3% Saline (AHS) 15 ml/kg, n=10, over 30 min. Hemodynamic parameters determined by femoral arterial thermodilution calibrated pulse contour analysis, central venous saturation (SvO₂), and intramucosal gastric pH (pHi) were recorded before and after fluid load. Non-parametric correlations between pre-infusion parameters and post-infusion changes with cardiac index increase (ΔCI) showed also stronger negative correlation. Other parameters previously proposed as predictors of fluid response in this model of hemorrhagic shock. Other pre-infusion stroke volume index (SVI) and global end diastolic volume index (GEDVI) showed strong negative correlation (r: 0.88, p: 0.000).

**Conclusion** Pre-infusion SVI and GEDVI were predictor parameters of fluid response in this model of hemorrhagic shock. Other parameters previously proposed as predictors of fluid response as SvO₂, PPV and SVV were not able to predict changes in cardiac index.

**Results** CI (median; IQR) increased from 2.1 (1.7–2.7) to 4.1 (3.6–4.6) L/min/m². There were no correlations between ΔCI and pre-infusion parameters or post-infusion changes in most parameters. Only pre-infusion stroke volume index (SVI) and global end diastolic volume index (GEDVI) showed strong negative correlation (SVI r: −0.61, p: 0.009; GEDVI r: −0.75, p: 0.001). ΔCI showed also strong correlation with SVI increase (r: 0.89, p: 0.000) and GEDVI increase (r: 0.88, p: 0.000).

**Background and Aims** Echocardiography has an important role to perform in the PICU, as it is an efficient, accurate, non-invasive diagnostic modality that can aid the intensivist in the management of the acute circulatory failure in children to Improve the hemodynamic Management. The Aim is to describe how echocardiography can answer 3 of the more commonly asked questions that arise in the PICU: Complete the clinical diagnosis, guide the therapeutics, and Repeat the measures for the evaluation.

**Methods** In this prospective study, children who had an acute circulatory failure, the evaluation of the cardiac output, contractility and the indications of filling were obtained by echocardiography. Each patient had a measurement before therapeutic and after to evaluate treatment.

**Results** In 20 children, 06 patients had septic shock, 09 with myocardial dysfunction and 5 non-cardiogenic shock. The mean pressure decreased with normal weight and less mature than those without (non-HSPDA/no PDA) (905±46 vs. 1218±43 grams; p<0.001, 28.6 ±0.3 vs. 26.2 ±0.3 weeks). Both the clinical and echo component correlated strongly with each other and with overall score (p<0.001, Kendall’s tau test. The PDA score and components significantly predicted HSPDA.

**Conclusion** The Manitoba PDA score and components significantly predicted HSPDA.

**Objectives** To determine whether a composite PDA score (Manitoba score), determined at 48–72 hours of age can predict a hemodynamically significant PDA (HSPDA) requiring closure in Infants <31 weeks.

**Results** 70 of 132 eligible neonates were studied. HSPDA was present in 24 (34%) infants, a non significant PDA in 32 (46%) and no PDA in 14 (20%). Infants with HSPDA were of lower birth weight and less mature than those without (non-HSPDA/no PDA) (905±46 vs. 1218±43 grams; p<0.001, 28.6 ±0.3 vs. 26.2 ±0.3 weeks). Both the clinical and echo component correlated strongly with each other and with overall score (p<0.001, Kendall’s tau test. The PDA score and components significantly predicted HSPDA.

**Conclusion** The Manitoba PDA score performed at 48–72 hours of age predicts HSPDA who eventually received treatment. Use of PDA score may reduce the number of infants who are treated with non significant PDA.

**Volume expansion is one of the most frequent used interventions in critically ill newborns, despite lack of hard evidence. In a case of a truly hypovolaemic patient, for example after massive hemorrhage secondary to an abruptio placentae, volume expansion is life-saving. However, volume expansion in a normo- and/or hypervolemic newborn infant is not without risk. Excessive fluid intake is associated with a disturbed neurologic outcome, an increased prevalence of chronic lung disease and an increased mortality. It would be profitable when the volume status of a critically ill newborn infant could objectively be assessed so the response to volume expansion could be predicted (‘fluid responsiveness’ - FR). The clinical assessment of the volume status is rather unreliable. Recently new dynamic parameters are introduced that reliably predict fluid responsiveness in ventilated adult patients. These variables, like ‘pulse pressure variation’ (PPV) and ‘systolic pressure variation’ (SPV), are based on arterial blood pressure variations secondary to mechanical ventilation (heart-lung interaction). This inspired us to study the phenomenon of arterial blood pressure variation in critically ill newborn infants under several clinical conditions. The (preliminary) data will be presented.

**Objective** To determine whether a composite PDA score (Manitoba score), determined at 48–72 hours of age can predict a hemodynamically significant PDA (HSPDA) requiring closure in Infants <31 weeks.

**Results** In 20 children, 06 patients had septic shock, 09 with myocardial dysfunction and 5 non-cardiogenic shock. The mean pressure decreased with normal weight and less mature than those without (non-HSPDA/no PDA) (905±46 vs. 1218±43 grams; p<0.001, 28.6 ±0.3 vs. 26.2 ±0.3 weeks). Both the clinical and echo component correlated strongly with each other and with overall score (p<0.001, Kendall’s tau test. The PDA score and components significantly predicted HSPDA.

**Conclusion** The Manitoba PDA score performed at 48–72 hours of age predicts HSPDA who eventually received treatment. Use of PDA score may reduce the number of infants who are treated with non significant PDA.