



# Pharmacy Pathfinder

The role of the pharmacist in preventing  
Acute Kidney Injury in the community

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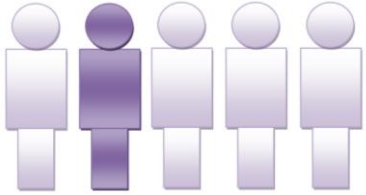
# Aim

- To improve the prevention, detection & management of acute kidney injury (AKI) in the community
- Employment of a specialist renal pharmacist in the nursing home and general practice setting

# Acute Kidney Injury (AKI)

- AKI is a global healthcare challenge
- Characterised by a **rapid deterioration of kidney function**
- Most commonly caused by **reduced blood flow** to the kidneys, usually in someone who is already unwell
- Excessive vomiting or diarrhoea, blood loss or severe dehydration

# Kidney health in the UK



**1 in 5** admitted to hospital have **Acute Kidney Injury**

**100,000**

Deaths each year  
associated with AKI

**24%**

Mortality rate in hospital  
in-patients

**£1.45 billion**

Estimated annual cost of  
**chronic kidney disease**  
to the NHS in England

**20%**

Of Acute Kidney Injury  
predictable & avoidable

**40,000 – 45,000**

Premature deaths each  
year in people with **CKD**

**65%**

Of AKI starts in the  
**community**

Only **1 in 2** people know their  
kidneys make urine



# Acute Kidney Injury: Doctors Warned About Condition

Few are aware of acute kidney injury but it kills more than 40,000 each year, many of which could be prevented by early diagnosis

11:11, UK  
Friday 26 August 2016

<http://news.sky.com/story/aki-doctors-warned-about-kidney-condition-10551935>





## Care Forum Wales chairman: Triple whammy hitting care homes

23 August 2016

Urgent action is needed to deal with the "triple whammy" hitting care homes and domiciliary care companies, the chairman of Care Forum Wales has said.

