

# The Age of BLoOd Evaluation (ABLE) randomised controlled trial: description of the UK-funded arm of the international trial, the UK cost–utility analysis and secondary analyses exploring factors associated with health-related quality of life and health-care costs during the 12-month follow-up

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## Plain English summary

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## Plain English summary

**M**any critically ill patients require blood transfusions to treat anaemia in order to maintain the body's ability to transport oxygen to cells. Donated blood is currently stored for up to 42 days in blood banks before being transfused. Before the trial, it was known that the blood changes during this storage time. There was widespread concern that older blood might be less safe and effective, but there were no large clinical trials that explored whether or not using the freshest blood (stored for 1 week or less) was better than the current standard storage time of about 3 weeks.

The Age of Blood Evaluation (ABLE) trial was an international trial undertaken in 64 intensive care units in Canada (the lead country), the UK (where the Health Technology Assessment programme funded the trial), the Netherlands and France. Just over 2500 patients who required a blood transfusion in the intensive care unit were allocated by chance to either receive blood transfusions using only the freshest blood (aged 1 week or less) whenever they needed a blood transfusion, or blood stored for the current standard time of about 3 weeks. In the UK, 359 patients participated; these patients were followed up for 12 months.

We found that a similar number of patients in each group died during the 3 months after participating in the trial (37.0% of patients in the group allocated to receive fresh blood and 35.3% of patients in the group allocated to receive standard-aged blood). We found no differences in any other important complications (organ failures, infections, length of time in hospital or transfusion complications). In the UK participants, we also found that there were no differences in patients' quality of life or illness costs between the groups (based on the 6- and 12-month follow-up points).

The study showed that there are no benefits from using the freshest blood for transfusions in critically ill patients compared with using standard-aged blood transfusions, as is current practice.



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