Rapid infusion of cellular blood components during massive transfusion: identification of current practices in Australian and New Zealand hospitals

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Life-threatening critical bleeding oftentimes requires much faster infusion of blood components than normal. Rapid infusion equipment such as infusion pumps or pressure devices are used along with blood warming to raise the temperature of cold-stored blood components. If not handled appropriately, such procedures can damage cellular blood transfusion components, such as red blood cell and platelet components.

No detailed practice guidelines for the rapid infusion of cellular blood components exist. Anecdotally there appears to be variation in practice, but the extent of variation is unclear, and the potential clinical consequences of any variation are unknown.

The aim of this project is to document current practice in order to capture evidence of variation in practice and/or determine whether gaps in knowledge or awareness exist, about the use of rapid infusion methods and blood warmers that may have an impact on clinical outcomes in the setting of massive transfusion.

Evidence will be captured by a comprehensive web-based survey that will be disseminated to all clinical specialities likely to encounter an extreme massive transfusion event that necessitates rapid infusion of blood components. The survey is scheduled to be conducted in early 2018.

The results of this project are expected to identify:

- Variations in rapid infusion practices that may impact outcome for massive transfusion recipients.
- Priority areas for further targeted research, and/or development of educational programmes or clinical practice guidelines for the rapid infusion of cellular blood components.