COVID-19 - service evaluation and audit on the care needs of children admitted to hospital (England)

Research & Evidence team
Run by NHS England, this aimed to provide important information on the clinical aspects of COVID-19 while also determining the care needs of children admitted to hospital with COVID-19.

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This data is no longer being updated and the below charts are up to date as of 31 July 2020.

About the service evaluation and audit

COVID-19 is responsible for the global pandemic currently sweeping across the world. As a new virus there is little known about the impact that it has on children, the course of the disease and which children are at higher risk of respiratory failure and death.

It is possible that COVID-19 causes more severe disease in children with significant co-morbidities including long term respiratory conditions, immunocompromise, congenital heart disease and arrythmias or neuromuscular conditions. In addition, there may be early predictors of severity that have not yet been recognised and therapeutic strategies that are more effective than others.

This service evaluation and audit aims to provide important up-to-date information to
clinicians relating clinical aspects of COVID-19 while also determining the care needs of children admitted to hospital with COVID-19.

Being able to respond to these data that will emerge as the pandemic progresses will help clinicians to plan for the service requirements of these patients, particularly the need for intensive care support. In addition it will be used to identify any populations of children who are at higher risk from SARS-CoV-2 infection to identify groups who may need to isolate more stringently.

The study will collect data in two parts. The first part will collect the baseline data on all children confirmed as having COVID-19 and requiring admission to hospital, or while an inpatient (Part 1). Part 2 will be used to determine the course of disease, therapeutic strategies used and level of care required. If a patient has a short stay in hospital, a single Part 2 form can be completed for the entire stay with documentation of the maximum level of respiratory/nutritional etc support required.

The data collected will complement the data on incidence of COVID-19 which is being collected by Public Health England and the UK-Clinical Characterisation Protocol (CCP), but intends to provide real-time information to clinicians so that they feel armoured with the most up-to-date information when managing the care of these patients.

You can download below the protocol and a letter from Simon Kenny, National Clinical Director for Children and Young People, NHS England and Russell Viner, RCPCH President.

Go to service evaluation and audit

We understand some clinicians are not able to access the online data collection for this service evaluation and audit from their Trust desktop computer. We recommend you instead use your smartphone or tablet to access the system. If you have any question about this programme, please contact rachel.harwood@liverpool.ac.uk and i.sinha@liverpool.ac.uk.

Data processing and confidentiality

All data will be anonymised prior to publication. In some cases there may be small numbers of patients included within groups (ie less than 5). While it is normal practice to not display aggregate data with <5 patients per group, due to the small numbers of patients currently affected and the pressing need for information to guide decision making, it has been decided that these data will be presented.

Results

The data displayed below have been collected using the online tool www.covidinchildren.co.uk. It does not represent every child in England who has been admitted to hospital with COVID-19 as reporting is not mandatory. Other groups are collecting additional data about children with cancer and those admitted to PICU (PICANet) but we encourage reporting on both forums. BPSU have a separate study on neonates. This data set is intended to give an overview about COVID-19 in children in England and Wales, to enable service provision to be appropriately planned in the coming weeks and months.
Summary and analysis of the results

As of end July 2020, 222 children who have been hospitalised with COVID-19 infection have been reported to this audit and service evaluation from 56 hospital trusts in England.

We find that the majority of children are very well with this. Less than 10% require high dependency or intensive care and less than 25% require any form of respiratory support.

Children present to hospital most commonly with fever, cough, lethargy and shortness of breath but up to 12% of children can be asymptomatic (i.e., attending hospital for something else and being swabbed routinely). Nine percent of children have an additional diagnosis to COVID-19, including blood culture confirmed sepsis, urinary tract infection and appendicitis, highlighting the need to be aware of co-diagnosis in COVID-19 positive children.

These data do not tell us whether children with pre-existing co-morbidities are more likely to contract COVID-19 than children without co-morbidities. However, we do see that for hospitalised children with COVID-19 the most common co-morbidities are Neurological, Respiratory and Oncological or previous Bone Marrow Transplant. It is reassuring that there has not been an increase in the number of children with COVID-19 with the re-opening of UK schools.

Deeper data analysis is being performed to help to identify whether any patient groups are at increased risk of severe COVID-19. Ongoing data collection as schools open will enable the rate of childhood COVID-19 infection to continue to be tracked temporally.

Downloads
Protocol: NHS standard data for children admitted to hospital with suspected and confirmed COVID-19 177.38 KB
Letter from Simon Kenny and Russell Viner 322.15 KB