

# Acute Hepatitis in children in United Kingdom and Republic of Ireland Beginning May 2022

## Outline of Study

The British Paediatric Surveillance Unit has now started collecting data on acute hepatitis in children in England, Wales, Northern Ireland and Republic of Ireland. This study is urgently needed to understand viral, non-viral or unidentified causes of this apparent increase in cases of acute hepatitis reported to the UKHSA leading to unprecedented number of liver transplantation in previously healthy children. The study will increase awareness of the condition among doctors and the public, improve early recognition, and potentially enhance the way we look after children with acute hepatitis and develop national strategies to further prevent such cases occurring in the first place.

Children with acute hepatitis can become very unwell with fever, jaundice, abdominal pain and vomiting. In some children, the condition can be so severe that it could lead to liver failure and liver transplantation. Most cases of acute hepatitis in children are caused by viruses such as hepatitis A and hepatitis B viruses, although other viruses and bacteria can also cause acute hepatitis. Between 2014 and 2015, the BPSU identified only 81 cases acute hepatitis among whom only two required liver transplantation. Since early April 2022, UKHSA has received reports suggesting unusually high numbers of acute hepatitis cases not caused by hepatitis viruses (A-E) in otherwise healthy children. The earliest cases occurred in January 2022. There is no known association with travel, SARS-CoV-2 infection or vaccination. Adenovirus was identified in many of the cases. Similar cases have been reported in other countries including Ireland, United States, Spain and New Zealand among others.

This collaborative study between the BPSU and the UKHSA has been developed to rapidly collect information about children who developed acute hepatitis since 01 January 2022. We are particularly interested in finding out the cause of acute hepatitis among the recent cases. We will also collect information about their symptoms when they were first diagnosed, what tests were performed, how long they stayed in hospital, what treatments they received and whether they completely recovered from their illness or had any continuing health problems after 6 and 12 months. By collecting information about all cases of acute hepatitis in children, we will have a better idea of the different viruses that are currently responsible for this condition and also to identify cases where no cause was determined.

We also hope that this surveillance will raise awareness of the condition among paediatricians. More information can be found on the [Royal College of Paediatrics and Child Health website](#). The BPSU surveillance will provide useful information about the condition for doctors looking after children with such conditions, public health specialists and researchers who would like to better understand the condition and develop effective treatments

**Duration:** BPSU surveillance will be undertaken for 13 months, commencing on 01 May 2022 (reporting cases from 1 January 2022).

**Case definition:** Any case where the clinician has made a clinical diagnosis of acute hepatitis with the following:

- (i) **discrete onset of symptoms suggestive of hepatitis** (e.g. fever, jaundice, abdominal pain, fatigue, loss of appetite, rash, itch, joint or muscle ache, dark urine, pale coloured stools, nausea or vomiting); AND
- (ii) **elevated serum alanine aminotransferase (ALT) levels (>500IU/L)**
- (iii) **age between 1 month and 15 years (inclusive)**
- (iv) **presenting to hospital any time from 1<sup>st</sup> Jan 2022**

## Reporting instructions

The UK Health and Security Agency (UKHSA) in collaboration with the British Paediatric Surveillance Unit (BPSU) is following up cases of acute hepatitis identified through the orange card reporting system. Please complete the form if your patient meets the case definition above. **Please report any case of acute hepatitis that occurred from 1 January 2022 irrespective of whether an infectious agent is identified.**

This study includes acute hepatitis cases occurring in England, Wales, Northern Ireland and Republic of Ireland.

**Website:** <https://www.rcpch.ac.uk/work-we-do/bpsu/study-acute-hepatitis>

**Funding:** UK Health Security Agency

**Ethical approval:** Public Health England (PHE; London, England, UK) has legal permission under Regulation 3 of the Health Service (Control of Patient Information) Regulations 2002 (<http://www.legislation.gov.uk/ukxi/2002/1438/regulation/3/made>) to conduct national surveillance of communicable diseases.

Public Health Wales, through the establishment order legislation, is required to conduct surveillance of communicable diseases in Wales. [<https://www.legislation.gov.uk/wsi/2009/2058/article/3/made>] and as such, individual patient consent is not required.

We are working to get permission for Northern Ireland and Ireland as a matter of urgency

**Public patient involvement:** Supported by the Children's Liver Disease Foundation (<https://childliverdisease.org/>)

**Further information:** If you would like any advice regarding the eligibility of a particular case for inclusion in the study please contact:

Study Lead: Dr Ifeanyichukwu Okike, Consultant Paediatrician, UKHSA, 61 Colindale Avenue, London NW9 5EQ, United Kingdom.

E-mail: [iokike@nhs.net](mailto:iokike@nhs.net)

Study Coordinator: Annabel Powell, UKHSA, 61 Colindale Avenue, London NW9 5EQ, United Kingdom

E-mail: [Annabel.powell@phe.gov.uk](mailto:Annabel.powell@phe.gov.uk)