

Extended methods

Study setting

In this study, tests requested in the emergency department and inpatient wards were grouped as inpatient tests. Children can be brought to the emergency department at the Oxford Children's Hospital by their parents or referred by their GP. From the emergency department, children can be admitted to the inpatient ward at the Oxford Children's Hospital or the Horton General Hospital in Banbury. Paediatric specialists look after children in the inpatient wards. GPs, emergency doctors, and ward paediatric teams can also refer children to outpatient clinics at both hospitals to be reviewed by paediatric specialists.

We used an age threshold of 16 for our study population as the Oxford Children's Hospital Emergency Department cares for children under the age of 16. Most adult services see children aged 16 or older, with children starting to be transitioned out of paediatric services at the age of 16.

How we calculated crude and age-standardised rates of test use

To calculate crude rates, the numerator was the number of tests, and the denominator was mid-year population estimates for the population aged 0 to 15 in Oxfordshire. Annual mid-year population estimates for Oxfordshire were obtained from the Office for National Statistics. To calculate age-standardised rates, the 2019 population was used as the reference standard as this was deemed to be most relevant to the current population.