

## Portugal

|   |  |
|---|--|
| <b>Population (January 2013):</b>               | 10 487 289   |
| <b>Human development Index (2013):</b>          | 0.822  |
| <b>HAV vaccine recommendations:</b>             | HAV vaccination is recommended for:<br>1. travellers to high or intermediate endemic countries<br>2. adolescents and adults with chronic liver disease<br>3. for outbreak control. |
| <b>Seroprevalence studies by quality score:</b> | score 0: 3 studies;<br>score 1: 3 studies;<br>score 2: 2 studies   |
| <b>Seroprevalence studies timeframe:</b>        | 1983–2007  |

Seroprevalence assessment: **low**  
Incidence assessment: **very low**  
Susceptibility in adults: **low**

The only study published in Portugal before 1990 (Lecour 1984), estimated an HAV seroprevalence to be above 50% by 15 years with less than 90% seroprevalence by 10 years (Figure 1).

Out of 5 studies estimating HAV seroprevalence in Portugal between 1990 and 1999, only three provided estimates of seroprevalence by 30 and 15 years old. The seroprevalence estimates are above 50% in all 3 studies by the age of 30; while only one study reports seroprevalence above 50% by the age of 15 (Figure 1).

Two studies conducted after 2000 estimated HAV seroprevalence to be around or over 50% by the age of 30 . Therefore, Portugal likely transitioned from intermediate to low endemicity in the 1990s (Figure 1), and remains a low endemicity country after 2000.

**Portugal\_Table 1. Hepatitis A seroprevalence level by time period**

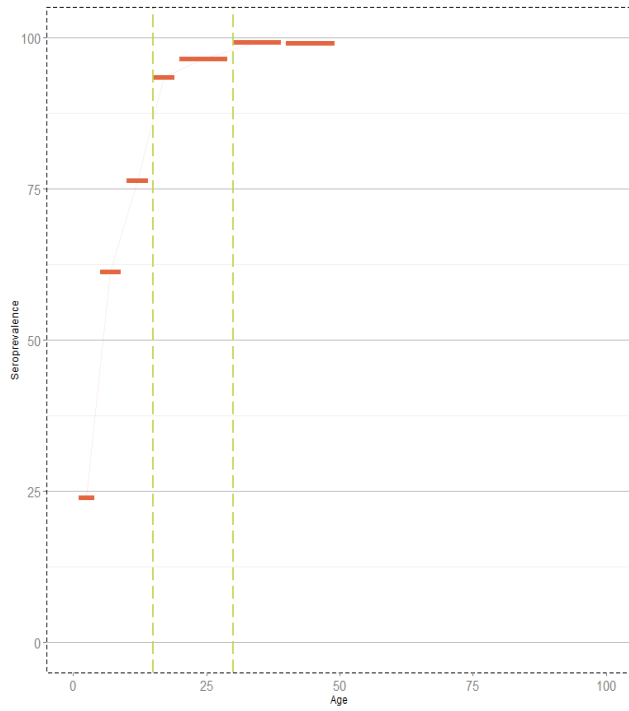
|           | Very low endemicity | Low endemicity | Intermediate endemicity |
|-----------|---------------------|----------------|-------------------------|
| 1975–1989 |                     |                |                         |
| 1990–1999 |                     |                |                         |
| 2000–2013 |                     |                |                         |

Reported incidence data in Portugal is available from TESSy (Figure 2) since 2006. It shows a very low incidence below 0.5 per 100 000.

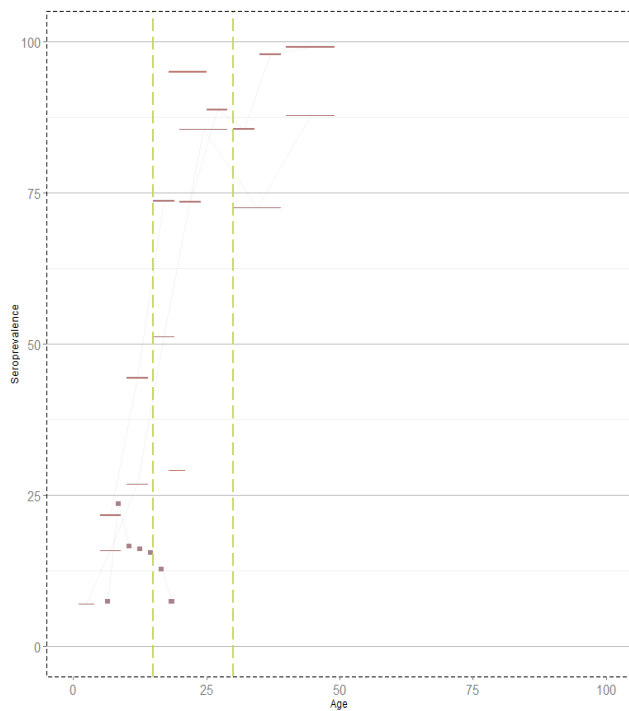
The susceptibility among adults is low, as susceptibility levels by 30 years are around 20% and by 50 years old less than 10% are susceptible.