<http://www.bbc.co.uk/news/uk-wales-politics-37157515>





## Pharmacy Pathfinder, AKI

Nursing home patients:  
Baseline measures

# AKI Risk Factors

44 nursing home patients

**30%** chronic kidney disease

**48%** high blood pressure

**98%** over 65 years old

**32%** previous stroke

**4.5%** liver disease

**18%** ischaemic heart disease

**41%** dementia or cognitive impairment

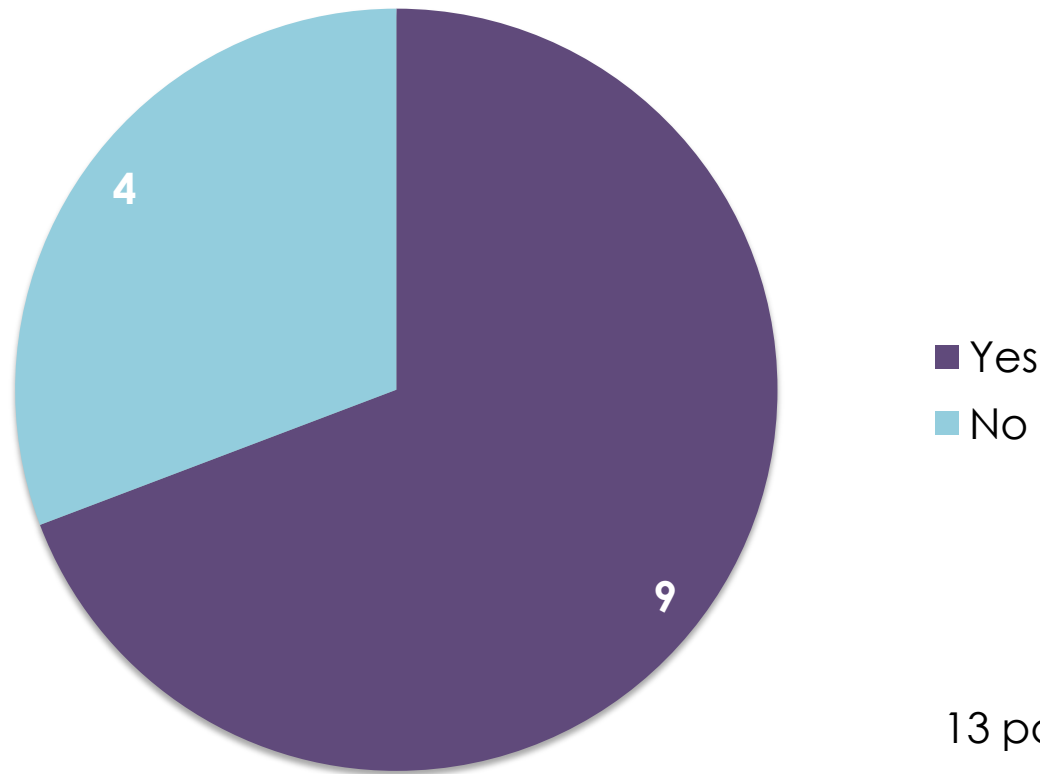
9% heart failure

18% diabetes



## Nursing home patients with chronic kidney disease

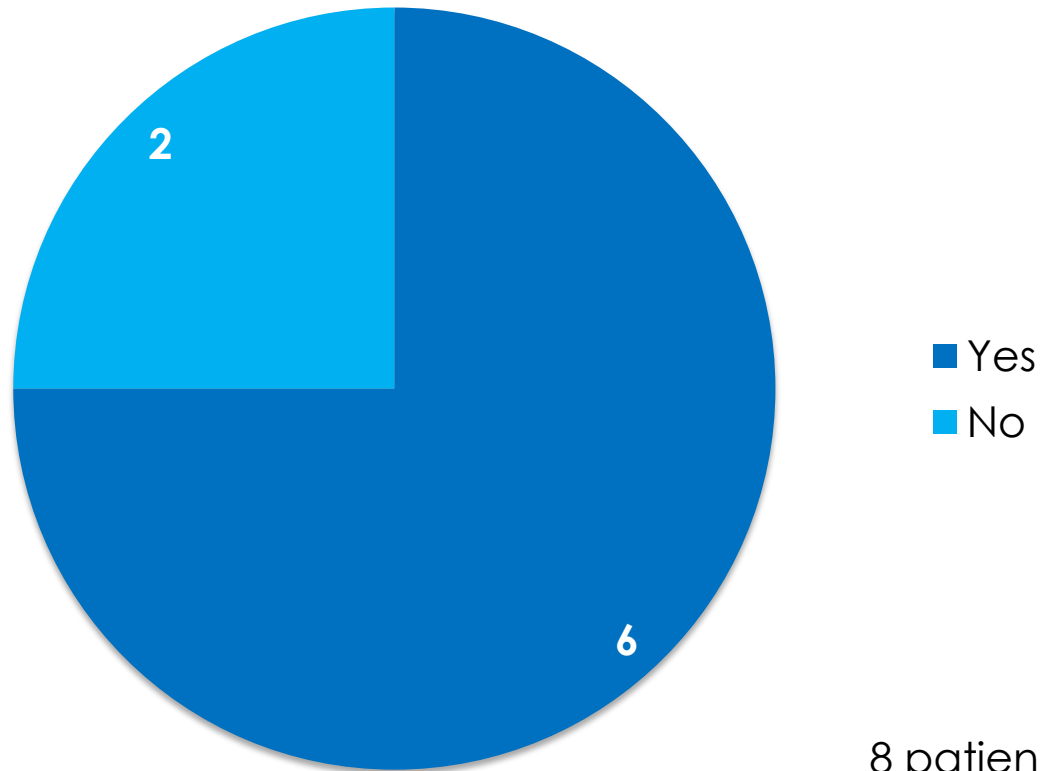
*.....with documented kidney function tests within the  
preceding 12 months*



