Renal Support in COVID-19

1 Avoid AKI by good volume management

- Ensure AKI not driven by hypovolaemia
  - Review fluid balance charts for previous days and take account of insensible losses (especially fever)
  - Consider oral or iv fluid to improve renal perfusion
  - Echocardiography and non-invasive measures of filling status may support clinical decision-making

2 Escalate concerns to ICU consultant

- AKI is associated with increased mortality in all critical illnesses
- AKI may precede (and drive) other organ failures
- Provision of RRT requires additional equipment and nursing workload
- Drug chart will need adjusting for changes in clearance
- Insertion of dialysis catheter may require patient to be turned supine (if proned) and then returned to prone again if necessary for their ventilation
- Ensure VTE prophylaxis is strongly considered in patients with dialysis catheters in situ

3 RRT prescription and delivery

- Pro-thrombotic state may shorten filter life and impair clearance
- Significant additional critical care nursing burden from RRT delivery (in an already stretched system)
- Consider moving patient to area where CVVH is easier to deliver, rather than providing CVVH in situ

4 Alternatives to CVVH

- Try to manage complications of AKI medically to conserve CVVH consumables
  - Furosemide for volume overload
  - Sodium Bicarbonate infusion for acidosis
  - Sodium zirconium cyclosilicate (Lokelma ™) for hyperkalaemia (in patients with functioning GI tract)
- Consider suitability for intermittent haemodialysis rather than CVVH
- Reduce intensity of CVVH to preserve filter fluid

Adjustments to standard CVVH in COVID-19 patients

1. Heparin-based filter as first-line therapy
2. Consider combining Heparin with Flolan or with Citrate if good access but short filter life-span (use a separate *systemic* heparin infusion at therapeutic doses in addition to running CVVH in the standard way for either Flolan or RCA)
3. Keep blood pump speed high
4. Optimise fluid management