

HEPATITIS A IN THE EUROPEAN UNION: RESPONDING TO CHALLENGES RELATED TO NEW EPIDEMIOLOGICAL PATTERNS

L Payne (lara.payne@ecdc.europa.eu)¹, D Coultombier¹

1. European Centre for Disease Prevention and Control, Stockholm, Sweden

Hepatitis A is a vaccine-preventable acute, usually self-limiting disease caused by infection with the hepatitis A virus (HAV). Transmission is usually by the faecal-oral route, including via person-to-person spread, contaminated water or food products. It has also been associated with injecting drug use and outbreaks among men having sex with men.

In the European Union (EU), though figures may vary among countries, the overall incidence of hepatitis A has decreased over the last 10 years from 15.1 per 100,000 population in 1996 to 3.9 per 100,000 in 2006 [1]. This decreasing trend has been attributed to continued improved sanitary and living conditions, with reduced exposure to infection, especially in early childhood. However, reduction in circulation of HAV leads to decreased acquisition of immunity and, in the absence of universal vaccination, an accumulation of susceptible individuals.

The impact of increasing susceptibility of the general population on the risk for outbreaks is clearly illustrated in independent outbreaks in Czech Republic, Latvia and Slovakia in 2008, described in three of the articles published in this week's issue of *Eurosurveillance* [2-4]. In these papers, the authors describe the extent to which hepatitis A can spread within at-risk susceptible populations and in the cases of Czech Republic and Latvia within the general population. In these reports, a significant proportion of cases are young adults, resulting in potentially more severe clinical presentation and posing a challenge to the health authorities in the area of safety of blood and tissue donation.

Experiences from the response to these outbreaks were the focus of a technical meeting organised by the European Centre for Disease Prevention and Control (ECDC) in collaboration with the Latvian Public Health Agency in Riga in November 2008, where the epidemiological pattern of hepatitis A outbreaks was reviewed, as well as the role of vaccination in outbreak settings. Discussions highlighted the fact that emergence of outbreaks in the EU generally follows the introduction of the virus from endemic countries through "seeding events". Non-immunised travellers to endemic areas are often at the origin of seeding events, as shown in this week's issue of *Eurosurveillance* in the three articles from France, Belgium and Germany [5-7] which describe clusters of travel-related cases following visits to Egypt.

To prevent the introduction of HAV in the EU travellers to endemic countries need to be vaccinated, and indeed vaccination

for travellers is recommended by the national guidelines of these three countries. However, as the authors point out, none of the cases reported in their articles had been vaccinated. These clusters therefore highlight the importance of effective travel medicine advice reaching EU travellers of all age groups.

Seeding events can be self-contained. However, when occurring in at-risk settings or communities, HAV transmission may be "amplified" and result in a wide spread of the disease, as described among injecting drug users in the reports by Czech Republic and Latvia, as well as among Roma populations as reported by Slovakia. Similarly, infected food-handlers may contribute to transmission amplification. Introduction of HAV by children attending day care centres or primary schools represents another type of situations at risk of increased transmission. The Slovak experience shows that immunisation targeting at-risk communities following such introduction may prevent the spread to the general community. However, the Czech example shows that such a strategy for control may not be effective with hard-to-reach communities such as injecting drug users.

Once the outbreak spreads to the general population, vaccination of contacts, as carried out in Czech Republic, represents an option to complement isolation of cases and health education measures, if done within a few days from exposure. Currently, there is no evidence-based guidance available regarding the use of HAV vaccine in outbreak control.

Though the total number of cases may be decreasing yearly in the EU, the articles published in this edition of *Eurosurveillance* indicate that hepatitis A is still an important public health issue, and highlight the need for increased awareness of both the risk of infection to the individual and the possibility of community outbreaks within a changing EU epidemiology.

As HAV vaccination is not included in universal immunisation schedules, the EU is likely to experience similar outbreaks in the future. This stresses the need to promote immunisation of all travellers to endemic areas to prevent return introduction and to develop evidence-based guidance for outbreak control strategies.

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