13 patients with CKD

# Nursing home patients with diabetes

*.....with documented kidney function tests within the preceding 12 months*



8 patients with diabetes

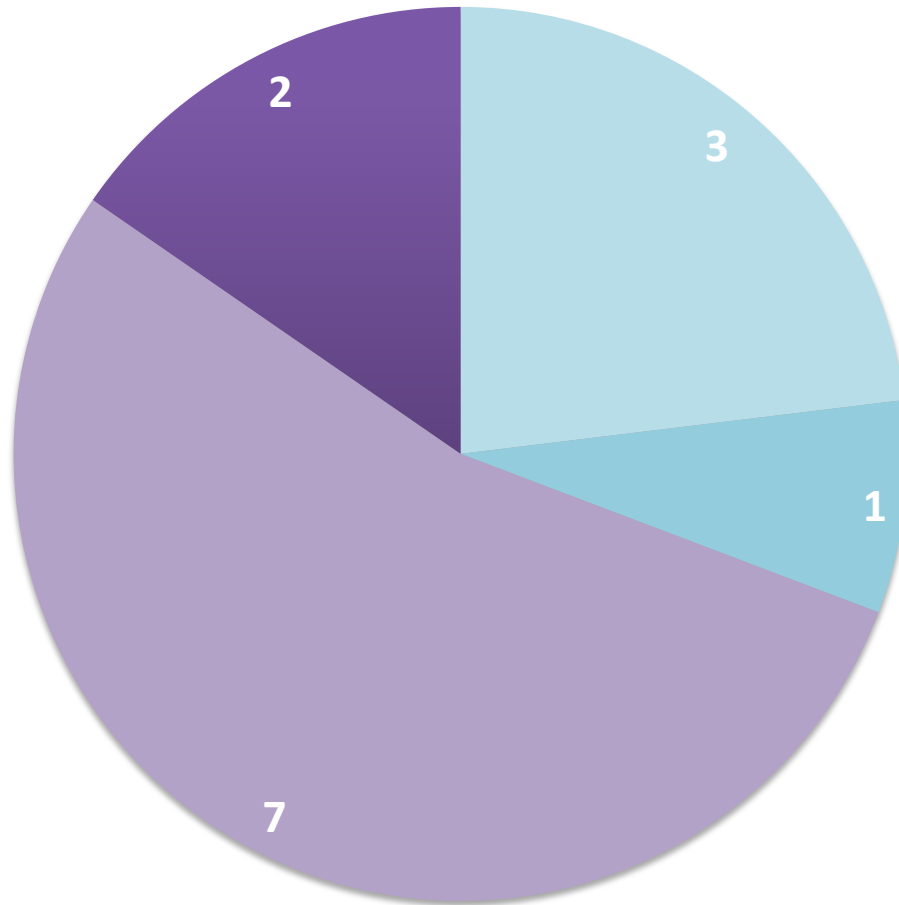


## Pharmacy Pathfinder, AKI

Nursing home staff surveys:  
Baseline measures before education

# Have you heard of AKI before?

13 questionnaires



■ I have definitely heard of it

