concentration prepared, who usually prepared the drug and what current safety practices were used.

**Results:** Thirty-eight responses to the survey were received representing 29 ICUs, approximately 17% of all adult ICUs in Australia and NZ. Two specialist paediatric ICUs also responded. Seventeen respondents (45%) were currently using at least one pre-prepared infusion, most commonly heparin (8/17), epidurals (6/17) or opiates for patient controlled analgesia (1/17).

Significant variation in final concentration was observed for all infusions except insulin and esmolol. The final volume varied significantly for all drugs. Other than the small number of pre-prepared infusions, nursing staff prepared all infusions. Labelling was usually hand-written with some colour-coding. Ninety percent of respondents identified safety and 68% identified efficiency as likely to be improved by the use of pre-prepared infusions.

**Conclusion:** Significant variation exists in the preparation of commonly used infusions across ICUs in Australia and NZ. Rationalisation and standardisation of practice would improve safety and efficiency. A nationally or regionally coordinated response could potentially reduce the barrier of cost.

**Disclosure of interest:** An unrestricted research grant from Baxter HealthCare supported the conduct of this study.

http://dx.doi.org/10.1016/j.aucc.2013.10.019

**Implementing a point of care testing (POCT) service improves management of haemostatic dysfunction in cardiac surgery patients**

B. Pearse1,2, D. Wall1, I. Smith1, D. Faulke1, I. Rapchuck1, J. Fraser2, J. McGree3, L. Drake1, P. Tesar1, Y. Fung2

1 The Prince Charles Hospital, Brisbane, Australia
2 Critical Care Research Group, UQ, 7 School of Mathematical Sciences, QUT, Australia
3 Critical Care Research Group, UQ, Australia

**Introduction:** Some bleeding is an expected consequence of cardiac surgery. Excessive or uncontrolled bleeding is a complication requiring timely management and may require blood transfusion/s. Turnaround times for standard laboratory tests (SLT’s) is often too slow to guide treatment. Hence, blood products are often transfused before SLT results are available. Blood product transfusion is not without risk and is independently associated with increased risk for morbidity/mortality.

**Objectives:** To improve diagnosis of haemostatic dysfunction and bleeding management, in July 2012 we commenced the implementation of a clinician driven POCT service using rotational-thromboelastometry (ROTEM) and platelet function (Multiplate) at The Prince Charles Hospital.

**Methods:** A multidisciplinary, multimodal approach was taken and involved appointment of a project lead, identifying stakeholders, developing a project plan, educating POCT operators/interpreters, developing quality control infrastructure and monitoring/analysing outcomes.

**Results:** A comparison of post POCT implementation data with historical controls demonstrated a decrease in percentage patients receiving RBC’s (p = 2.965e−08), FFP (p < 2.2e−16) and platelets (p = 2.2e−16). Units per patient was reduced for RBC (p = 1.8413e−09), FFP (p = 5.4988e−25) and platelets (p = 8.5073e−27). A significant decrease was seen in re-exporation rate for bleeding (p = 0.0509) and median hospital LOS (p = 9.3657e−09).

**Conclusions:** Implementation of our POCT service reduced percentage of patients receiving blood products as well as quantity of products transfused. Timely results allowed clinicians to treat coagulopathy, with only those products required to resolve haemostatic dysfunction. Key to this success is a dedicated project lead and a multidisciplinary, multimodal approach involving all stakeholders.

http://dx.doi.org/10.1016/j.aucc.2013.10.020

**Measurement of temperature in critically ill adults: A systematic review and clinical practice guideline**

K. Rolls1,∗, K. Armstrong2, L. Keating3, D. Wrightson4, S. Walker5, J. Masters1

1 ACI-ICCMU, Australia
2 Bankstown ICU, Australia
3 St George ICU, Australia
4 Wollongong ICU, Australia
5 Central Queensland University, Australia

Accurate measurement of temperature is important to ensure patients receive appropriate and timely interventions to prevent significant morbidity and mortality. The clinical question underpinning this study was ‘what method/s of measuring body temperature ensures the timely identification of abnormal temperatures in critically ill adults?’

An expert nursing group undertook a systematic review to identify research published between January 2000 and May 2012, published in English and applicable to critically ill patients aged more than 13. Recommendations for practice were developed at a consensus meeting and refined using internal and external validation panels. Online surveys were used where panellists indicated their level of agreement using a 9-point Likert scale. Agreement was set as a median of equal or greater than seven. National Health and Medical Research Council guideline processes and evidence taxonomy were applied. Scottish Intercollegiate Guidelines Network quality criteria were used.

Thirty-one papers were reviewed with 24, including 17 Level III-2 studies, four systematic reviews and three guidelines, included in the final review. The most common problems were failure to ensure adequate inter-rater reliability and sample size, and application of Bland–Altman analysis.

The current evidence base revealed that the more a critically ill patient’s temperature deviates from normal the less accurate are non-core, especially tympanic and temporal artery, methods. More invasive methods should be used where identification of abnormal temperatures is time-critical and significantly important to patient outcomes.

http://dx.doi.org/10.1016/j.aucc.2013.10.021

**The mortality associated with hospital medical emergency calls (Respond Medical Emergency Team or Respond Blue)**

R. Smith1, D. Reid, E. Faraone, J. Santamaria

St. Vincent’s Hospital, Melbourne, Australia

**Introduction:** Clinical deterioration may lead to activation of hospital medical emergency systems. We sought to describe the mortality associated with these emergencies in order to better understand the implications of patient deterioration.