

# AKI Reporting in NHS Scotland 2020

## Background

Acute Kidney Injury (AKI) is relatively common, occurring in up to 22% of hospital admissions and is associated with poor outcomes. Early recognition and intervention, focussing on basic elements of care, can improve AKI outcomes. An AKI algorithm can be embedded in a LIMS to identify potential cases of AKI and generate e-alerts. These can be communicated in various ways to clinical users, to facilitate earlier detection and management of AKI.

An earlier survey by the network noted varied uptake and practice in this area across the boards.

## Aim

To establish a more up to date snapshot of the status and mode of AKI alert reporting across Scotland and capture key information on which population (primary care, secondary care, adults, paediatrics) this was provided to, barriers to implementation and the resources required to provide this service.

## Method

A survey was sent out to all boards in September 2020, as detailed in Appendix 1.

## Results and Discussion

Responses were received from 9/14 NHS Scotland boards; Ayrshire and Arran, Borders, Fife, Highland, Grampian, Greater Glasgow and Clyde, Lanarkshire, Shetland and Tayside.

### AKI alert provision

1. Algorithm implemented in LIMS and AKI alert facility possible for 8/9 responder boards, with this in planned development for one other board.
2. In 1 board the algorithm was generated only for 1 test location and only visible to lab team.
3. In 1 of the boards who had implemented the algorithm, the alert was generated for both primary care and secondary care, but not reported and only visible to the lab team for primary care.
4. AKI alerts are provided for secondary care in 7/9 boards.
  - There were some exception areas for example not to Renal, ICU or OP in one board.

5. AKI alerts provided for primary care in just 3 /8 boards but 2 further boards had plans to roll this out to primary care. One board stated that primary care clinicians were not supportive of having AKI alerts.
6. Provided for paediatric patients in only 3 Boards along with paediatric specific guidance in 2 boards.

### **Mechanism of communication**

1. Via comments on reports for all 7 boards who reported AKI alerts
  - 2 report AKI stages 1-3 only, 1 reports for AKI 1-4
  - 2 boards provide link on report to local AKI guidelines
2. Phoning
  - First occurrence of stages 2 and 3 are phoned in 5 boards
  - New stage 1 where serum/plasma potassium is > 6.0 mmol/L in 4 boards
  - In 1 board AKI alerts are phoned at discretion of Duty Biochemist
  - Note results may also be phoned to requestor based upon potassium or urea and creatinine cutoffs for standard critical limits for phoning, both during routine 9-5 and out of hours' periods which may catch many of AKI stages 2 and 3.
  - AKI alerts for stages 2 and 3 are phoned on 24/7 basis in 4 boards
  - Personnel varies with BMS phoning alerts OOH where alerts phoned 24/7

### **Guidance**

Guidance on AKI is provided in the 7 boards where AKI alerts are produced. In two boards a link to the guidance is provided with the comment on the reports.

### **Resource Implications**

This was considered to be minimal where alerts were communicated electronically. For phone communication, this was roughly estimated as 2-3 additional phone calls a day at a rate of around 2-3 minutes per call. One large board anticipated that with further rollout to primary care this could rise to an extra 17 calls per day for primary and secondary care, should all first instances of AKI 2 and 3 be phoned to the requesting location.

### **Barriers to implementation**

Challenges faced included resources required for phone communication of alert (especially to primary care), complexity of the IT involved and the capability of individual LIMS, also in house IT support. Alert fatigue was also cited in one board. One board stated primary care were not supportive of having AKI alerts, hence they were only generated for patients in secondary care locations. Many comments related to the downstream impact of providing alert, e.g. education on interpretation and reacting to alerts and implementation of

additional pathways, demands on renal services from the rollout of alerts to primary care. In several boards, the Renal Team were not supportive of further development of AKI alerts, citing current pressures on service, staffing resources, lack of investment, all impacting on time and appetite for quality improvement work.

## Appendix I

### Survey Template

<b>Health Board and contact</b>		
<b>What is the current status regarding installation of an algorithm in your LIMS to generate an AKI warning?</b>	For Secondary care	
	For Primary care	
<b>Which Patient group do you provide Alerts for?</b>	Adult patients	Y/N
	Paediatric patients	Y/N
	Further comments as required	
<b>How is the AKI warning communicated to the clinician?</b>	A comment on the laboratory report	
	Laboratory staff telephone the clinician.	
	Please state grade of staff who phones result and AKI warning stage phoned.	
	Other. Please provide details	
<b>Do you have a policy for laboratory staff to telephone the AKI warning to clinician?</b>		
<b>Please indicate how much resources /time you typically require to communicate AKI alerts</b>		

<p><b>Has your health board provided guidance/care bundle to secondary care on responding to AKI alert ?</b></p>	
<p><b>Has your health board provided guidance/care bundle to primary care on responding to AKI alerts?</b></p>	
<p><b>What are the barriers to implementing AKI alerts?</b></p>	
<p><b>Is your health board participating in the SPSP – acute kidney injury collaborative?</b></p>	
<p><b>Any other comments?</b></p>	