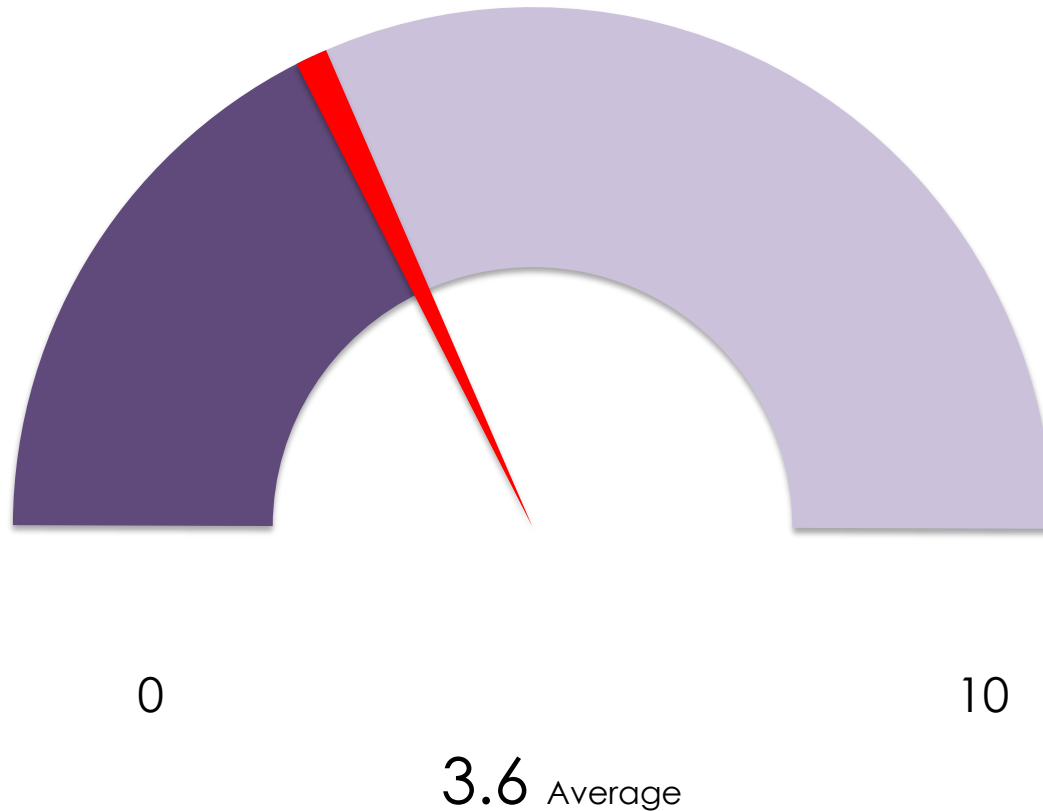
■ I think I have heard of it

■ No, I have not heard of it

■ Don't know

# What are the kidneys responsible for?

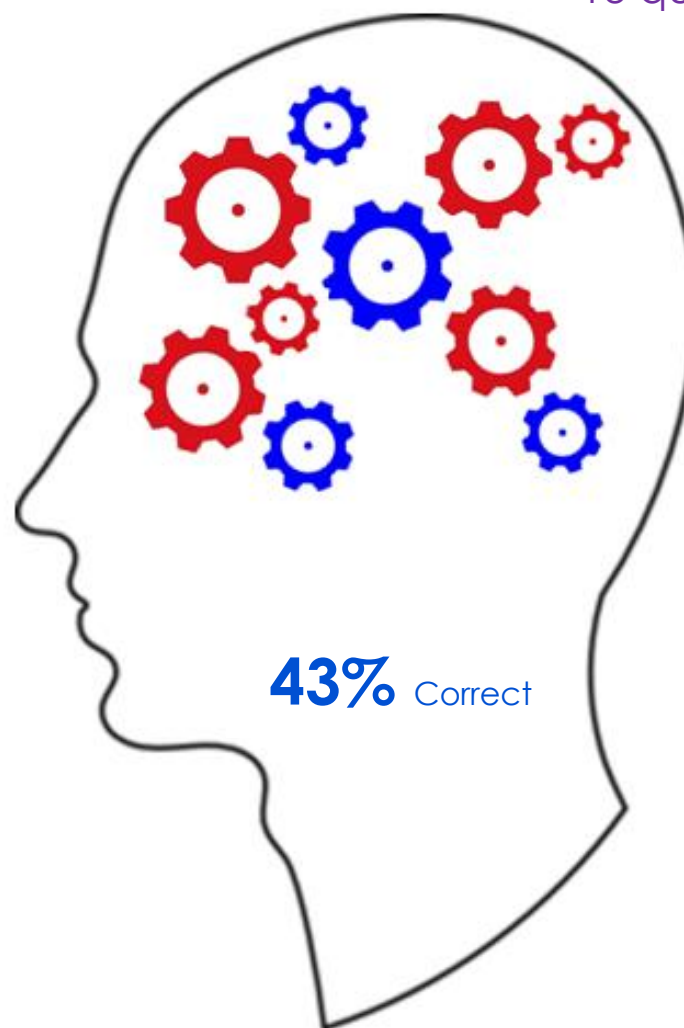
13 questionnaires



# What best describes AKI?

13 questionnaires

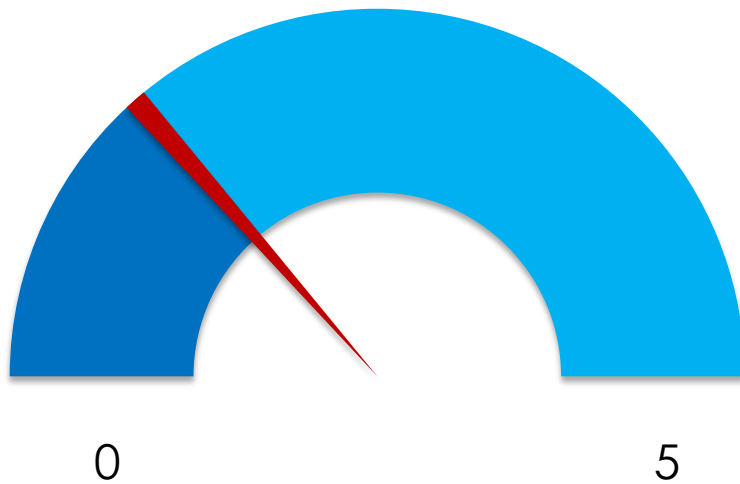
***“Sudden damage to the kidneys that causes them to stop working properly as a