

Communicable diseases such as measles, pertussis and hepatitis B still pose a major threat to the health of European citizens. Measles, a highly infectious disease of the respiratory system, is caused by a virus. Symptoms include fever, cough, runny nose, red eyes and a characteristic rash. It can lead to severe health complications, including pneumonia, encephalitis, diarrhoea and blindness. Pertussis (or whooping cough) is also highly infectious, and is caused by the bacterium *Bordetella pertussis*. The disease derives its name from the sound made from the intake of air after a cough. Hepatitis B is an infection of the liver caused by the hepatitis B virus. The virus is transmitted by contact with blood or body fluids of an infected person. A small proportion of infections become chronic, and these people are at high risk of death from cancer or cirrhosis of the liver. Protection against each of these diseases is available through vaccination (see Indicator 3.3).

An average of over 5 000 measles cases were reported annually in European Union countries during 2006-08, with the highest number of cases occurring in four countries: Germany, Romania, the United Kingdom and Italy. The highest crude incidence during 2006-08 was in Switzerland, with 15 cases reported per 100 000 persons (Figure 1.11.1). A number of other western European countries, including the United Kingdom, Romania, France and Italy, also had high incidences. Across the European Union, average incidence for 2006-08 was 1.2 cases per 100 000 population. This represents a marked decline from the average rate in 1991-93, which was 27 cases per 100 000 population. In 2008, more than half of all cases (53%) occurred among children and young people aged 5-19 years. Hospitalisation was necessary for 15% of cases. Among cases whose vaccination status was known, the vast majority (91%) were unvaccinated (EUVAC.NET, 2009).

Almost 13 000 pertussis cases were reported annually among EU countries, with an overall incidence of six per 100 000 population (Figure 1.11.2). The highest incidences were reported in Norway (113 cases per 100 000 population), Switzerland (45), the Netherlands (41), Estonia (26) and Slovenia (24). Most cases were reported from the Netherlands, Norway, Switzerland and Poland, which together contributed three-quarters (76%) of all cases reported in 2008. Pertussis incidence has halved since 1991-93, when the average rate among EU countries was 11.3 notified cases per 100 000 population.

Two-thirds of all pertussis cases in 2008 occurred among children aged under 15 years of age, although the disease may be under-diagnosed in adolescents and adults. The highest incidence occurred among infants aged less than one year, many of whom are too young to be vaccinated, and children aged 10-14 years, who may have not had a full course of vaccination, or who may have lost their immunity. Vaccination status was known in only half of all reported cases, but of these 21% were unvaccinated (EUVAC.NET, 2010).

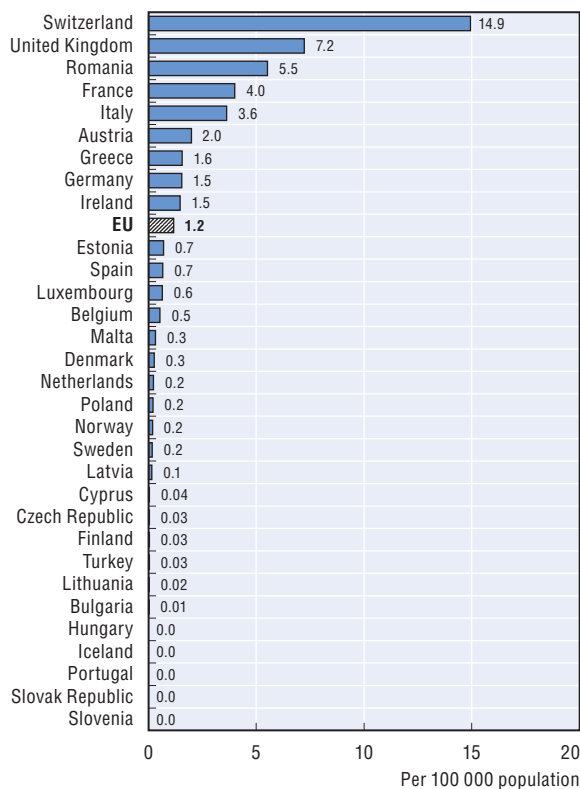
Around 6 000 hepatitis B cases were reported annually in EU countries during 2006-08. The highest incidence rates occurred among six countries: Iceland (13.2 notified cases per 100 000 population), Bulgaria (9.9), Turkey (9.1), Austria (8.1), Latvia (7.3) and Romania (5.1) (Figure 1.11.3). The notification rate has declined in EU countries since 1991-93, when it was 8.3 cases per 100 000 population to 2.5 for 2006-08. Hepatitis B infection is more common in the southern parts of Eastern and Central Europe, and low in prevalence in most of Western Europe. Around twice as many cases of hepatitis B occurred among males than females in 2008, with the majority reported in the age group 25-44 years, followed by 15-24 year-olds. The disease is increasingly seen as a sexually transmitted disease, although the disease pattern and risk groups differ widely across Europe (ECDC, 2009).

