ECDC INFORMATION SHEET

Hepatitis B and C
Current situation in the EU/EEA

ECDC coordinated two studies on hepatitis B and C in the EU and released two technical reports:

- 'Hepatitis B and C in the EU neighbourhood: prevalence, burden of disease and screening policies' (literature review)
- 'Hepatitis B and C surveillance and prevention in Europe' (Overview of national surveillance systems and prevention programmes for hepatitis B and C)

Key aspects

- There is a significant yet diverse burden of infection and disease due to hepatitis B and hepatitis C in the EU/EEA.
- The epidemiological situation of hepatitis B and C is diverse: In some EU countries, hepatitis B is predominantly a sexually transmitted infection while in other countries transmission via household contacts or injecting drug use is more apparent. For hepatitis C, the epidemiological picture is unclear due to the differences in screening and reporting systems and the inability to distinguish between acute and chronic infections.
- Harmonisation and strengthening of hepatitis B and C surveillance at the EU level helps to assess the disease burden, evaluate prevention and control strategies and define epidemiological trends or transmission patterns. Any framework for enhanced surveillance should strive for comparable and reliable data across EU Member States. Enhanced surveillance is currently under development and coordinated by ECDC, in close collaboration with experts in the Member States.
- Increased use of prevalence surveys, in addition to case-based surveillance, would enable countries to better estimate the current burden of infection and disease and improve the quality of targeted prevention programmes.
- Various prevention measures have been implemented by all Member States; so far there is evidence of efficient hepatitis B vaccination programmes. Countries with high prevalence rates, either in sub-populations or the general population, should consider further strengthening screening and immunisation programmes, including persons from high-endemic countries.
- There is a strong need for more evidence-based analysis of the cost-effectiveness of screening for hepatitis C in sub-populations at risk and in the general population. It is likely that considerable health gain can be achieved by secondary prevention of hepatitis B and C, including early detection through screening and treatment of patients.
- Screening of blood and blood products as well as tissue and organ donors should be standard practice in national hepatitis B and C prevention programmes. Screening of pregnant women against hepatitis B virus infection should be available in all countries. Further screening programmes should be tailored to the local and national epidemiological situation.

Epidemiology

Hepatitis B

Although there is a general decreasing trend, each year there are between 7 000 and 8 000 newly diagnosed cases of hepatitis B in the European Union and European Economic Area (EU/EEA). The downward trend of hepatitis B can be explained by efficient vaccination programmes as well as changes in sexual behaviour. The number of newly reported cases per 100 000 population has declined over the past ten years from 6.7 cases per 100 000 population in 1995 to 1.5 cases per 100 000 population in 2007.

The total percentage of people infected with hepatitis B varies in different countries, with higher rates in the southern part of Europe. The country with the highest prevalence (> 4%) is Romania, followed by medium prevalence countries (1–4%), Spain, (parts of) Italy, and Greece. Countries with a low prevalence (< 1%) include Belgium, the Czech Republic, Finland, Germany, Ireland, the Netherlands, Slovakia and Sweden.

The most affected population groups are injecting drug users, sex workers, men who have sex with men, people living with HIV, prison inmates, and immigrants from high-endemic regions. In some countries, sexual transmission is more common than transmission through household contacts or injecting drug use.

Hepatitis C

In the EU/EEA, reported numbers of hepatitis C show a significant increasing trend. Every year there are 27 000 to 29 000 newly diagnosed cases in the EU/EEA. The number of newly reported cases per 100 000 population has increased in recent years from 4.3 cases per 100 000 population in 1995 to 6.9 cases per 100 000 population in 2007. This increasing trend may reflect changes in testing practices and reporting rather than a real increase.

The total percentage of people infected with hepatitis C varies in different countries, with a higher prevalence in the southern part of Europe. Countries with high prevalence (> 2%) include Italy, Romania and Spain. Medium prevalence was observed in Bulgaria, France, Greece, and Poland. Countries with low prevalence (< 1%) include Belgium, Germany, the Netherlands, Sweden, and the United Kingdom.

