The Single Troponin Accelerated Triage (STAT) Chest Pain Study: Results from Phase 1
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**Background:** The majority of patients presenting to an Emergency Department (ED) with chest pain do not have acute myocardial infarction (MI). In particular, patients who have very low levels of high-sensitivity cardiac troponin (hsTn) at presentation are likely at extremely low risk. The STAT Chest Pain Study is testing the hypothesis that patients who present with very low levels of hsTn (<5 ng/L, Abbott Architect assay) >2 hours after symptom onset can be safely and quickly discharged after a single troponin measurement. Here we present data from phase 1 of the study.

**Methods:** This is a prospective cohort study recruiting all patients aged >18 yrs presenting with symptoms suggestive of possible MI to Royal Perth Hospital ED, using opt-out consent. In phase 1, patients were managed according to the current CSANZ/NHF recommended chest pain pathway.

**Results:** 1,251 consecutive patients were enrolled; of these 37% (468) were discharged directly from the ED with the remainder being admitted for further assessment. 73% (911) of patients presented >2 hrs from the onset of their symptoms, and of these 701 had an initial hsTnI <5 ng/L, representing 56% of all patients. None of these patients had an index MI or an MI in the following 30 days.

**Conclusions:** These data suggest that MI can be confidently excluded in >50% of patients presenting to ED with chest pain after a single hsTn measurement, and the vast majority could be safely discharged without further testing. This is being prospectively tested in phase 2 of the study.

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**Hypertension (045-052)**

**045**

Blood Pressure Variability and Cerebral Small Vessel Disease: a Systematic Review, Meta-Analysis and Meta-Regression
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**Background:** Recent empirical work demonstrates an association between blood pressure variability (BPV) with stroke and cardiovascular events, however, the association remains controversial. The objective of this study was to systematically review the literature and quantify the bidirectional association between intra-individual BPV and cerebral small vessel disease (CSVD).

**Methods:** A systematic review of electronic databases was performed on MEDLINE, EMBASE and SCOPUS from inception until September 2018. Eligibility criteria: Population, adult humans (over 18 years but with no upper age limit) without sub-acute stroke <4 weeks from primary care, community cohort, electronic database registry, or randomised controlled trial; Exposure, BPV quantified by any metric over any duration; Comparison, low versus high or mean BPV; Outcomes, 1) prevalent or incident CSVD or progression of CSVD, and 2) standardised mean difference in BPV.

**Findings:** Twenty-six articles were included describing 25 studies (11,481 unique brain scans, mean age 73.1 years, 48.3% female). Systolic BPV was associated with CSVD (12 studies, OR = 1.29; 95% CI 1.18 to 1.41) and there was marginal evidence of heterogeneity between BPV and mean systolic pressure effect sizes (p = 0.05 for comparison, I² = 74%). Evidence was sparse for diastolic BPV and risk of CSVD (6 studies, OR = 1.30; 95% CI 1.14 to 1.48). Small but significant differences were evident between CSVD populations systolic BPV (13 studies, Hedge’s g = 0.28; 95% CI 0.18 to 0.38) and diastolic BPV (Hedge’s g = 0.13; 95% CI 0.08 to 0.19) without heterogeneity between BPV and mean pressure effect sizes.

**Interpretation:** The association between BPV and CSVD has implications for blood pressure monitoring and management in people with CSVD.

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**046**

Development and Testing of an Evidence-based Education Package to Improve Home Blood Pressure Monitoring Accuracy, Knowledge, Technique and Patient Satisfaction
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**Background:** Home blood pressure monitoring (HBPM) is becoming ubiquitous to current hypertension diagnosis and management. Patients training using evidence-based guide- line can help improve the accuracy of their measurements. The aim of this study was to determine the effectiveness of an evidence based, patient-centered education package in improving their HBPM knowledge and technique.

**Methods:** Eligibility criteria included patients who were currently (or recommended to) performing HBPM, medically stable and not undergoing medication review. The measurement instruments were adapted from published instruments, updated with current recommendations from the Australian Expert Consensus Statement for HBPM. The results from the pre- and post-surveys were then compared to determine the effectiveness of the intervention.

**Results:** The study recruited 26 participants (18 patients, 8 nurses) from multiple locations across the south-east