Are the ‘rules’ for times in setup and duration of red cell transfusion too strict?

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Background
Currently the UK Blood Services recommend the following time limits:
• ‘30 minute rule’: a unit of blood must be set up for transfusion within 30 minutes of removal from controlled temperature storage
• ‘4 hour rule’: a unit is transfused over no more than 4 hours
The scientific basis for these times is weak. There are concerns about a potential increase in bacterial growth as a unit warms up and about possible reduction in the quality of red cells. However, bacterial contamination is rare with no reports of transfusion-transmitted bacterial infection to SHOT since 2009, and only 40 in total from the start of SHOT in 1996 (Figure 1). None of these were related to extended transfusion times.

Results 1
There were no clinical adverse outcomes from either delayed set up or prolonged transfusions.

Results 2:
In both categories majority of transfusions took place on inpatient wards, 37/382 in critical care areas.

16/382 took place in a community hospital or hospice:
• Possible delays in delivery of blood to these areas
• Lack of training/de-skilling of staff who transfuse so infrequently

Conclusions
It is worrying that a proportion of the delays related to urgent or emergency transfusions.

Current guidance may be too stringent and lead to increased wastage. SHOT recently changed reporting criteria so only transfusions >5h duration need to be reported. Perhaps this duration could be further increased with more evidence. Blood Services could consider making timings more flexible.