ISARIC4C Incidence series study of elevated liver transaminases

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Background

A series of cases of severe hepatitis in young children was recognised in central Scotland in March 2022. The aetiology is unknown but an infection or co-infection is a strong possibility. It is possible that this outbreak has been more widespread. In particular, milder, self-limiting disease may not have been recognised.

Aim

To determine if an increase in the proportion of elevated transaminases has occurred, where, and over what period.

Method

A rapid, pragmatic survey of clinically-measured transaminase levels.

Data collection

In order to comply with information governance requirements, eliminate the risk of confidential disclosure, and make use of routine lab data, the following summary data will be collected in csv format from hospitals:

We will count the number of *hospital inpatients* tested for blood levels of AST or ALT for whom the result was >2-fold greater than the upper end of the reference range* on at least one occasion, and the total number of patients for whom AST or ALT was measured:

- for each month between Jan 2018 and March 2022 inclusive
- for each age bracket in this list: <3wks, 3wks-5y, 6-16y, 17-50y, 51–80y, >80

* Please use the same reference range for all age groups: The reference range for your laboratory at the time of the test, for patients aged 5yrs. e.g. If the

upper end of reference range for AST in a 5-year-old was 50 iu/ml in March 2018, count all patients with AST $>$ 50 iu/ml for that month.

Additional data will be collected from each contributing laboratory:

- location of hospital
- institutional email addresses of contributing scientists

Please upload data on this csv template. If you are uploading data from multiple hospitals, please use a separate file for each one.

Analysis plan

Proportions will be summed at a regional level and examined over time to observe trends. Pre-specified comparisons between the same months in 2022 and pre-pandemic years (2019 & 2018) will be performed by region.