

# Evaluation of timeliness and models of transporting critically ill children for intensive care: the DEPICT mixed-methods study

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## Plain English summary

### DEPICT mixed-methods study

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## Plain English summary

Each year, nearly 5000 sick children require emergency transport to a hospital that has appropriate intensive care facilities. How quickly specialist transport teams reach these children and how they provide clinical care during transport varies across the country. Our research aimed to understand how these differences might affect children's outcomes and service experience.

Our study statistician looked at data collected between 2014 and 2016 during the transports of around 9000 children to check if delays in reaching the child or in getting the child admitted to the intensive care unit affected their survival chances. We also asked parents of sick children transported to 24 intensive care units in England and Wales in 2018 to complete a questionnaire about their experience and 2133 did so. In addition, we conducted detailed interviews with 30 parents and 48 clinicians/managers. Our health economists looked at the most cost-effective ways to provide a high-quality transport service and our mathematicians used modelling to explore ways to enhance the current service for children.

We found that neither the time taken by the transport team to reach the child nor the seniority of the team members affected the child's survival. However, if a critical incident occurred during transport, then it was associated with a higher risk of death. The majority (> 90%) of parents reported a high level of satisfaction with the transport team. Interviews showed that staff confidence, better communication and the choice to travel with their child were key factors influencing a positive experience for parents. Modelling showed that some changes to current team allocation and availability of an additional three teams nationally over the winter months would help sick children.

National service standards should be revised to reflect our study findings and should emphasise the importance of routinely collecting patient experience measures during the transport of sick children to intensive care.



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