

**Inclusion criteria:**

- Adults (aged 18 years and older) enrolled in SNAP randomised platform
- At least one of the following risk factors for AKI:
  - concurrent administration (within the 48 hours before study enrolment) of vancomycin with flucloxacillin or piperacillin+tazobactam for at least 24 hours
  - receipt of vasopressors or inotropes for any duration in the 48 hours before study enrolment
  - pre-existing chronic kidney disease (not requiring dialysis)
  - admission to HDU or ICU at study enrolment.
- Able to collect first urine sample before the end of the calendar day of study entry.

**Patients will be excluded from this sub study if they have any of the following:**

- kidney transplant (kidney transplant patients can often have elevated concentrations of urinary biomarkers due to graft fibrosis or AIN in the setting of decreased renal function)
- ileal conduit
- unable to produce urine for sample collection
- receiving any form of dialysis at study enrolment.

**CKD can be defined as any of the following:**

1. two documented occasions of eGFR  $<60\text{mL}/\text{min}/1.73\text{m}^2$  three months or more apart (gold standard definition). One of these occasions can include the initial serum creatinine from the current hospital admission.
2. two documented occasions of eGFR  $<60\text{mL}/\text{min}/1.73\text{m}^2$  over any period but across two “episodes of care”
  - a. Note that one of these occasions can include the initial serum creatinine from the current hospital admission
  - b. “Episodes of care” means hospital admissions, visits to GP or ED or just having a blood test – but they need to be 2 distinct episodes (i.e. not 2 blood tests from the same hospital admission).
3. 1 documented occasion of eGFR  $<60\text{mL}/\text{min}/1.73\text{m}^2$  PLUS previously documented CKD on specialist or GP letter.

**Activities:**

- Once enrolled, make an entry in REDCap to get participant a SNAPPER ID (this is needed for labelling urine samples). The SNAPPER ID will appear **after saving the first REDCap page (Inclusion and exclusion criteria)**.
- Collect a urine sample daily (from the day of enrolment for the next four days in a row – 5 days total). Urine sample collection details are available in the full SNAPPER protocol for midstream urine and indwelling catheter (both using sampling port and catheter valve). Urine samples can be collected at any time of the day.
- Complete patient enrolment and tracking log.

- Urine samples must be stored at 4°C and centrifuged and frozen within 48 hours of collection. Time from collection until freezing should ideally be within 24 hours of urine sample collection and must not be longer than 48 hours. Urine samples should be spun in a 10 mL centrifuge tube at 3000 rpm (or 1000 g) for 10 min.
- Label cryovials with the following convention:
  - **[SNAPPER ID; xxx-xx].[DAY OF SNAPPER].[CRYOVIAL 1 OR 2];**
  - Example for RBWH patient on day one, cryovial 2: *RBH-01. D1. C1*
- Cryovials can be labelled using a preprinted freezer sticker, blank freezer sticker and freezer pen, or just a freezer pen, as long as the details are clearly legible.
- Store all cryovials at -80°C.
- Complete SNAPPER urine sample log.
- Store cryovials in freezer box (document sample position using Cryovial Storage Matrix template).
- Complete data collection in SNAPPER REDCap database.