**Portugal\_Figure 1 (panel a).** Summary of seroprevalence in Portugal, by age and time period.

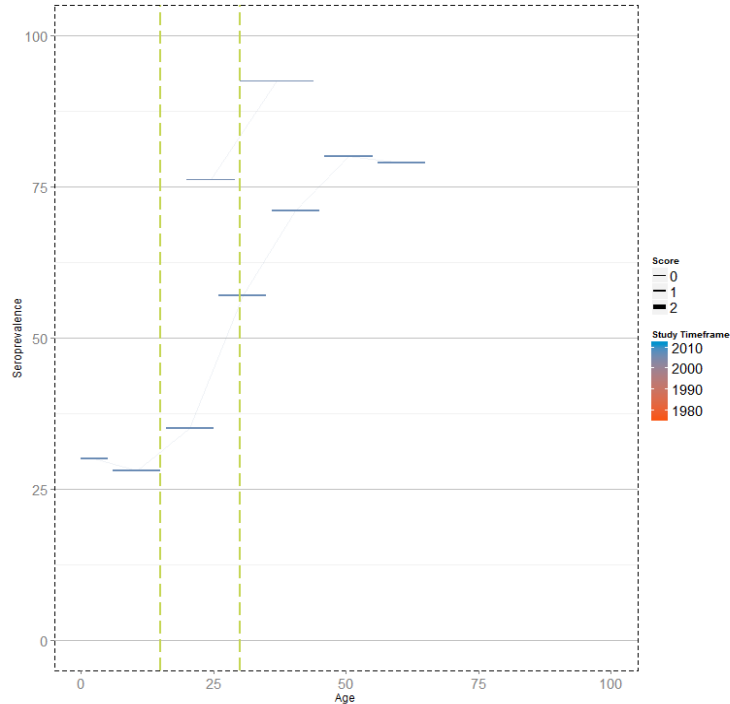
Panel a.1: 1975–1989



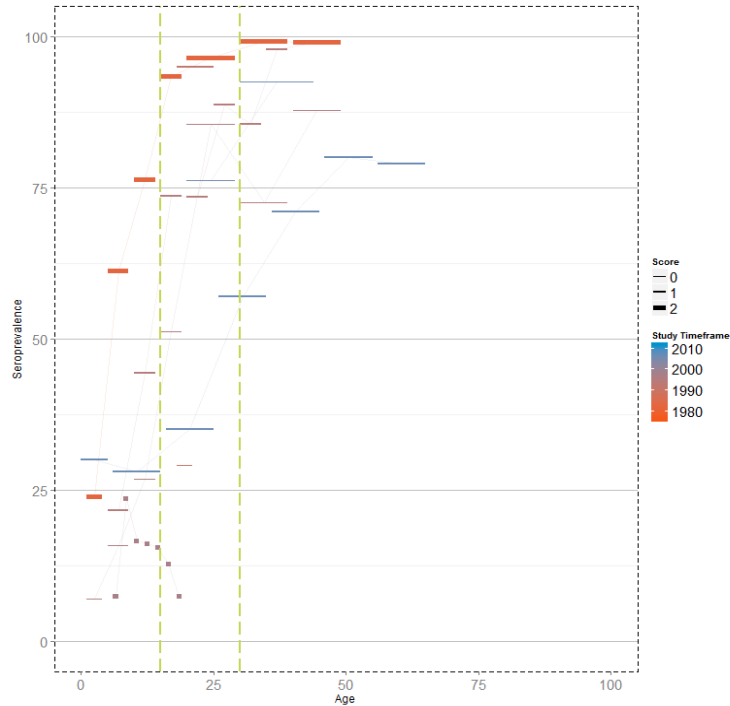
Panel a.2: 1990–1999



Panel a.3: 2000–2013



Portugal\_Figure 1 (panel b). Summary of seroprevalence in Portugal, by age and time period (1975–2013).



**Portugal\_Figure 2. Reported incidence of hepatitis A, Portugal, 1989–2013.**

## Bibliography

1. Antunes H, Neiva F, Estrada A. Learn more in preventing infants' hepatitis a: The prevalence of hepatitis a virus antibody in portuguese pregnant women population. *J Pediatr Gastroenterol Nutr.* 2009;48:E65-E6.
2. Barros H, Oliveira F, Miranda H. A survey on hepatitis A in Portuguese children and adolescents. *J Viral Hepat.* 1999 May;6(3):249-53.
3. Cunha I, Antunes H. [Prevalence of antibodies against hepatitis A virus in a population from northern Portugal]. *Acta Med Port.* 2001 Sep-Dec;14(5-6):479-82.
4. Lecour H, Ribeiro AT, Amaral I, Rodrigues MA. Prevalence of viral hepatitis markers in the population of Portugal. *Bull World Health Organ.* 1984;62(5):743-7.
5. Leitao S, Santos RM, Santos JC, Ferreira R, Goncalves FN, Coutinho P, et al. Hepatitis a prevalence in rural and urban Portuguese populations. *Eur J Intern Med.* 1996;7(2):119-21.
6. Macedo G, Ribeiro T. Hepatitis A: Insights into new trends in epidemiology [1]. *Eur J Gastroenterol Hepatol.* 1998;10(2):175.
7. Marinho RT, Valente AR, Ramalho FJ, de Moura MC. The changing epidemiological pattern of hepatitis A in Lisbon, Portugal. *Eur J Gastroenterol Hepatol.* 1997 Aug;9(8):795-7.
8. Pereira S, Linhares I, Neves AF, Almeida A. Hepatitis a immunity in the district of Aveiro (Portugal): An Eleven-year surveillance study (2002-2012). *Viruses.* 2014;6(3):1336-45.