

Comparing explained vs unexplained SUDI in England

Method

The National Child Mortality Database (NCMD) collects information on all child deaths in England, with statutory notification within 48 hours. NCMD paediatricians review notifications daily. All sudden unexpected deaths of infants (SUDI) undergo a full child death review process. SUDI deaths in the calendar year of 2020 were analysed in detail.

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Results

Of the 361 SUDI during 2020, child death reviews had been completed for 249 (69%) (73 infants aged 0-27 days; 176 aged 28-364 days). Of SUDI aged 0-27 days 26 (20%) remained unexplained; for those aged 28-364 days it was 103 (80%).

Male infants were over-represented in unexplained deaths



Male

64% of unexplained deaths
49% of explained deaths



Female

36% of unexplained deaths
51% of explained deaths

Infants living in the most deprived neighbourhoods were over-represented in explained and unexplained deaths



Least deprived

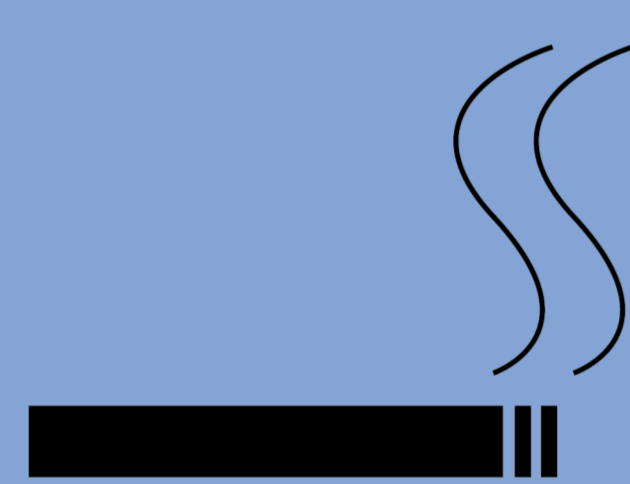
8% of unexplained deaths
10% of explained deaths



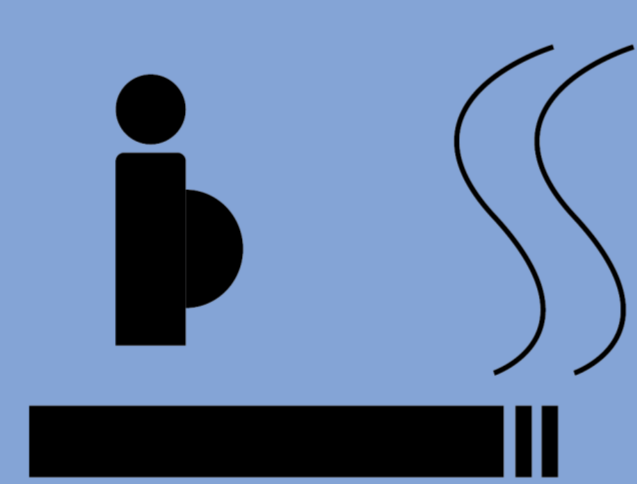
Most deprived

42% of unexplained deaths
34% of explained deaths

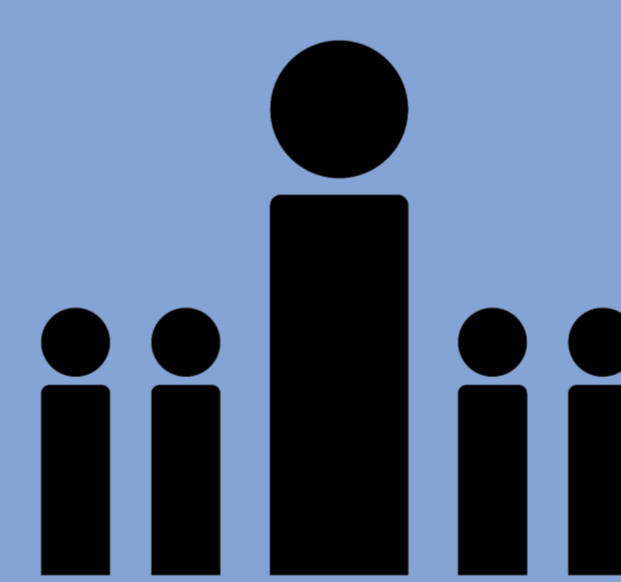
The unexplained deaths were strongly associated with:



