



Feidhmeannacht na Seirbhíse Sláinte
Health Service Executive



2006

EPIDEMIOLOGY OF HEPATITIS A IN IRELAND



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Authorship:

Report written by Niamh Murphy and Dr Lelia Thornton, HPSC

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Further information:

<http://www.ndsc.ie/hpsc/A-Z/HepatitisHIVAIDSandSTIs/HepatitisA/>

<http://www.who.int/topics/hepatitis/en/>

<http://www.cdc.gov/ncidod/diseases/hepatitis/a/index.htm>

Summary

2006

| | |
|----------------------------------|------------------------|
| Number of cases: | 39 |
| Age-standardised incidence rate: | 0.9/100,000 population |

2005

| | |
|----------------------------------|------------------------|
| Number of cases in 2005: | 56 |
| Age-standardised incidence rate: | 1.3/100,000 population |

Introduction

Hepatitis A virus causes an acute, usually self-limiting disease of the liver. It is primarily transmitted from person to person via the faecal-oral route, and is associated with poor hygiene and sanitation. Common source outbreaks due to contaminated food or water may also occur. Protective antibodies develop in response to infection and the disease does not have a chronic form. However, prolonged viral excretion and prolonged relapsing hepatitis for up to a year can occasionally occur.^{1,2}

Clinical severity tends to increase with age. Adults can experience severe illness lasting several months whereas children are often asymptomatic or mildly symptomatic. Jaundice occurs in 70-80% of people aged over 14 years and less than 10% of children younger than 6 years. Other symptoms include sudden onset of fever, fatigue, loss of appetite, nausea and abdominal pain.^{1,2}

In developed countries, hepatitis A is most commonly seen among travellers to endemic countries, injecting drug users (IDU), men who have sex with men (MSM) and household or sexual contacts of known cases. Sporadic food and waterborne outbreaks and outbreaks in crèches also occur. The median incubation period is 30 days (range: 15-50 days) and infection can usually be transmitted from two weeks prior to onset of illness to approximately one week after the appearance of jaundice.

A safe and effective vaccine is available for hepatitis A. In Ireland, vaccination is recommended for individuals in high-risk groups such as travellers to high endemicity countries, patients with chronic liver disease, individuals at occupational risk, close contacts of infected persons, individuals with haemophilia and recipients of plasma-derived clotting factors.³ Human normal immunoglobulin is also effective at preventing infection when given to close contacts of cases within two weeks of exposure.¹

Case Definitions

Hepatitis A (acute) ⁴

Clinical description

In symptomatic cases, clinical picture compatible with hepatitis, i.e. discrete onset of symptoms and/ or jaundice or elevated serum aminotransferase levels. Asymptomatic cases are common.

Laboratory criteria for diagnosis

One of the following:

IgM-class to hepatitis A virus (anti-HAV) positive

Detection of antigen in stool

Detection of nucleic acid in serum

Case classification

Possible: A case that meets the clinical case definition but has no epidemiological link

Probable: A case that meets the clinical case definition and has an epidemiological link

Confirmed: A case that meets the clinical case definition and is laboratory confirmed

Materials and Methods

Hepatitis A is a notifiable disease under the Infectious Diseases Regulations 1981. Aggregate data on notifications are available from 1982 and disaggregate data are available since mid-2000. An amendment to the regulations implemented on 1st January 2004 (S.I. 707 of 2003) introduced case definitions and mandatory laboratory reporting.⁴

Data for this report were extracted from CIDR on 3rd September 2007. These figures may differ from those published previously due to ongoing updating of notification data on CIDR. All rates were calculated using 2006 census data.

Results

The incidence of hepatitis A in Ireland has been low in recent years and remained low in 2006, with 39 cases notified. This corresponds to an age-standardised notification rate of 0.9/100,000 population and represents a 30% decrease compared to 2005, when 56 cases were notified (figure 1). Case classification was reported for all cases, with 38 cases laboratory confirmed and 1 case classified as possible.