Definition and deviations

National mandatory notification systems for communicable diseases, including measles, pertussis and hepatitis B, exist in most European countries, although case definitions, laboratory confirmation requirements and reporting systems may differ.

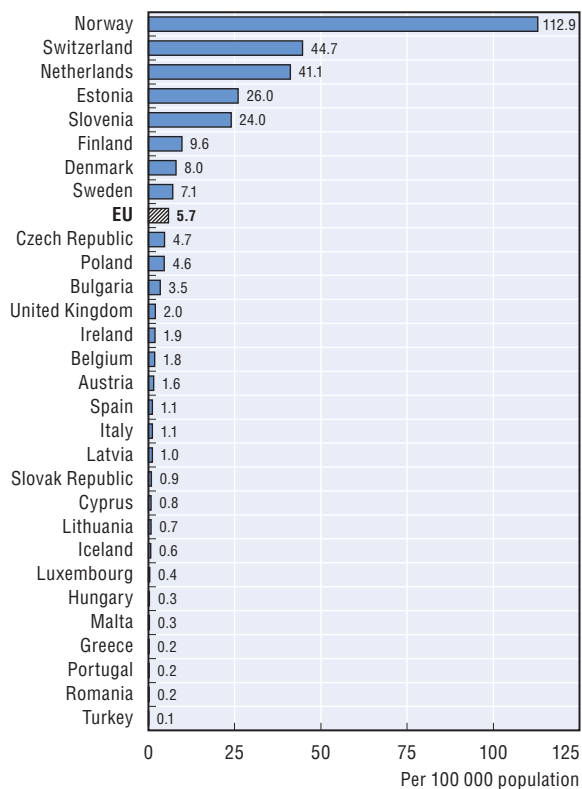
In 2008, measles notification was voluntary in Belgium, although mandatory in schools. Pertussis notification was mandatory only in parts of Belgium and Germany, and Switzerland and France had sentinel surveillance systems. Hepatitis B notification was voluntary in France and Belgium, Italy had a sentinel surveillance system, and reporting was not mandatory in Switzerland.

1.11.1. Incidence of measles, 2006-08



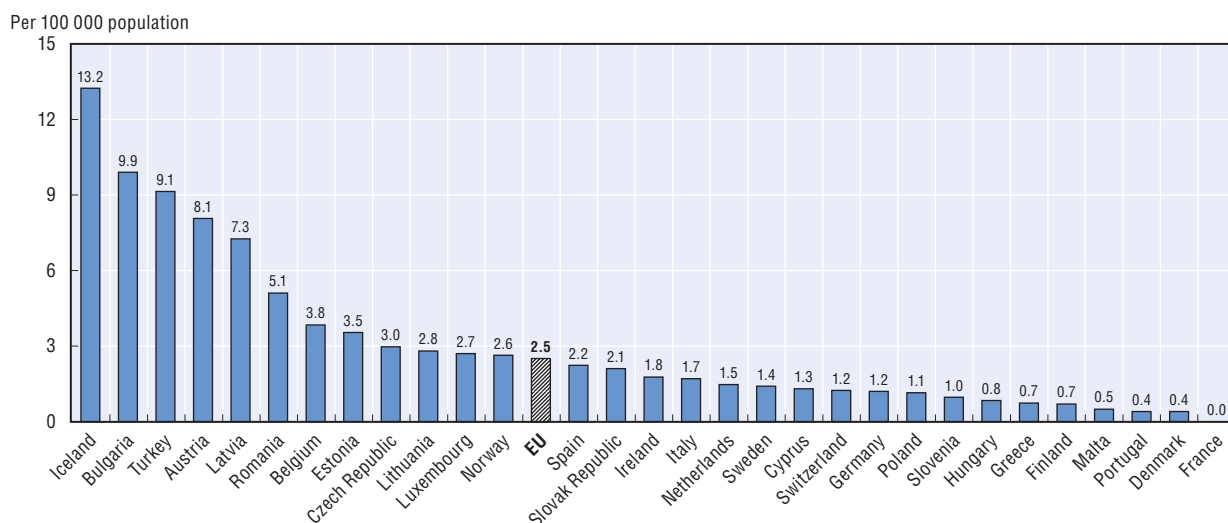
Source: OECD Health Data 2010; WHO Europe (2010).
 StatLink <http://dx.doi.org/10.1787/888932335951>

1.11.2. Incidence of pertussis, 2006-08



Source: OECD Health Data 2010; WHO Europe (2010).
 StatLink <http://dx.doi.org/10.1787/888932335970>

1.11.3. Incidence of hepatitis B, 2006-08



Source: OECD Health Data 2010; WHO Europe (2010).
 StatLink <http://dx.doi.org/10.1787/888932335989>



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