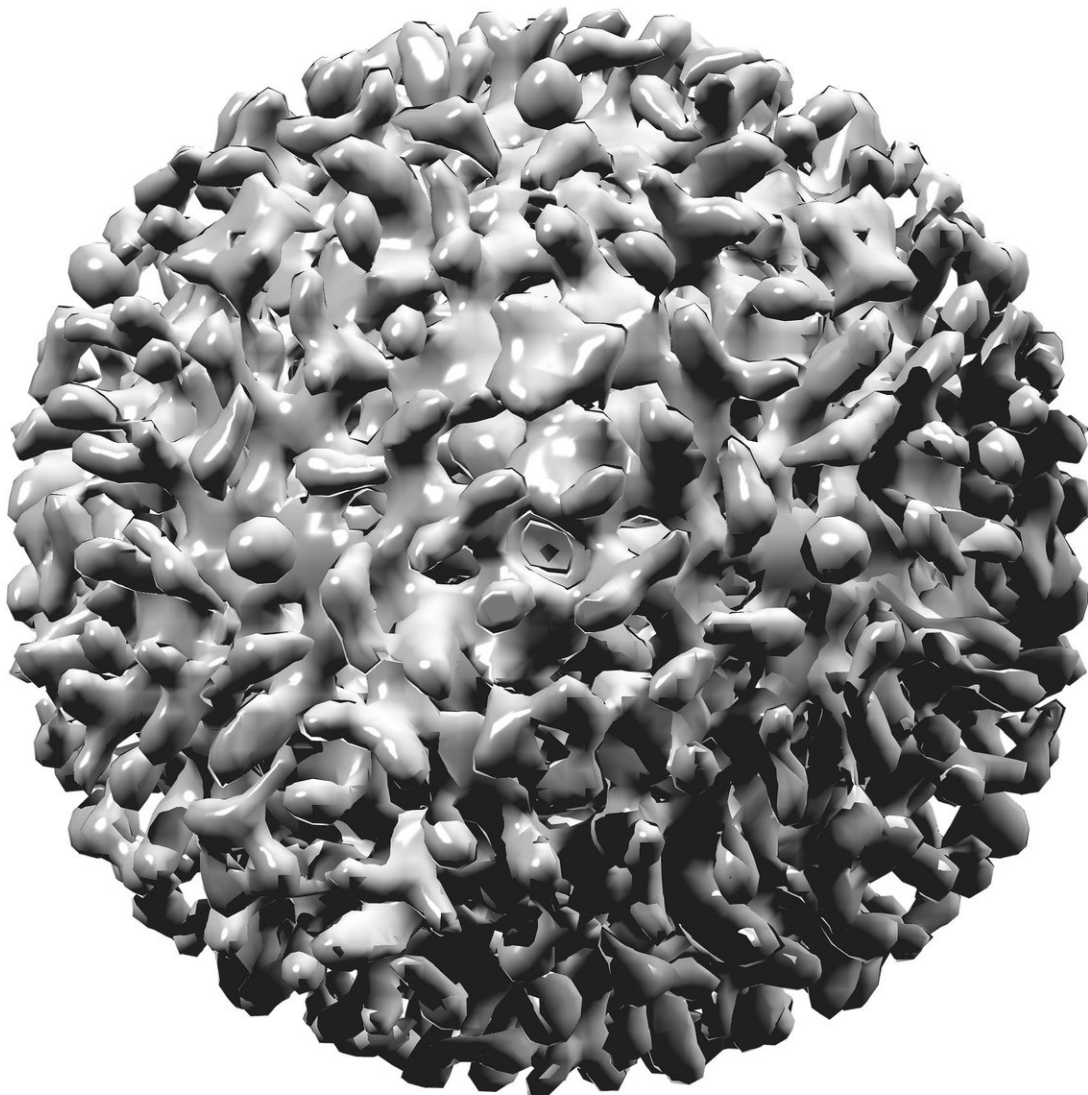


# Closing the gap: Finding undiagnosed hepatitis C infections after blood transfusions

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What is the incidence of viral hepatitis caused by blood transfusions before and after Sweden introduced screening of blood in the early 1990s? In an article published in *Eurosurveillance* ahead of World Hepatitis Day on 28 July, the authors also try to estimate how many people of those who were infected with hepatitis B and C through blood transfusion still live with undiagnosed hepatitis.

Transmission of viral hepatitis via [blood transfusion](#) or through the use of plasma-derived products is rare in Europe nowadays due to effective [blood](#) safety programs which include exclusion criteria for donors and blood screening for hepatitis B (HBV) and C (HCV). Large numbers of infected [blood donors](#) and recipients of blood transfusions have been identified since screening was implemented around the year 1990.

The Swedish public health agency estimated in 2015 that between 35,000-45,000 people in Sweden are living with diagnosed HCV. A similar estimate for HBV does not exist for Sweden.

Dahl et al performed a [retrospective cohort study](#) based on different nationwide data sources covering Sweden's transfusion experience from 1968 to 2012 and nationwide notified infections. The aim was to estimate the past and present burden of transfusion [transmission](#) of all types of viral hepatitis and to find undiagnosed infections with hepatitis C virus (HCV).

A total of 1,146,307 transfused patients were included in the analysis of HCV transmission for the study. Some 12 000 patients had received at

least one transfusion from a donor in one of the strata that were identified as substantial and statistically significant risk increases, namely patients transfused before 1992 with units from a donor with a subsequent HCV diagnosis.

Based on this, the [data analysis](#) by Dahl et al identified 1,180 transfused patients and 44 blood donors who they consider at a high risk of being infected with HCV and who are still alive, living in Sweden and had not yet been diagnosed with HCV infection at the end of follow-up in 2017.

## **No signs of HBV transmission via blood transfusion since 1992**

"For hepatitis C, we found ongoing transmission in Sweden before the anti-HCV blood screening was fully implemented in 1992. After that, transmission of HCV decreased to undetectable levels. Our study did not show any signs of hepatitis B transmission through transfusions after 1992", says Gustaf Edgren, associate Professor of epidemiology at the Swedish Karolinska Institutet. "Those people, that we have identified as still undiagnosed with hepatitis C should be tested and offered treatment."

The study showed only one possible case of transmission of hepatitis A after blood transfusion in Sweden. And even though no HEV transmission related to [transfusion](#) was identified in this study, an earlier study found that one in 7,896 Swedish plasma donations were positive for HEV RNA, which indicates that this transmission route probably also happens in Sweden.

The study was based on notified infections only, which limits its sensitivity as it depends on the extent to which infections had been diagnosed in Sweden. Which, in turn can also depend on whether the

hepatitis infection is symptomatic.

**More information:** Dahl Viktor et al. Transmission of viral hepatitis through blood transfusion in Sweden, 1968 to 2012. *Euro Surveill.* 2020;25(29):pii=1900537. [DOI: 10.2807/1560-7917.ES.2020.25.29.1900537](https://doi.org/10.2807/1560-7917.ES.2020.25.29.1900537)

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