

SARS-COV-2 confirmed or probable infection

Background

COVID-19 is an acute respiratory illness caused by infection with the novel coronavirus SARS-CoV-2. COVID-19 was characterised by the World Health Organisation as a pandemic on 11 March 2020, and has led to millions of cases and hundreds of thousands of deaths worldwide. Children have been underrepresented in reported cases, and there are a number of case reports which suggest that the illness is generally less severe in children than adults. New Zealand data show that over half (58%) of the cases in under-15 year olds are probable rather than confirmed cases. Only one-fifth of cases in people aged 15 years or older are probable cases.

The proposed surveillance study will identify paediatric cases with severe symptoms requiring hospitalisation. The questionnaire will provide information about the clinical course for these children, which is not available from other data sources. An ancillary question will collect qualitative data about the impact of COVID-19 on child health services overall.

Case definition

Confirmed case: A child aged under 15 years who is hospitalised overnight, or who dies, with laboratory definitive evidence of SARS-CoV-2 infection.

Probable case: A child aged under 15 years who is hospitalised overnight, or who dies, and who meets the criteria for a probable case of COVID-19

Notes

Laboratory definitive evidence requires detection of SARS-CoV-2 from a clinical specimen using a validated NAAT (PCR) OR detection of coronavirus from a clinical specimen using pan-coronavirus NAAT (PCR) and confirmation as SARS-CoV-2 by sequencing OR significant rise in IgG antibody level to SARS-CoV-2 between paired sera (when serological testing becomes available).

Criteria for a probable case are that the case meets the clinical criteria for COVID-19 AND other known aetiologies that fully explain the clinical presentation have been excluded AND the case either has laboratory suggestive evidence OR for whom testing for SARS-CoV-2 is inconclusive; OR who is a close contact of a confirmed case that either meets the clinical criteria and for whom testing cannot be performed

OR who is a negative result but a public health risk assessment indicates they should be classified as a probable case.

Clinical criteria for COVID-19 are any acute respiratory infection with at least one of the following symptoms: cough, sore throat, shortness of breath, coryza, anosmia with or without fever.

Laboratory suggestive evidence requires detection of coronavirus from a clinical specimen using pan-coronavirus NAAT (PCR)

Duration

Information will be collected weekly, subject to ongoing review. Follow-up as required if more information needed.

Delay in paediatric care study

Background

The paediatric impact of the COVID-19 pandemic seems to be primarily a secondary one, with the focus being on the management of what is an 'adult' disorder, and with very little or no emphasis on the consequences for children, and for some other medical services.

The weight given to acute infection with coronavirus-like symptoms in adults, and the fear associated with the resultant illness, may affect the context of otherwise 'usual' acute and chronic illnesses in children.

As a consequence, we are adding a study to collect information from all New Zealand paediatricians about delays in the presentation of unwell children to hospital. The precise definition of what a delay constitutes is very difficult, so we have decided to collect a relatively wide dataset initially, and then to restrict this as a *post-hoc* procedure if this will be more practical. We are asking for weekly reporting of delays in the presentation of children to paediatric care, as we think that this is the most likely to yield a coherent body of data.

This study is different from the majority of surveillance studies which are set up to ascertain the occurrence of a specific condition. Rather, it is designed to assess a process, hence the case definition being one of an impression of a delay rather than a specific period of delay.

This study is based on a similar study undertaken by Uned Oruchwyliaeth Bediatrig Cymru (the Welsh Paediatric Surveillance Unit). We acknowledge with thanks the permission given to adapt the protocol and questionnaire used.

Case definition

Any child where the responsible paediatrician feels there has been a delay longer than what they would normally expect in a child's hospital presentation, admission, clinical review, investigation, treatment or discharge, or a complication, that may be due to the COVID-19 pandemic and response.

Duration

Information will be collected weekly, subject to ongoing review; there will be follow-up only if required to verify impression.