

## <u>Strategy</u> for <u>UP</u>take of <u>PrO</u>cesses for <u>Recognizing</u> and Responding <u>To A</u>cute Kidney Injury





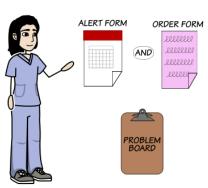


RECOGNIZE: CN reviews lab results daily to identify patients with AKI.

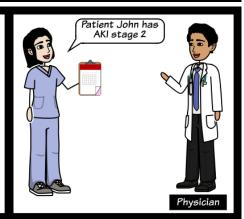
RECOGNIZE: UC pulls tableau report daily at 13:30. Tableau flags AKI episodes approx. 24 hrs after lab results become available.



UC gives tableau report displaying patient information to CN. Turn this page for more information on AKI staging.



RESPOND: To alert physician, place a completed AKI alert form and Physician order form on problem board. Add information to Kardex



REFER to physician. Where available, residents and extenders may be contacted first.



REFER to pharmacist. Full review available to vascular patients. For others call dispensary, Pharmacy Intervention Note may be created.



Patient Monitoring

√ Vital signs √ Urine output √ Serum creatinine



Fluid Intervention

Medication Adjustment

Specialist/Pharmacy consultation

RESPOND: Primary nurse continues to monitor and record urine output and SCr on AKI alert form. Follow up with physician on PIN.

AKI severity will guide the urgency of referrals.









AKI Alert Form			
AKI Stage: (Please insert from Tableau Report)	Patient Label		
Baseline serum creatinine: (Review chart)			
Date of Surgery:			

AKI: Staging, Definitions, and Severity		
Stage	Definitions	Severity
AKI 1	SCr increases by 26 $\mu$ mol/litre within 48 hours, or by 50% within 7 days	Mild
AKI 2	SCr increases by 2-2.9 folds in 7days	Moderate
AKI 3	SCr increases by over 3 folds, or to over 353 $\mu$ mol/litre within 7 days	Severe

Risk of Fluid Overload Causing Cardio-Respiratory Compromise				
Risk Level	Criteria	Recommended Volumes		
Low	No history of heart failure 250 to 1000 mL bolus(es			
	Left ventricular ejection fraction > 55%			
	No history of chronic kidney disease			
	No third spacing of fluids			
Intermediate	Heart failure (mild systolic dysfunction)	100 to 500 mL bolus(es)		
	Left ventricular ejection fraction 45-55%			
	History of chronic kidney disease			
	Minor third spacing of fluids			
High	History of heart failure (moderate/severe	50 to 250 mL bolus(es)		
	dysfunction)			
	Left ventricular ejection fraction < 45%			
	History of advanced chronic kidney disease			
	Significant third spacing of fluids			

## Medications to be avoided or dose adjusted\*

- Diuretics (e.g. Lasix, spironolactone, amiloride, hydrochlorothiazide, chlorthalidone, indapamide)
- NSAIDs (e.g. Ketoralac, Naproxen, Indomethacin, Ibuprofen)
- ACEi (e.g. Perindopril, Lisinopril, Ramipril, Captopril, Enalapril)
- ARBs (e.g. Telmisartan, Irbesartan, Valsartan, Candesartan, Losartan, Olmesartan)
- **CNIs** (e.g. Tacrolimus, Cyclosporine)
- Anti-infectives (e.g. Ciclovir, Aminoglycosides, Amphotericin IV Fungizone®, Co-trimoxazole, Fluconazole, Ganciclovir IV, Penicillins, Teicoplanin, Tetracycline, Trimethoprim, Valganciclovir, Vancomycin)

\* Bring to the attention of physician. This is not exhaustive, full list of high risk medication is on AHS Insite, check the Clinical knowledge Topic on Acute Kidney Injury.

## Study inquiries or feedback about the tools and processes?