

Hepatitis A

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The virus is almost always spread through the fecal-oral route either by direct contact with infected persons or indirectly through ingestion of fecally contaminated food or water, especially raw or undercooked shellfish.

The virus can survive in a dried state for at least a week in ambient conditions and can survive in water for as long as 10 months.

Person-to-person transmission, including sexual contact, is another mode of transmission.

HAV infections are usually effectively controlled by the host with elimination of the virus;

High-income regions (Western Europe, Australia, New Zealand, Canada, the United States, Japan, the Republic of Korea, and Singapore) have very low HAV endemicity levels and a high proportion of susceptible adults, low-income regions (sub-Saharan Africa and parts of South Asia) have high endemicity levels and almost no susceptible adolescents and adults, and most middle-income regions have a mix of intermediate and low endemicity levels.

Summary of results of HEV and HAV found in urban sewage samples ^a

Site	Period of sampling	HEV-Positive samples/total analyzed	HAV-Positive samples/total analyzed
Barcelona, Spain	October–November 1994	0/2	1/2
	May–June 1995	0/2	1/2
	February–April 1996	1/2	1/2
	September–October 1997	0/3	2/3
	January 1998	0/1	1/1
	March–April 1999	1/2	2/2
	June–December 2000	2/15	13/15
	January 2001–January 2002	16/19	NT
Total (Barcelona)		20/46 (43.5%)^b	21/27 (77.8%)^b
Nancy, France	March 1998	1/4	3/4
Umeå, Sweden	September–October 1997	0/4	1/4
Patras, Greece	June–July 1999	0/5	1/4
Washington, DC, USA	December 1999	1/5	5/5

Intervening to reduce inequalities in infections in Europe.

Semenza JC, Giesecke J.

Am J Public Health. 2008 May;98(5):787-92. Epub 2008 Apr 1.

Portugal Indicators of poverty (crowding index and level of maternal education) were independent predictors of hepatitis A infection among students aged 6 to 19 years attending public and private schools.⁴⁵

