

# A Novel Quality Improvement Collaborative to Reduce Acute Kidney Injury Incidence and Progression in a Large Teaching Hospital in England

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Foundation Trust



Salford  
Royal

# Background



- AKI is common, affecting 1 in 5 acute admissions
- Only 50% of care is considered “good”
- 43% had an unacceptable delay in recognition
- 33% had inadequate investigations
- 29% inadequacies in management

# Incidence at SRFT

Number of patients per annum with AKI at SRFT

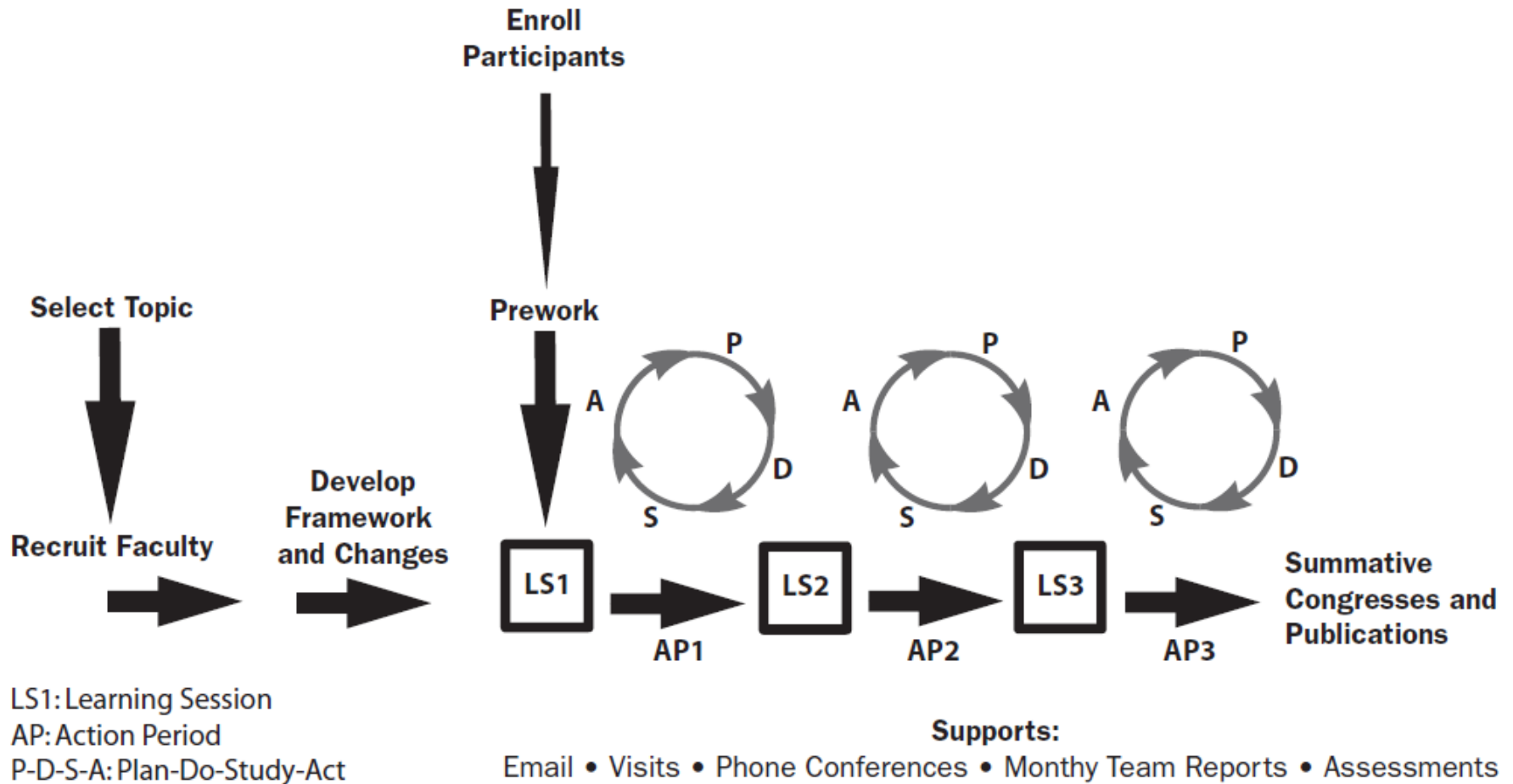


AKI stage	Serum Creatinine criteria	
<b>1</b>	SCr increase $\geq 26 \mu\text{mol/L}$ <u>or</u> SCr increase $\geq 1.5\text{-}2$ fold from baseline	<b>2316</b>
<b>2</b>	SCr increase $\geq 2\text{-}3$ fold from baseline	<b>621</b>
<b>3</b>	SCr increase $\geq 3$ fold from baseline <u>or</u> SCr increase $\geq 354 \mu\text{mol/L}$ <u>or</u> initiated on RRT (irrespective of stage at time of initiation)	<b>518</b>

**Total 3455**

# The collaborative

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10% reduction in all AKI by December 2016

25% reduction in preventable "hospital acquired" AKI by December 2016

Achieve a 50% reduction in the number of early (Stage 1) progressing to Stage 2/3 by December 2016

- Practice educator roles/ Nurse Preceptorship training
  - Allocation of Nurse Champions
  - Testing designated AKI nurse/ MDT
  - Development of E-learning package
- Review and implementation of national training toolkit
  - Trust wide communication strategy
- MDT use of medicine optimization training tool kit (renal pharmacy group)

- NPSA Algorithm launch
  - EPR Implementation
  - Communication of flag
  - Electronic decision support
- Development of screening risk assessment
- Mechanism to flag AKI patients to pharmacists

- Bundle development
  - Stop/ start medication tests
- Role allocation and escalation of trigger
  - Local guidelines
- Identification and management within the community/ patient education
  - Communication at discharge of AKI diagnosis
    - Sick day rules

- Bundle/ risk assessment compliance
  - Local audit
  - AQ AKI stage 3 measure
  - Education compliance
- Pharmacy knowledge baseline audit
  - Medication review data

## AKI Online Learning Resources

One in five emergency admissions to hospital will have AKI. Such patients are usually under the care of specialties other than nephrology. With the right care and treatment up to 30% could be prevented (NCEPOD 2009).