complication of another serious illness or dehydration”***



**43%** Correct

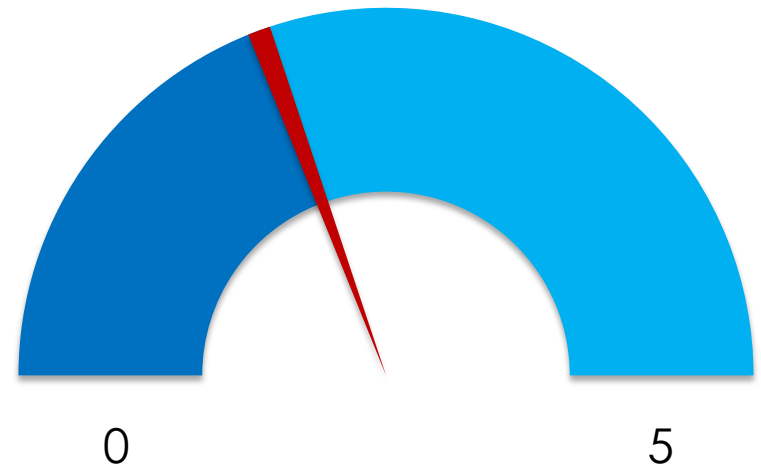
# Nursing home staff: Rate your knowledge

Acute Kidney Injury



1.4 Average

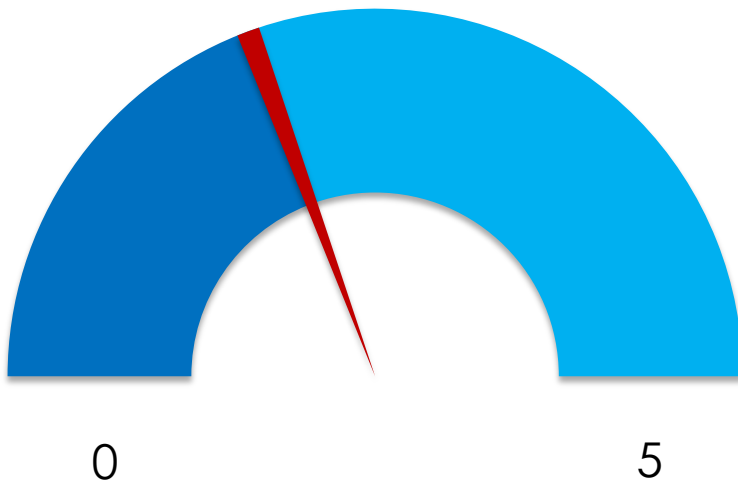
The biggest dangers to the health of the kidneys



1.9 Average

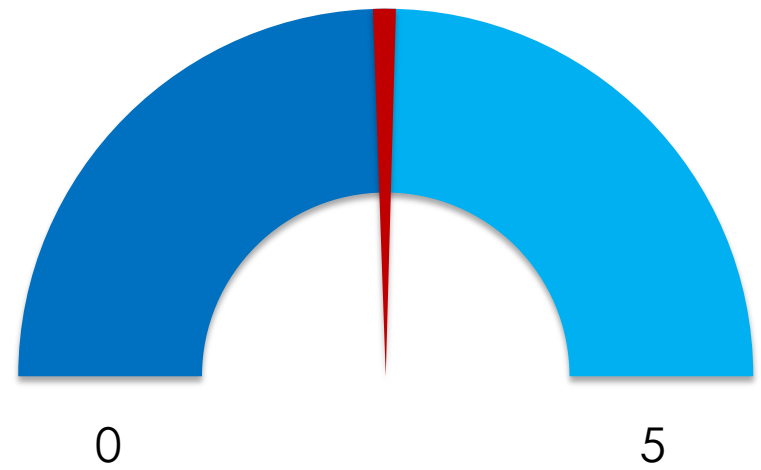
# Nursing home staff: Rate your knowledge