A survey on hepatitis A in Portuguese children and adolescents

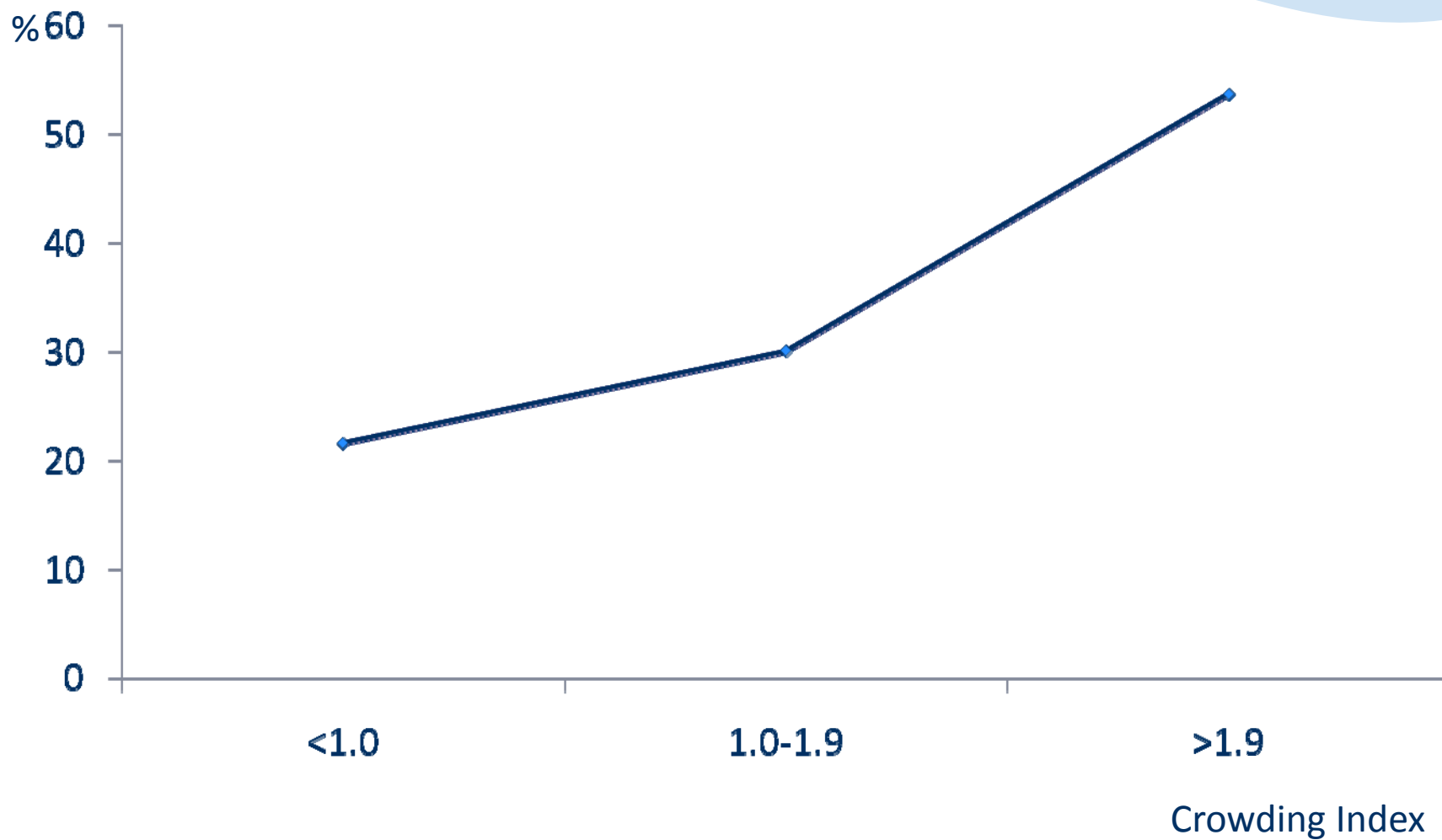
H. Barros, F. Oliveira, H. Miranda

Journal of Viral Hepatitis Volume 6, Issue 3, pages 249–253, May 1999

Anti-HAV Prevalence (6-19 yrs)