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

- Events Key
- Hide global events
  - Hide course events
  - Hide group events
  - Hide user events

### Navigation

- Home
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  - Acute Kidney Injury (AKI)
    - Participants
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    - Forum
    - Trust Policy and Best Practice Resources
    - Patient Information

In the UK up to 100,000 deaths each year in hospital are associated with acute kidney injury. Up to 30% could be prevented with the right care and treatment

NCEPOD. Adding insult to injury, 2009

One in five people admitted to hospital in the UK each year as an emergency has acute kidney injury

Wang, et al. 2012

Just one in two people know their kidneys make urine

Ipsos MORI survey, July 2014

## Learning Resources

This section provides online learning resources to support staff at all levels with their online assessment and professional development. In order to complete the AKI course you must complete the AKI skills check in the next section

- The award winning University Hospital of Leicester online course takes you through a variety of case studies and is particularly useful for supporting **Doctors, Pharmacists and None medical prescribers** <http://www.uhl-library.nhs.uk/aki/>
- The NICE resource has 2 modules aimed at **registered nurses and support workers** <http://elearning.nice.org.uk/login/index.php?>. Users need to take a minute to set up a free account with NICE before they can assess the course



Think Kidneys is a national programme led by NHS England in partnership with UK Renal Registry

# Think SALFORD

Institute AKI bundle in all patients with  $26 \text{ mmol/L}$  or  $1.5 \times$  rise in creatinine or oliguria ( $<0.5 \text{ mls/kg/hr}$ ) for  $>6$  hours.

**S**epsis and other causes-treat

**A**CE/ARB and NSAIDS suspend/review drugs

**L**abs (Repeat Creatinine within 24 hours) & **L**eflets (for patients)

**F**luid assessment and response (History and examination, initiate fluid chart, measure daily weights - if hypovolaemic give bolus IV 250 mls and reassess)

**O**bstruction USS should be performed within 24 hours in non-resolving AKI 3 ( $3 \times$  rise in serum creatinine or  $>354 \text{ mmol/litre}$ ) of unknown cause

**R**enal /critical care referral Non resolving AKI 3, possible intrinsic renal disease requiring specialist treatment, CKD 4-5, renal transplant, severe AKI complications