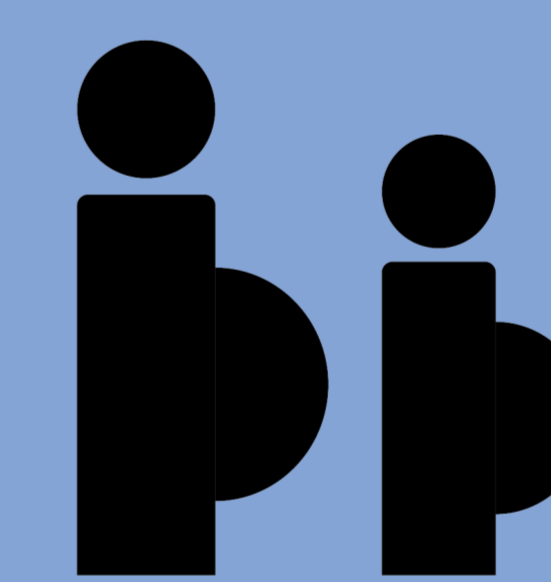
Parental smoking (69%)



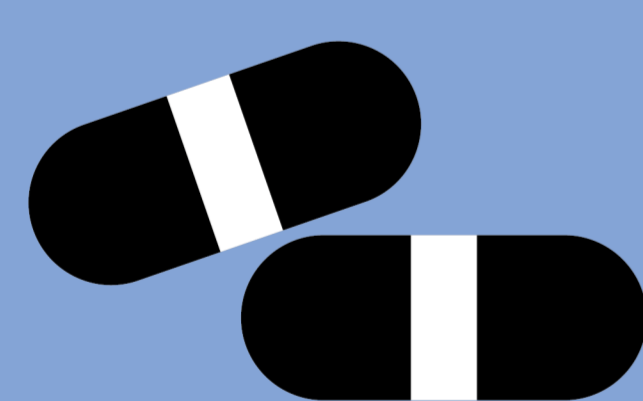
Maternal smoking during pregnancy (50%)



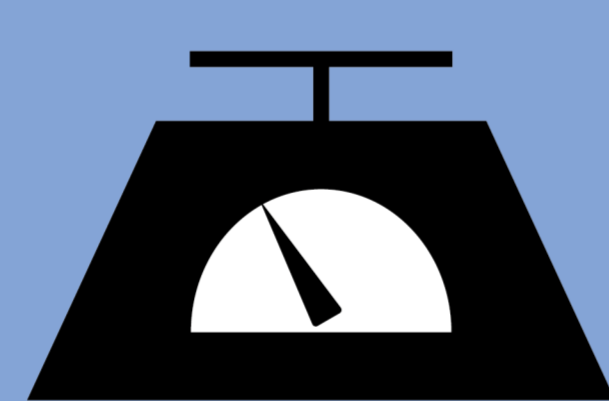
Larger families (44%)



Young maternal age (36%)



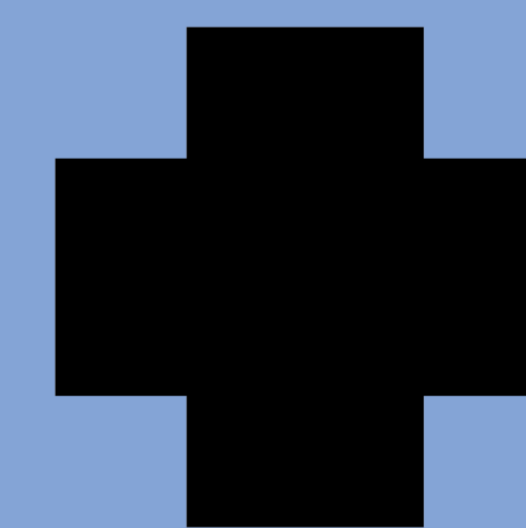
Parental drug misuse (35%)



