**Background:** Patients undergoing surgery are at increased risk of Acute Kidney Injury (AKI). We implemented a validated pre-operative scoring tool that predicts post-operative AKI for all patients undergoing orthopaedic surgery requiring an overnight stay at Perth Royal Infirmary. This was accompanied by an intervention bundle for patients deemed high risk of AKI.

**Methods:** The scoring tool comprises of 7 readily available parameters; age, gender, presence or absence of diabetes, estimated glomerular filtration rate, use of angiotensin converting enzyme inhibitors or angiotensin receptor blockers, number of prescribed medications and American Society of Anesthesiology (ASA) grade. An electronic tool available on smart phones and desktop computers was developed that was used to calculate the score. A pre-operative AKI score of greater than 10% was used to identify patients at high risk of AKI. The intervention bundle was created following a baseline audit of clinical practice and included guidance on peri-operative prescribing of certain medications, fluid management and post-operative renal function monitoring. Patients at high risk of AKI had a sticker highlighting this placed on the front of their medical notes. The intervention bundle was incorporated into the electronic tool and posters outlining the intervention were placed in clinical areas. Patients undergoing elective procedures were scored in the pre-assessment clinic whilst emergency patients were scored by the admitting doctors.

**Results:** The impact of our intervention was assessed over 4 Plan-Do-Study-Act (PDSA) cycles. In the first PDSA cycle, 2 out of 3 patients had the score completed inaccurately but this improved significantly during the project with all 12 cases in the fourth PDSA cycle completed accurately. In total, 27/41 (66%) patients included in the data collection had the score completed. Compliance was better amongst patients undergoing elective surgery at 21/27 (78%) compared to 6/14 (43%) for emergency patients. All patients at high risk of AKI had a sticker placed on the front of their notes and had their bloods monitored post-operatively as advised by our intervention bundle. There was also excellent compliance with the suggested medication changes. Fluid balance monitoring was advised for all patients but the outcome was similar following our intervention at 27/41 (66%) compared to 23/37 (62%) in the baseline data collection. Compliance with fluid balance monitoring was higher in patients at high risk of AKI (9/12, 75%).

**Conclusion:** We demonstrated that our electronic scoring tool was reliable and being utilised accurately. Further work needs to be done to improve compliance particularly amongst patients undergoing emergency surgery. Our interventions for patients at high risk of AKI were simple with a minimal risk of harm and led to a significant change in the prescribing of certain medications peri-operatively and improved the post-operative monitoring of renal function.