**D**ip the urine and record it

To find the SALFORD bundle to support best practice care for AKI patients on EPR:

- On EPR option panel go to preferences - Select acronym expansion - Select option export from another user# and find Nipah





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**AKI Score: 2 12-07-2016**

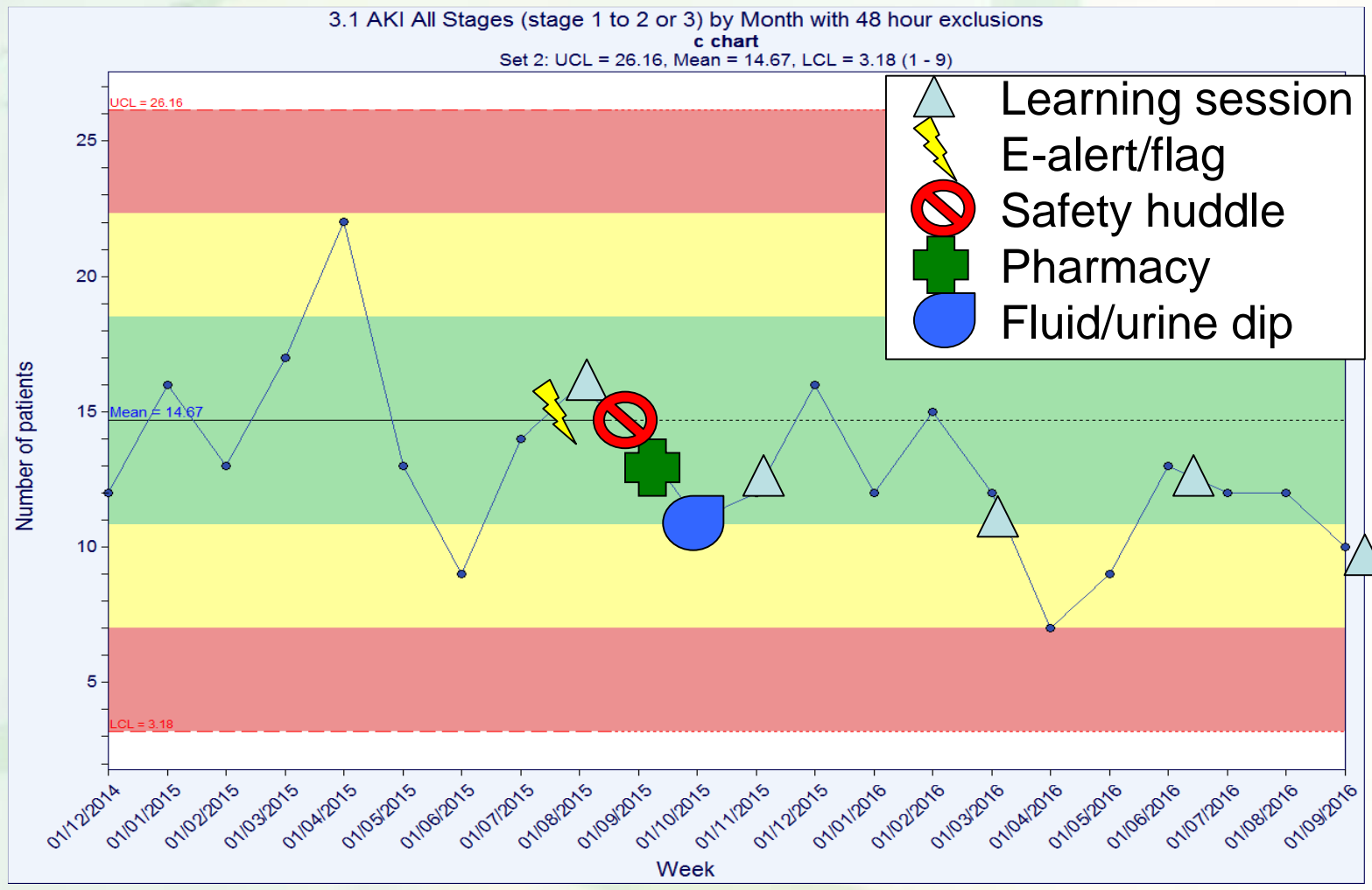
# WHAT ELSE DID WE DO?