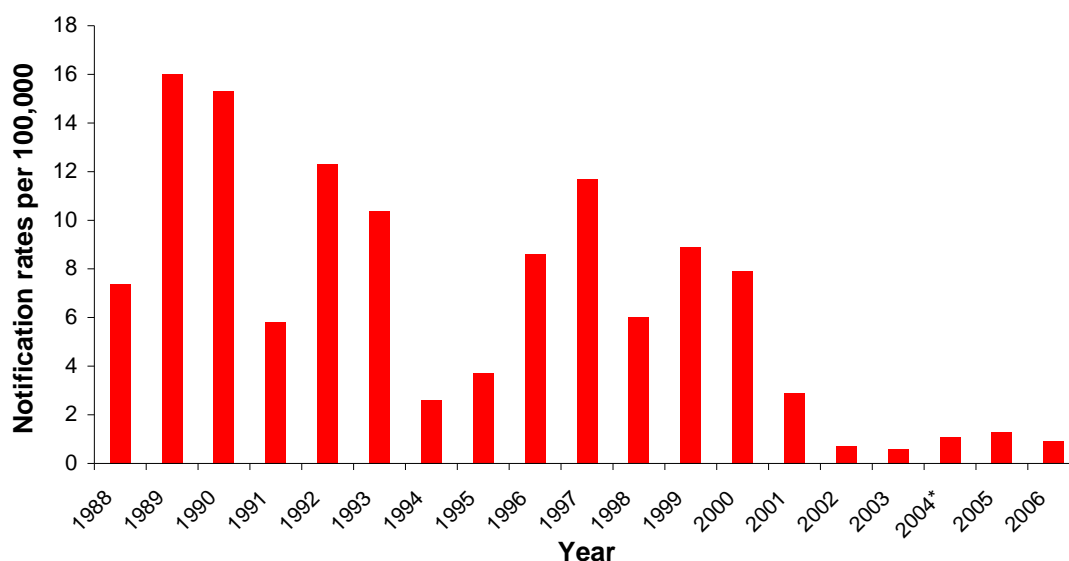


Figure 1. Crude notification rates/100,000 population for hepatitis A, 1988-2006

*Case definitions and mandatory laboratory reporting of notifiable infectious diseases were introduced in 2004

Cases were spread over all HSE areas but the highest age-standardised notification rates were in the HSE-NW and HSE-S, both of which had rates of 1.5 per 100,000 population (figure 2).

Fifty four percent of cases were male, 44% were female and sex was unknown for one case. All age groups were affected, but the highest rates were in children aged 0-9 years (figure 3). Seven patients were known to have travelled outside of Ireland within the incubation period of the disease.

Three family outbreaks were reported in 2006. One outbreak involving two family members, and a separate outbreak affecting 5 extended family members, were reported by the HSE-S. No food or waterborne sources were identified. The remaining outbreak involved 2 siblings in the HSE-E and was related to travel to Pakistan.

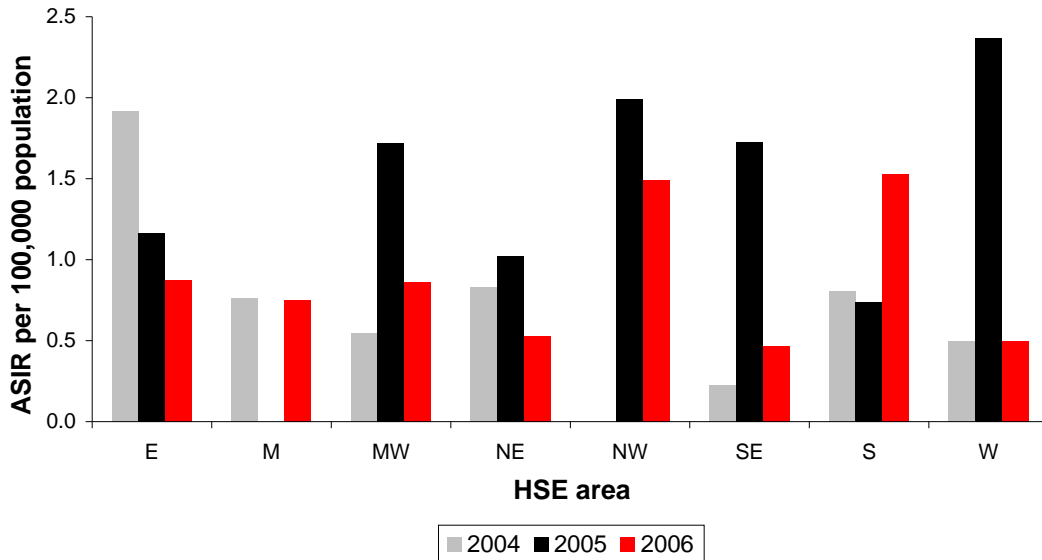


Figure 2. Age standardised notification rates for hepatitis A per 100,000 population by HSE area, 2004-2006

