

Multidisciplinary AKI care and education in Exeter – AOK!

Acute Kidney injury (AKI) occurs in one in five acute hospital admissions and is estimated to cost the NHS £1 billion per year. AKI is recognised as a serious patient safety challenge as patients typically have multiple comorbidities and risk factors. Up to 30% of AKI cases could be prevented with correct care and rapid treatment. Effective education and clinically supportive resources for those involved in the provision of health care is imperative if the risk and burden of AKI is to be successfully reduced.

Most secondary care institutions in the UK have or are in the process of adopting the use of AKI management guidelines and many have an outreach nursing team.

The Royal Devon & Exeter AKI Outreach nursing team, the first of its kind in the South West, was appointed as a pilot in January 2014. Amongst a number of resources designed to assist the entire multidisciplinary team, they developed an AKI specific safety thermometer combining both medical and nursing care elements, in order to measure staff response to e-alerts and the recognition and response to AKI risk factors.

As well as demonstrating that education plays an important part in developing staff knowledge and performance, the safety thermometer highlighted some serious discrepancies in two of the most commonly utilised resources; 24 hour fluid balance charts and the Early Warning Score (EWS) system.

The fluid balance charts in the Trust had undergone a change in the preceding two years. General consultation had been minimal and this, coupled with the fact that the charts were now designed to be totalled at 0700 hours and were printed on white paper, led to an extremely poor reception from and very poor completion by the nursing teams. A quality improvement measure commenced in August 2014 and six months of data was gathered to form a baseline.

A fully interactive pilot to develop a 'one size fits all' chart for all adult care areas in the Trust was commenced following completion of a baseline questionnaire in April 2015.

Trust nursing staff were constructive in their comments and understood Team AKI's rationale behind amalgamating the use of the two resources. They greatly appreciated Team AKI's wish to work collaboratively and being able to have their opinions heard. Nursing teams also wished to optimise their patients' safety and care whilst benefitting from expediting escalation of concerns.

The new blue fluid balance charts were released Trust-wide on July 1st 2015. (See picture below).

Changes to the urine scoring element of the Trust EWS formed part of a toolkit to identify the deteriorating patient released 1st December 2015.

Chart completion, although still variable, has since improved, over a six month period from 40% to 90%, most noticeably alongside both charts availability for concurrent use.

Equation to assist with calculating expected urine output.

Chart is Blue. Start time is 0100 hours.

24-HOUR FLUID BALANCE CHART - ADULT												
Date: DD/MM/YYYY		Previous day's balance: ml		Patient name:								
Fluid restriction: ml		Urine output should be 0.5ml/kg/hr		NHS no.:								
Patient weight = kg		+ 2 = expected urine output of ml/hr		Hospital no.:								
DOB:												
Time	INTAKE (ml)						OUTPUT (ml)					
	Type	Offered	Taken	Enteral Feed	IV / Subcutaneous 1	2 3	Urine	Vomit / Aspirate	Faecal	Drain		
01:00												
02:00												
03:00												
04:00												
05:00												
06:00												
07:00												
08:00												
09:00												
10:00												
11:00												
12:00												
12 hr total												
13:00												
14:00												
15:00												
16:00												
17:00												
18:00												
19:00												
20:00												
21:00												
22:00												
23:00												
24:00												
12 hr total												
24 hr total												

INTAKE = ml OUTPUT = ml FLUID BALANCE = ml

Intake - Output = Fluid Balance (either positive or negative)
Ensure balance carried forward (enter overleaf)

24-hour Fluid Balance Chart - Adult
Approved by: Patient Safety Group 07/05/2015
Approved by: IFR Document Approvals Groups 02/02/2015
Review date: May 2018

Healthcare Charts & SPECIAL SHEETS
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Plenty of space to document intakes and outputs. Columns can be renamed if required.

Space for and advice on how to complete a fluid balance.



Royal Devon and Exeter NHS Foundation Trust

T.H.I.N.K

ACUTE KIDNEY INJURY

Toxins, Drugs, Contrast
Hypoperfusion, Hypovolaemia, Heart failure
Infection, Sepsis
No way through - Obstruction
Kidney Disease - remember Urinalysis

Mel Sully, AKI Nurse Specialist and Kevin Churchill, (ex) AKI Nurse Specialist with the redesigned fluid balance charts