Emergency Department  
**MAJORS**  
Today's Date  
9/10/16  
Nurse in Charge  
Sr. Penelope  
Majors Co-ordinator  
Co. Harriette  
Consultant of the Day  
Dr. Martin

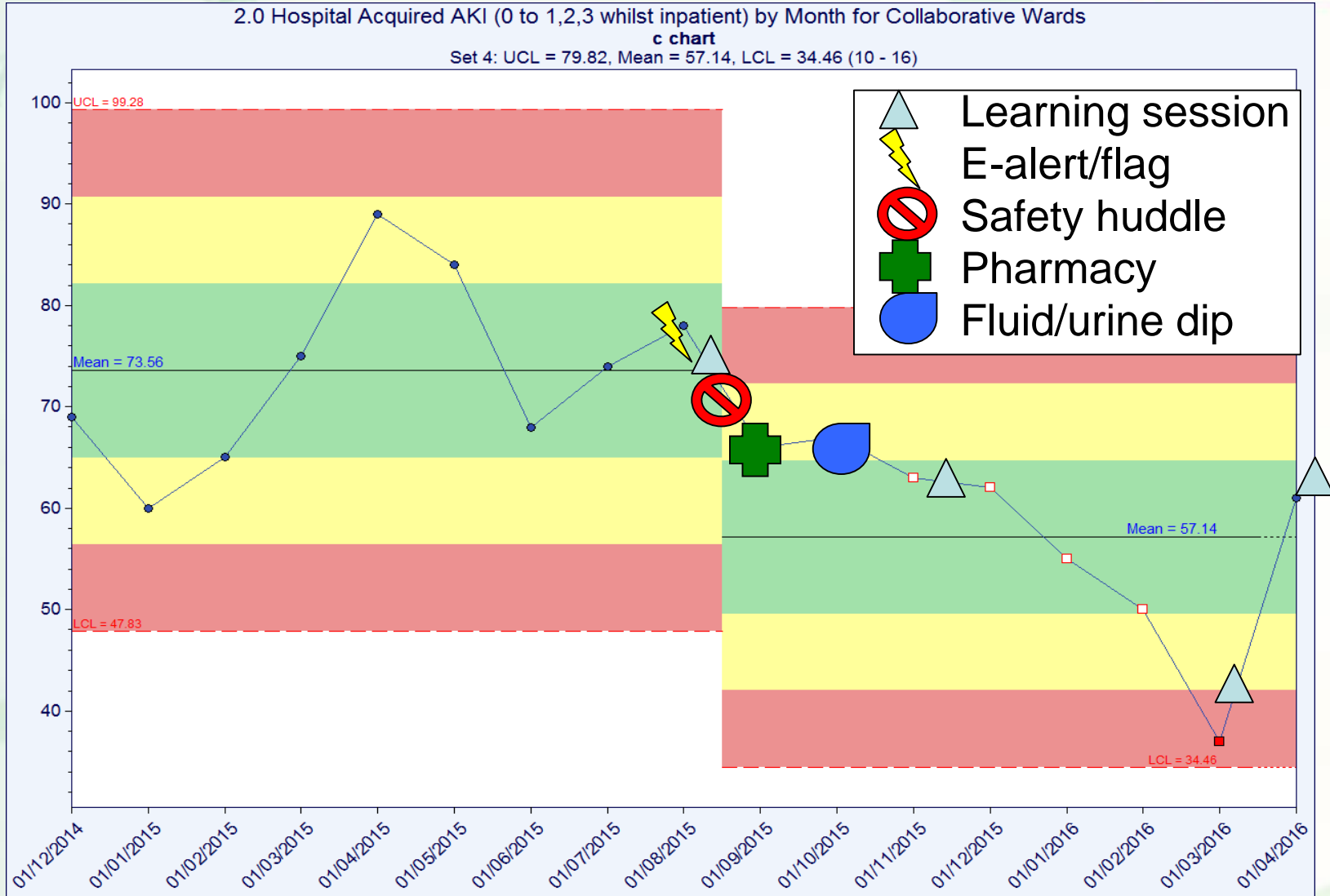
# Hospital Acquired AKI

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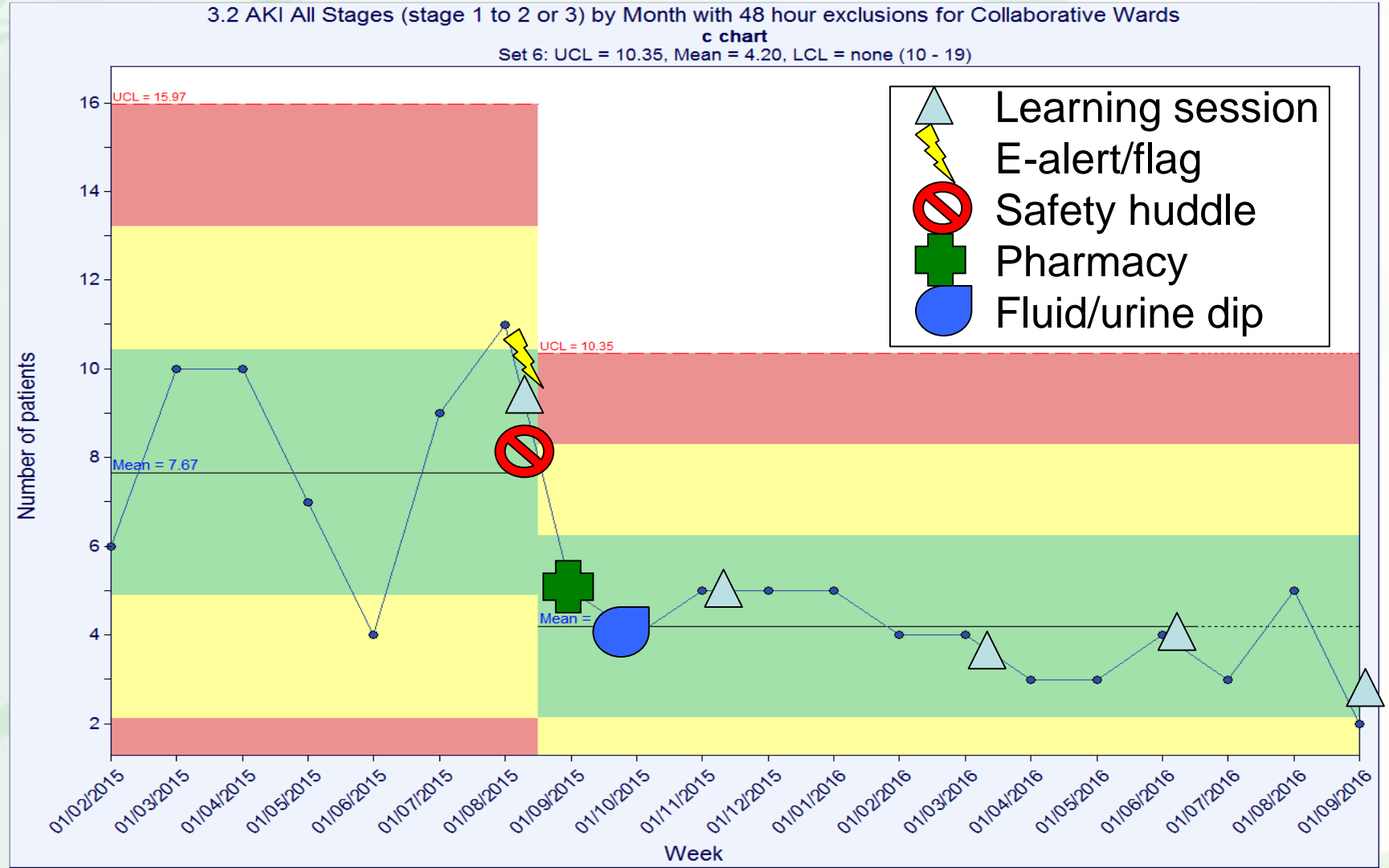
# Collaborative results

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# Collaborative results

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QUALITY

# Where next?

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# Thanks

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- AKI working group
- Collaborative teams
- NIHR CLAHRC Greater Manchester
  
- Further information or queries

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The National Institute for Health Research Collaboration for Leadership in Applied Health Research and Care (NIHR CLAHRC) Greater Manchester is a partnership between partners and commissioners from the NHS, industry, the third sector and the University of Manchester. We aim to improve the health of people in Greater Manchester and beyond through carrying out research and putting it into practice

<http://clahrc-gm.nihr.ac.uk>