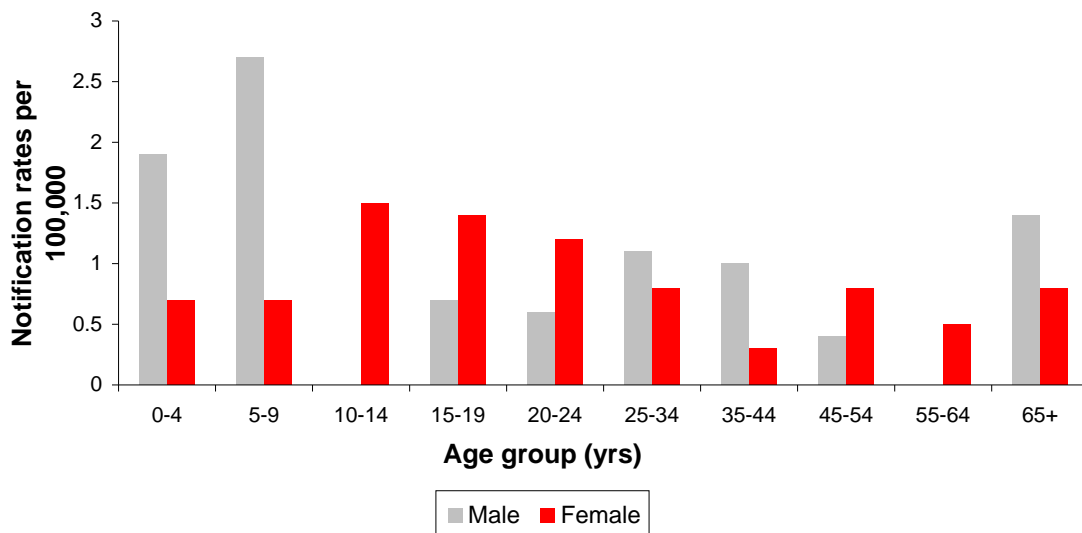


Figure 3. Age and sex-specific notification rates/100,000 population for hepatitis A, 2006

Discussion

In high endemicity countries, hepatitis A infection commonly occurs in early childhood, with transmission due to person-to-person spread or associated with common source food or waterborne outbreaks.¹

In low endemicity countries like Ireland, the highest rates of hepatitis A are usually found in young adults as many have not been exposed in childhood and hence are not immune. Young adults are also more likely to travel outside of Ireland and eat in restaurants both at home and abroad. Cases are commonly transmitted through person-to-person spread and food and waterborne outbreaks are uncommon.¹

Although the highest rates in Ireland in 2006 were in children less than 10 years, cases were distributed among all age groups. The outbreaks affected five children, two teenagers and two young adults.

There is currently no routine enhanced surveillance system for hepatitis A in Ireland, but risk factor information is collected in the context of outbreaks and country of infection is provided if this is available. In 2006, seven cases were thought to be travel-associated. Two of these were part of a family outbreak associated with travel to Pakistan. The two other outbreaks involved person to person spread among family and extended family members.

Outside of Ireland, two large outbreaks were reported in different regions of Bulgaria in 2006.⁵ The first involved at least 113 confirmed cases and a further 92 suspected cases, and was probably associated with contamination of the drinking water supply.^{5,6} The second involved 1,364 suspected cases and was in an area with a high proportion of people belonging to the Roma ethnic minority. Sanitation and hygiene in this area are very poor with problems including the presence of illegal dung-hills, a degraded sewage system and an irregular water supply.^{5,7}

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