The most affected population groups are injecting drug users, haemodialysis patients, persons living with HIV, prison inmates, and immigrants from high-endemic regions. Reported numbers are likely to reflect the current testing and screening practices in countries rather than the real incidence of infection. The reported number is an underestimate of the real occurrence of hepatitis C because of the asymptomatic nature of the infection.

National surveillance systems

The existing surveillance systems across EU/EEA Member States show a large heterogeneity. Major differences are related to how the system is organised, how frequent the data are reported and analysed, and the set of collected variables. In addition, chronic and asymptomatic cases are often not included in the surveillance data.

The majority of countries have a passive mandatory surveillance system for hepatitis, and they include confirmed and acute cases in their reporting system. Most of the countries rely on clinicians as the main source of data, use an electronic format at the national level, and collect a similar set of basic data. Underreporting is common, but the exact extent is unknown.

Prevention programmes

Immunisation

Vaccination against hepatitis B is included in the routine childhood vaccination programme in 22 EU/EEA Member States. Seven countries do not routinely vaccinate children but have implemented selective immunisation programmes targeting sub-populations at increased risk. The vaccination schedules vary widely (as does vaccine formulation), but the countries with neonatal vaccination programmes that are part of the universal vaccination programme have comparable schedules. Besides the universal vaccination programme, most countries have implemented additional programmes targeting groups at risk, mostly for those at risk of acquiring hepatitis B via occupational exposure; but there is a wide variety of approaches.

The reported coverage rate is heterogeneous but for most countries with a routine vaccination programme the coverage rate for infants is above 95%.

Screening

All EU/EEA countries, except one, have indicated that they have at least one screening programme in place for hepatitis B or hepatitis C. National screening for hepatitis B in pregnant women is organised in 24 countries, missing in four countries, and not implemented at the national level in one country. Screening for hepatitis C is included in only two antenatal screening programmes in the EU/EEA.

Specific screening programmes exist:

- For haemodialysis patients and blood and organ donors (all but two countries).
- For at-risk groups, e.g. injecting drug users (half the countries), STI clinic patients (nine countries), prison inmates (11 countries) and people with multiple sex partners (two countries); there is evidence that hepatitis B screening among injecting drug users is cost-effective, while the evidence-base for screening migrants has been insufficiently studied.
- For healthcare workers against hepatitis B infection (six countries).

Current evidence suggests that the implementation of screening programmes is needed for the sub-populations at increased risk and hard-to-reach populations and could be needed for the general population. Effectiveness of screening programmes should be thoroughly investigated, including a cost-effectiveness analysis and taking into consideration the availability of effective treatment.

Burden of disease

Both hepatitis B and C, but especially hepatitis C, may cause severe complications in advanced stages of infection, including cirrhosis and hepatocellular carcinoma (HCC).

Annual HCC mortality ranges for women from 0.27 per 100 000 women in Sweden to 5.35 per 100 000 in Bulgaria, and for men from 0.68 per 100 000 men in Sweden to 8.03 per 100 000 in Bulgaria. HCC mortality for both women and men is generally lower in the north-west of Europe, compared with the south-east. This is partially due to the fact that data for some countries in Eastern Europe do not distinguish between primary and metastatic liver cancer.

Annual cirrhosis mortality ranges for women from 1.02 per 100 000 in Malta to 20.91 per 100 000 in Hungary, and for men from 4.40 per 100 000 (Netherlands) to 68.27 per 100 000 (Hungary). In some Eastern European countries mortality due to cirrhosis is relatively high, both for men and women. However, similar to HCC, some of the variation may be due to validity of cirrhosis certification.

Contact

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References

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- ECDC. Surveillance and prevention of Hepatitis B and C in Europe. Stockholm: ECDC; 2010.
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