Interventions to reduce the risk of surgically transmitted Creutzfeldt–Jakob disease: a cost-effective modelling review

Matt Stevenson,[1*] Lesley Uttley,[1] Jeremy E Oakley,[2] Christopher Carroll,[1] Stephen E Chick[3] and Ruth Wong[1]

[1]School of Health and Related Research (ScHARR), University of Sheffield, Sheffield, UK
[2]School of Mathematics and Statistics, University of Sheffield, Sheffield, UK
[3]INSEAD, Fontainebleau, France

*Corresponding author m.d.stevenson@sheffield.ac.uk

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Plain English summary

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Plain English summary

The aims of this report were to summarise evidence relating to surgically transmitted Creutzfeldt–Jakob disease and to explore the value for money of strategies to reduce the chance of any future surgically transmitted Creutzfeldt–Jakob disease cases. Current recommendations include keeping sets of surgical instruments together for high-risk operations and using separate instruments for people born after 1996. The project involved reviewing published papers, speaking with experts and building a computer model.

The literature reviews found that Creutzfeldt–Jakob disease occurs in around 1–2 per million people and that no definite cases of surgically transmitted Creutzfeldt–Jakob disease have been observed since the 1970s. The reviews also looked for information on the possibility of patients being infected with Creutzfeldt–Jakob disease after having surgery on high-risk tissues, such as the brain and the back of the eye. They found that there was a great deal of uncertainty regarding who might have Creutzfeldt–Jakob disease, but not yet have symptoms, as well as the risk of transmission and the ability of strategies to reduce this risk.

The computer model aimed to estimate value for money of different strategies to reduce the risks of surgically transmitted Creutzfeldt–Jakob disease. However, the reviews found that some of the numbers needed for the model were not known, so experts were asked to estimate this information instead along with the range of possible values. This information included the effectiveness of different cleaning practices and the chances of infected tissue being transmitted between patients undergoing high-risk surgery.

The model found that keeping surgical instruments moist prior to cleaning was likely to save money and reduce the chance of future surgically transmitted Creutzfeldt–Jakob disease cases. However, additional measures, such as using only sets of single-use instruments, ensuring that instruments were kept together in their sets or using separate instruments for those born after 1996, appeared to be poor value for money.

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This report

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