D: The asylum process

The following description of the current asylum process has been provided by the UK Borders Agency.

Asylum seekers arrive in the UK in a variety of ways. Asylum seekers may claim asylum either on arrival at a port, after arrival at the Asylum Screening Unit, after arrest or detection as an illegal entrant, or as a result of not complying with the requirements of their visa including overstaying their visa.

Illegal entry and use of false documentation may in certain circumstances, if not adequately explained by the individual, result in criminal charges and possible custodial sentences, although such cases are not common.

If asylum is not applied for as soon as reasonably practicable after the person’s arrival in the UK then asylum support by the UK Border Agency may be denied (Section 55 of the Nationality, Immigration and Asylum Act 2002), unless providing support is necessary to avoid a breach of the person’s rights under the European Convention of Human Rights.

Asylum seekers will undergo screening at which time their application for asylum will be registered. Screening ordinarily takes place in a non-detained environment, however in limited circumstances screening may be undertaken in a detained setting – the individual’s particular method of entry, needs, and the screening resources available are key determining factors. This would not ordinarily involve more than a day or two in detention. Anyone who is detained for any reason is medically examined on entry to detention and has access to medical care once detained.

At screening asylum seekers are issued with written information in a language they can reasonably be expected to understand on the asylum process, accessing legal advice, seeking general assistance from voluntary organisations, and accessing healthcare in the UK.

Asylum seekers may be accommodated in a variety of ways. Some may stay with friends or relatives and are required to provide a single address where they intend to stay throughout the process. Or, if they have no accommodation available to them nor means to obtain accommodation, they may be accommodated by the UK Border Agency. While asylum seekers wait for their claim for asylum to be processed they are normally prohibited from working.

Where an applicant’s case is one on which it appears that a fair and sustainable decision can be made quickly, the applicant may be detained for his/her case to be considered in the detained fast track process. Applicants whose cases are for another safe European country to consider, for instance, because they stayed in such a country before deciding to come to the UK, may also be detained before being returned to the relevant country.

Asylum seekers who are destitute and require accommodation will be routed to Initial Accommodation (IA) where they can apply for asylum support under section 95 of the Immigration & Asylum Act 1999. Asylum seekers in IA will receive an induction briefing.
where they will be provided with information on the accommodation and how to access local services, such as local NHS services. In most cases health assessments are conducted in Initial Accommodation delivered by a healthcare team independent of the UK Border Agency. Asylum seekers who receive a healthcare assessment will be issued with a national hand held record, also known as a blue book (there is a different book for children), recording the results of the assessment.

Section 95 support is provided in the form of accommodation only, subsistence only, or both accommodation and subsistence. If an asylum seeker is in receipt of subsistence only support, the UK Border Agency will make no contribution to their accommodation costs. If an asylum seeker is accommodated by the UK Border Agency, the provision of accommodation is on a no choice basis. Supported asylum seekers may be dispersed throughout the UK, generally to areas where there is a ready supply of accommodation, though any dispersal requirements the asylum seekers may have will be taken in to account. Primary Care Trusts are notified of the arrival of asylum seekers accommodated in their catchment areas.

Following arrival in dispersal accommodation, asylum seekers will receive an induction briefing provided by the accommodation provider, where they will be provided with information on the accommodation and how to access local services, such as how to register with a local GP and a dentist, and how to make contact with, and the appointment systems associated with, the local National Health Service. If asylum seekers have pre-existing medical conditions or are in need of an urgent GP review, requiring registration with a local GP, they will be taken by the accommodation provider to a GP’s surgery for registration within 5 working days of arrival at the dispersal address. If however, the asylum seekers also have an urgent need of a new supply of prescribed medication, they will be taken to a GP within 1 working day of arrival at the dispersal address.

It is very important that dispersed asylum seekers are linked in to primary care health services. The handheld record should be shared with health staff in dispersal areas and aims to reduce the amount of time taken for any health checks or general practice registration medicals that are undertaken in dispersal areas. Asylum seekers who have been subject to sexual abuse or torture may not disclose this at their first health assessment in IA because of many factors including fear and stigma. This important information may only be disclosed once trust has been established with a health care practitioner. Medical evidence is often very important in supporting an asylum application.

There are four possible outcomes of the asylum application assessment process. These categories have an impact on people’s status and their access to social benefits and housing.

- **A grant of asylum:** The applicant will be granted refugee status and five years limited leave to remain. These individuals have the same welfare rights as other citizens and will have immediate access to the labour market and to all key mainstream benefits. They also enjoy access to family reunion provisions and Refugee Convention Travel Documents.

- **A grant of humanitarian protection following refusal of asylum application:** Those granted Humanitarian Protection will normally be granted leave to enter or remain
for a period of five years in the first instance. This is granted where the applicant
does not qualify for asylum but is judged to be at serious risk of being subjected to
the death penalty, unlawful killing, torture, inhuman or degrading treatment or
punishment in their country of origin. These individuals will have the same welfare
rights as other citizens and will have immediate access to the labour market and to
all key mainstream benefits. They also enjoy the same access to family reunion
provisions as people granted refugee status.

- A grant of discretionary leave following refusal of asylum application: An applicant
  may be granted discretionary leave for up to three years in situations where the
  applicant does not qualify for asylum or humanitarian protection but where it would
  be inappropriate to remove them from the UK for other reasons, e.g.
  unaccompanied children. These individuals will have the same welfare rights as
  other citizens and will have immediate access to the labour market and to all key
  mainstream benefits, but they do not have access to family reunion.

- Refusal of asylum claim with no grant of leave: Failed asylum seekers are people
  whose asylum claims have been refused and whose appeal rights have been
  exhausted, and are required to leave the UK as soon as possible. They are usually
  prohibited from working. Failed asylum seekers who are destitute and are unable
  to leave the UK immediately due to circumstances beyond their control, can
  request the provision of support under section 4 of the Immigration & Asylum Act
  1999. Section 4 support is provided in the form of accommodation and
  subsistence.
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