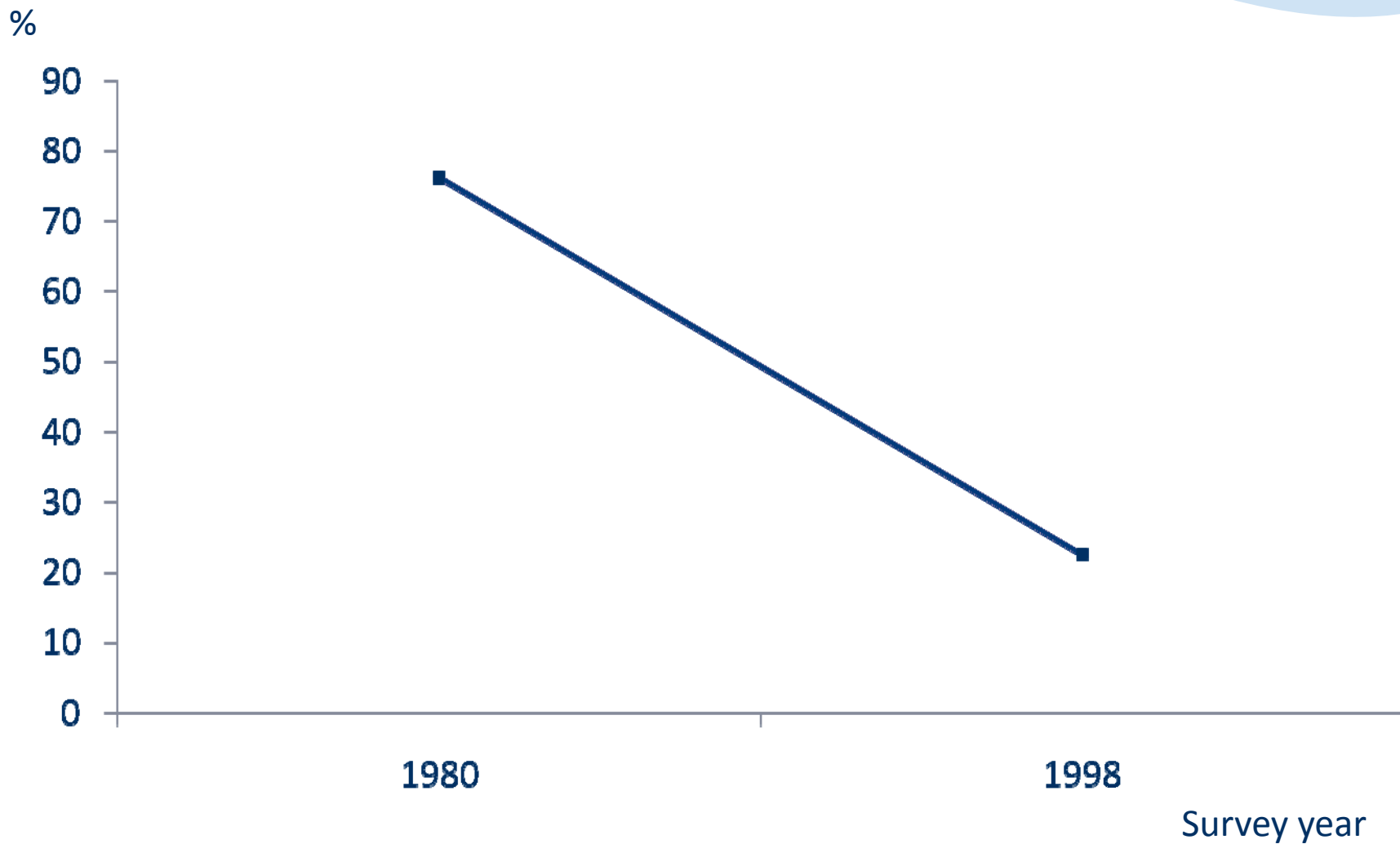


Crowding Index (Inhabitants/room)



Porto, Portugal

Anti-HAV Prevalence (6-19 yrs)



In Catalonia (Spain), incidence rates in the whole population were 5.51 per 100,000 person-years in the 1992-1998 period and 2.98 in the 1999-2005 period, after the introduction of Hepatitis A vaccination programme. The rate reduction in the 10-19 years age group was 72.43% and was more than 45% in the 5-9 years and 20-29 years age groups. The impact was observed in vaccinated (pre-adolescents) and also in non-vaccinated age groups due to a herd immunity effect.

Dominguez A et al. Vaccine 2008;26:1737-41

Particularly in with high total anti-HAV prevalence, a high proportion of HCV-positive patients are expected to present anti-HAV positivity, making anti-HAV testing a cost-effective strategy and testing should be carried out before vaccination.

Hepatitis A & HIV

Increase severity and longer duration of disease

Possibility to interrupt HIV drugs (liver processation of the drugs high risk of liver-related side effects)

Vaccination recommended for HIV patients (especially with a low CD4 count). However, the vaccine can increase HIV viral load (temporary only) and more than one dose might be needed

http://www.hivandhepatitis.com/2010_conference/icaac/docs/1026_a.html

As vaccine preventable diseases (VPD) threaten international travelers, in Canada, the records of 37,542 ill returned travelers entered into the GeoSentinel Surveillance Network database were analyzed and 580 (1.5%) presented VPDs, 148 corresponding to acute viral hepatitis. Business travel was associated with influenza ($p < 0.001$), and longer travel with hepatitis A virus ($p = 0.02$).

Boggild AK, et al. Vaccine 2010;28:7389-95.

Hepatitis A is one of the most common vaccine-preventable diseases in travelers to developing world countries, and has the highest mortality and morbidity rates of any vaccine-preventable infection in travelers.

International travel is the predominant risk factor for HAV transmission in low endemicity communities and countries.

Health care providers should encourage vaccination of at-risk travelers

Vaccines should prevent disease and disease consequences.

For hepatitis A, the time from virus discovery to vaccine availability was 2 decades, and the time from vaccine availability to fulfillment of the vaccine's promise may be even quicker—the vaccine dividend has been dramatic.

Jules L. Dienstag

Hepatitis A: The Vaccine Dividend. *The Journal of Infectious Diseases*
2008;197:1220–1222