Hepatitis A outbreak in Bijeljina, Bosnia and Herzegovina, August 2012 - April 2013

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From August 2012-April 2013, an outbreak of hepatitis A with 28 laboratory-confirmed cases occurred in Bijeljina, Bosnia and Herzegovina. The index case was in a seven year old child from the local Roma community. Cases were 7-70 years old, 7-15 year-olds (9 cases) were the most affected age group. The event highlights the susceptibility of the population due to reduced hepatitis A virus circulation with consecutive lower immunity in the population in the past years.

In January 2013, the local health authorities in Bijeljina, the fifth largest city in Bosnia and Herzegovina, informed the national authorities about an ongoing outbreak of hepatitis A. A first case had been notified in August 2012 and by mid-January the case count had raised to 20. Here we describe the outbreak investigation and control measures taken by the local health authorities.

Background

Bijeljina is a town and municipality with about 120,000 inhabitants, located in the north-east of Bosnia and Herzegovina (Figures). It is the fifth largest city in Bosnia and Herzegovina and second largest in the Republic of Srpska. Republic of Srpska is one of the two main political entities of Bosnia and Herzegovina. Bijeljina municipality shares borders with Croatia and Serbia. It is a significant agricultural, trade and transit area in Bosnia and Herzegovina, with a high population density.

In the past 21 years, the epidemiological situation of reported intestinal infectious diseases in Bijeljina municipality was stable. Only sporadic cases of salmonellosis and few family outbreaks of trichinellosis were notified (data not shown).

In the Republic of Srpska, hepatitis A is a notifiable disease in accordance with the law on protection of the population against infectious diseases [1]. An infectious disease reporting is regulated by respective rules which do not define the criteria for reporting in detail [2].

Despite numerous challenges such as the Bosnian war from 1992 to 1995, migration of inhabitants elsewhere, poor socio-economic conditions and the unprecedented floods of the Drina river at the end of 2010, no hepatitis A cases were recorded before the current outbreak, in Bijeljina in the past 21 years. There is a possibility however, that cases of hepatitis A had occurred that were neither detected nor registered due to severe disruption of the surveillance of infectious diseases, especially during wartime. Before that period, from 1971 to 1991, a total of 3,399 cases of hepatitis A with an average of 154 cases per year, were registered (Figure 2).

In the last 15 years, the overall incidence of hepatitis A in Bosnia and Herzegovina decreased (Figure 3). In the same period, declining hepatitis A incidence trends were also observed in many other European countries [3].

Figure 1
Location of Bijeljina, Bosnia and Herzegovina