

In response to the COVID-19 pandemic, a **real-time child mortality surveillance system** was set up by the National Child Mortality Database (NCMD) which uses statutory child death review (CDR) notifications made within 48 hours of death by Child Death Overview Panels (CDOPs). Additional detailed information on the circumstances of the children's lives and deaths is subsequently gathered, and analysed to support learning that could reduce child deaths in future.



- Only system of its kind globally, enabling rapid review of all child deaths and providing immediate feedback to NHS England.
- Helped to guide NHS response to COVID-19 pandemic, identifying features of direct and indirect effects and guiding policy.
- By linking with national virology results, NCMD was uniquely placed to investigate the effects of both the virus and lockdown on child mortality.

Infographic used to encourage effective reporting:

Think C-H-I-L-D when reporting child death...

C	COVID-19	Children with COVID-19 (confirmed or suspected), even if they die of another cause
H	HOME	Factors relating to being in the home eg inflicted injury and child suicide
I	INFECTION	Children who die of any cause, but show signs of undiagnosed infection in the 14 days before death*
L	LOCKDOWN	Factors relating to lockdown such as changes in access to services
D	DELIVERY	Babies who die who are delivered to mothers known or suspected to have COVID-19

*Including those who meet the criteria for a Joint Agency Response (JAR) where the cause of death is uncertain or where family members have had COVID-19 symptoms.

Objectives

- Understand the nature and effect of SARS-CoV-2 on children and child mortality.
- Investigate and quantify the characteristics of children dying with COVID-19.
- Identify changes in overall rate of childhood mortality during the pandemic and lockdown.

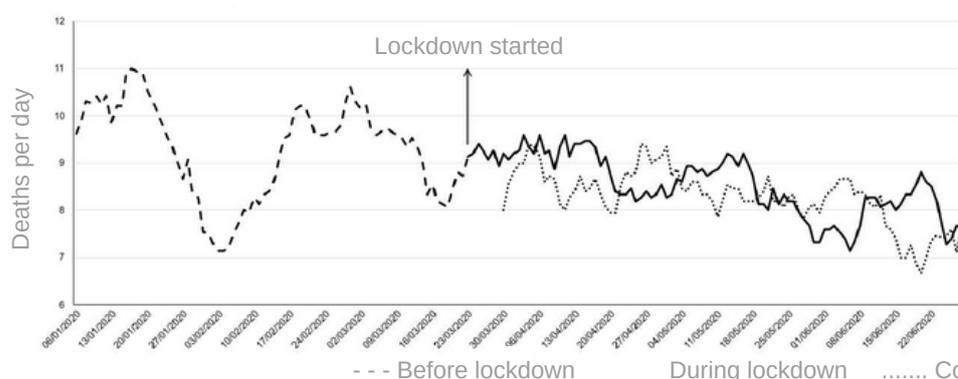
Method

We compared the characteristics of children who died in 2020, split by SARS-CoV-2 status. A negative binomial regression model was used to compare mortality rates in lockdown (23rd March-28th June 2020), with children who died in the preceding period (6 January-22 March 2020) and a comparable period in 2019.

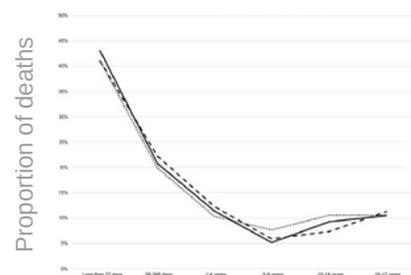
Results

- 1550 child deaths notified (23 March-28 June 2020).
- 437 of which linked to SARS-CoV-2 virology records, and 25 (5.7%) had a positive PCR result.
- PCR positive children less likely to be white (37.5% vs 69.4%, $p=0.003$) and were older (12.2 vs 0.7 years, $p<0.0006$) compared to child deaths without SARS-CoV-2.
- All-cause mortality rates similar during lockdown compared to both the period before lockdown in 2020 (RR 0.93 (0.84 to 1.02)) and a similar period in 2019 (RR 1.02 (0.92 to 1.13)).

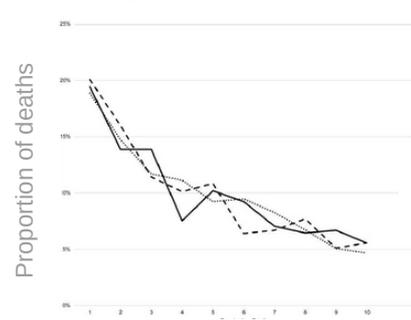
Mean number of deaths per day (Jan-June 2020)



Age of death



Deprivation decile



Conclusions

- Little to suggest excess mortality during the period of lockdown in England studied.
- Apparent higher frequency of children from BAME groups testing positive for SARS-CoV-2, consistent with adults.
- Changes in delivery of healthcare may affect chronic conditions many months later.
- Economic impacts on socio-economically disadvantaged children may take time to become apparent.
- Ongoing surveillance of overall rates of child death and the likely causes and contributory factors is essential as the pandemic continues, to provide rapid support for policy makers and information for the public and professionals.