A scoping study to explore the cost-effectiveness of next-generation sequencing compared with traditional genetic testing for the diagnosis of learning disabilities in children

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Plain English summary

Diagnosis of learning disabilities in children

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Next-generation sequencing (NGS) techniques are new developments in genetic testing that are expected to increase the number of health-related conditions that can be diagnosed. Currently, these techniques are mainly being used for research purposes. The purpose of this study was to find out whether these techniques offer value for money when used in the NHS to help diagnose learning disabilities in children. The study found that:

- NGS technologies are at an early stage of development and it is too soon to say whether they can offer value for money when used to help diagnose learning disabilities in children
- stakeholders had very different views about how, and over what time period, NGS technologies could, or even should, be used in the NHS
- if NGS technologies were to be introduced into the NHS:
    - more staff would be needed (particularly data analysts and genetic counsellors)
    - there would be a need for more genetics-related education for NHS staff and for members of the public
    - new systems would be needed to make sure that these new technologies were used safely and fairly.

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