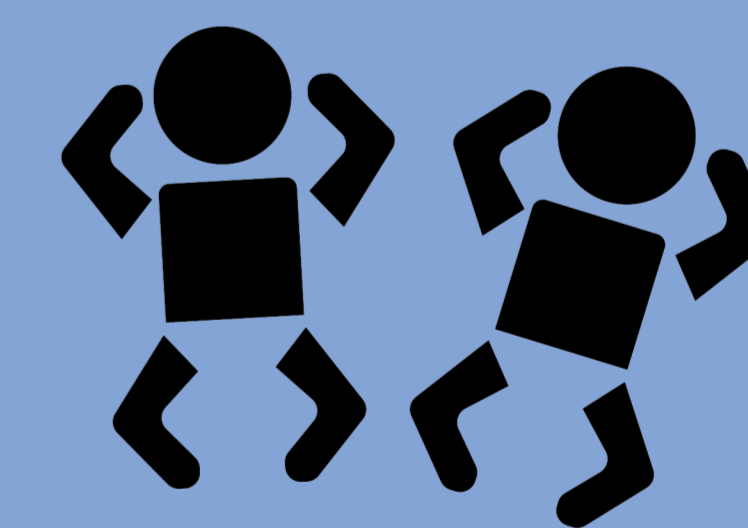
Low birthweight (29%)



Prematurity (28%)



Admission to a neonatal unit (28%)

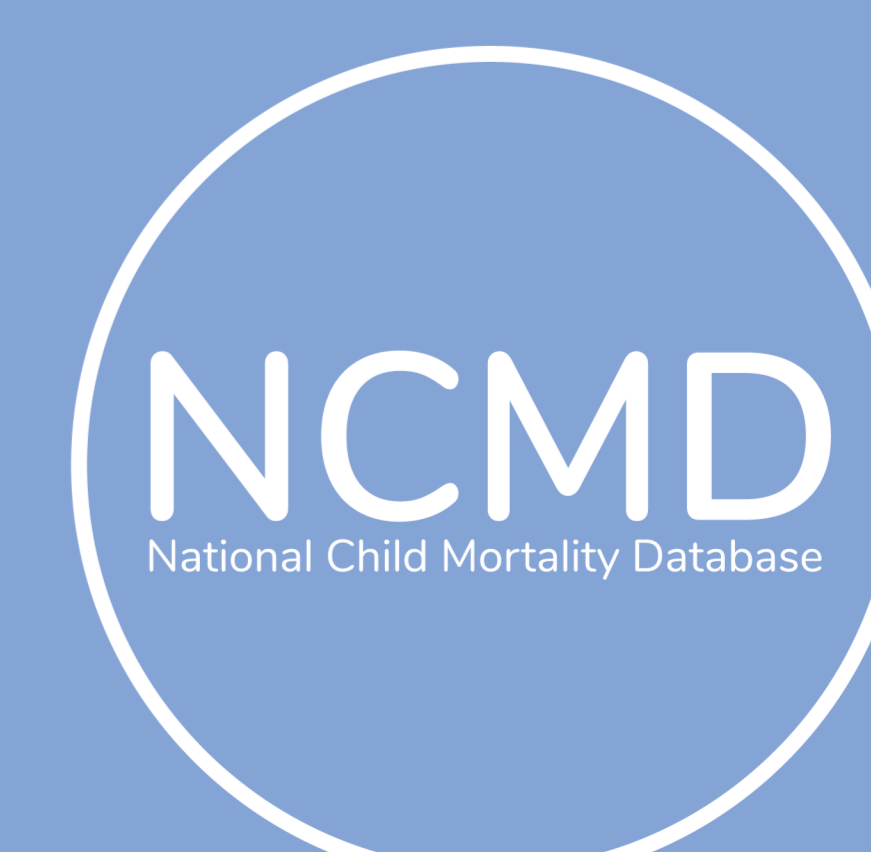


Multiple births (8%)

The profile of vulnerability surrounding the birth characteristics was even more marked among the explained deaths.

Conclusion

SUDI is a rare event. For unexplained sudden deaths in infants the link with socioeconomic deprivation is clear as is the evidence base around other potentially contributory factors such as prematurity and admission to a neonatal unit. However, the same factors are even more significant for those deaths that were eventually explained, and further research is needed to investigate the reasons for this.



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