**Introduction:** Recent evidence of significant reduction in rate of complication to surgical procedures by widespread implementation of the World Health Organisation (WHO) Surgical Checklists has led to increased interest in exploring their application to other clinical procedures carried out such as renal biopsies in our renal department. The aim of this audit is to study the effect of utilizing an adapted WHO checklist for renal biopsy in improving patient safety, sample and equipment handling.

**Methodology**: The check list was designed using existing surgical operation checklists and our renal unit biopsy protocol. Patients are followed prospectively and data collected from documentations in the Electronic Data Manager (EDM), Electronic Patient Records (EPR), Powerchart, and Clinical Vision (CV4) is analysed. The patients’ individual factors including their blood pressure, co-morbidities, haemoglobin levels, renal profile and clotting screen were reviewed against our standard of practice looking for any deviations from our protocols. The patients were also followed to assess for complications and the samples to ensure adequacy and acceptable conditions for processing. Data presented is the pilot interim analysis from implementation.

**Results**: This pilot study shows some evidence that human factor process intervention can improve a practical procedure such as a renal biopsy as measured by completion of a sequenced checklist without impacting on the time and efficiency of a procedure. There were 39 biopsies over the course of four months, 15 day-cases and 24 inpatient biopsies, 18 of these were native and 21 transplant kidneys. The range of haemoglobin, urea, creatinine, and international normalised ratio (INR) levels pre-biopsy are between 79-171g/L, 4.5-34.7mmol/L, 74-598mmol/L, and 0.8-1.0 respectively. The haemoglobin levels post-biopsy are 76-157g/L. The pre-biopsy blood pressure (BP) ranges are 103-163mmHg systolic and 52-90mmHg diastolic. The numbers of glomeruli obtained from these biopsies are ranging from 23 to 41. 10 of the biopsies were performed by renal consultants and 29 were done by registrars. This audit also showed utilisation of the WHO checklist in all 39 of the renal biopsies. In terms of post-procedure complications, 2 patients developed haematuria which resolved without intervention, 2 patients developed moderate level pain which resolved with opioid analgesia, and 2 patients had mild bleeding at the biopsy site, which resolved without intervention. There were no incidences of major complications.

**Conclusion**: Introduction of WHO checklist to the trust for procedures not traditionally receiving this check can serve as an additional safety net particularly for invasive procedures. Staff perceptions and attitudes towards change can however have a significant impact on implementation and outcome. Since implementation, the department has shown good compliance to its utilisation although taking into account the slight influence of Hawthorn effect. Limitations include that the internal validity is challenged by the fact that the process has not been double blinded or randomised. Direct observation of the process may only assess the act of going through biopsy check list completion and not necessarily the thought processes of those carrying out the procedure. Difficulty directly linking process measures to patient outcomes further limits audit performance as measured. In order to help further validate the process we will continue to assess over a longer period and take into account operator and patient satisfaction.