Medicines that can damage the kidneys



1.9 Average

Recognising signs & symptoms of dehydration

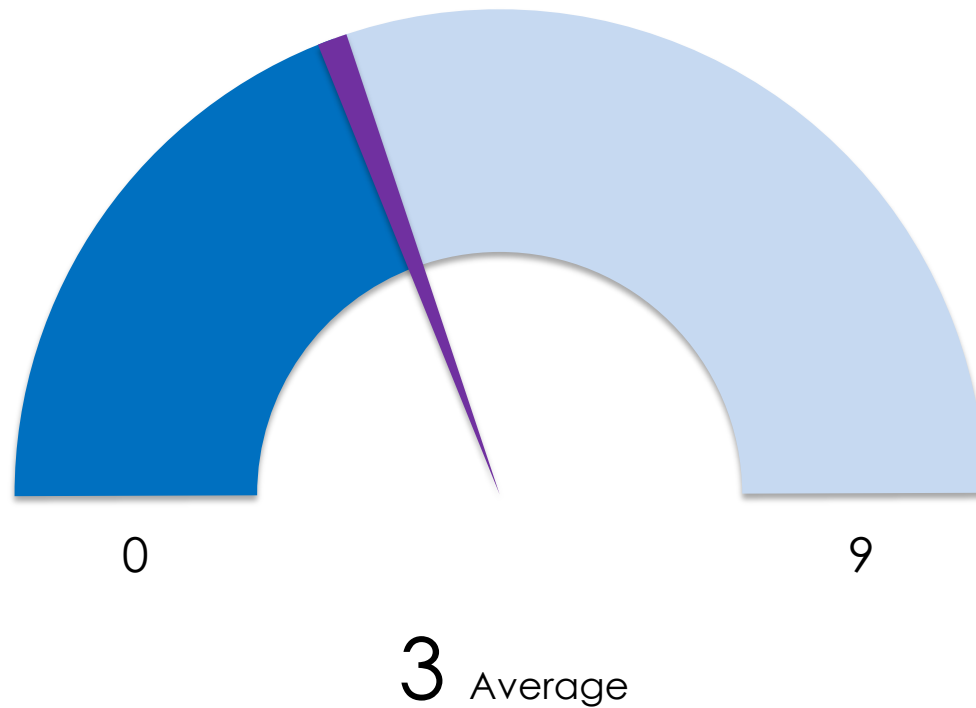


2.5 Average



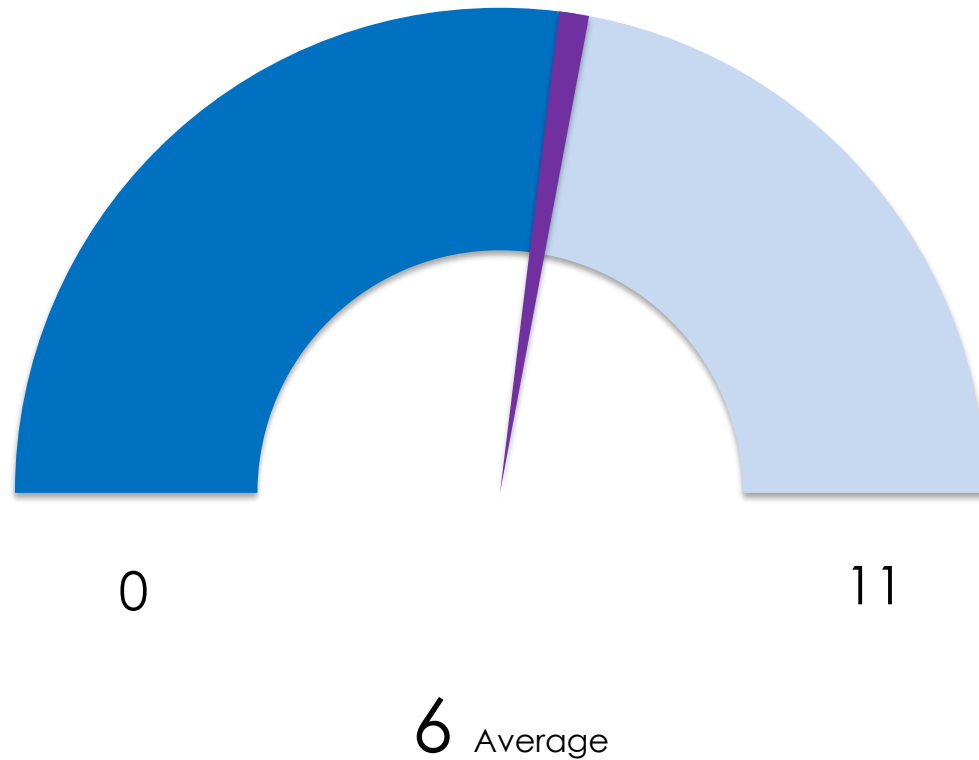
# Which medicines are known to damage the kidneys?

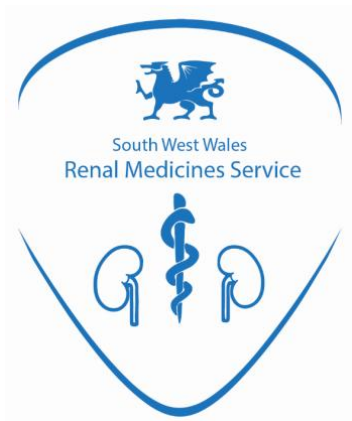
13 questionnaires



# Which of the following are signs of dehydration?

13 questionnaires



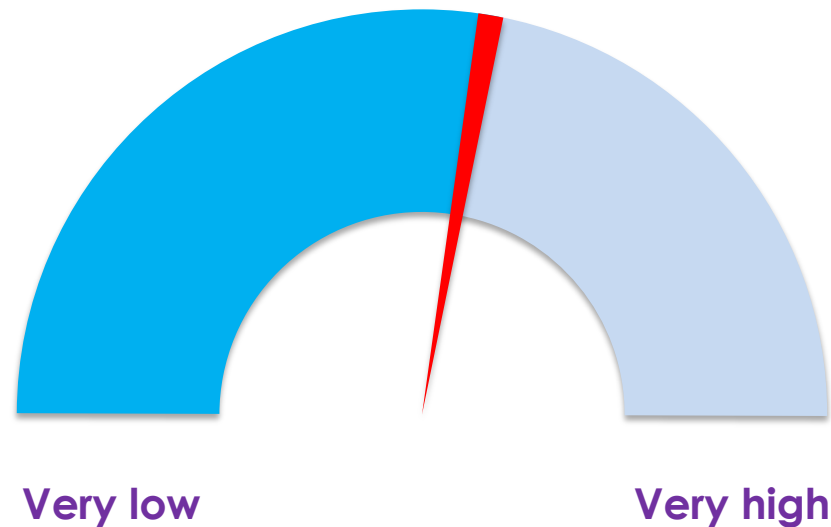


## Pharmacy Pathfinder, AKI

GP Surveys

# Pharmacist support: where does AKI rank in priority?

.....relative to the management of other conditions e.g. respiratory disease, diabetes, dermatology, cardiovascular disease, cancer etc.



5 questionnaires

# GP Comments

1

*“Priority points for nursing homes include poly-pharmacy, especially nephrotoxic drugs and hydration charts & sick day rules”*

*“We would be happy for you to get involved with other clinical areas. A major priority for us is controlled drugs/high dose analgesia”*

# GP Comments

2

*“Although AKI is an important marker of ill health I feel directing research at nursing homes is less likely to have a major impact on quality of life. However it makes sense to start in a nursing home as the case is standardised. More impact will be felt in patients living at home, especially if housebound and thus less likely to involve medical care through regular contact”.*

# Current fluid input chart



44 nursing home patients

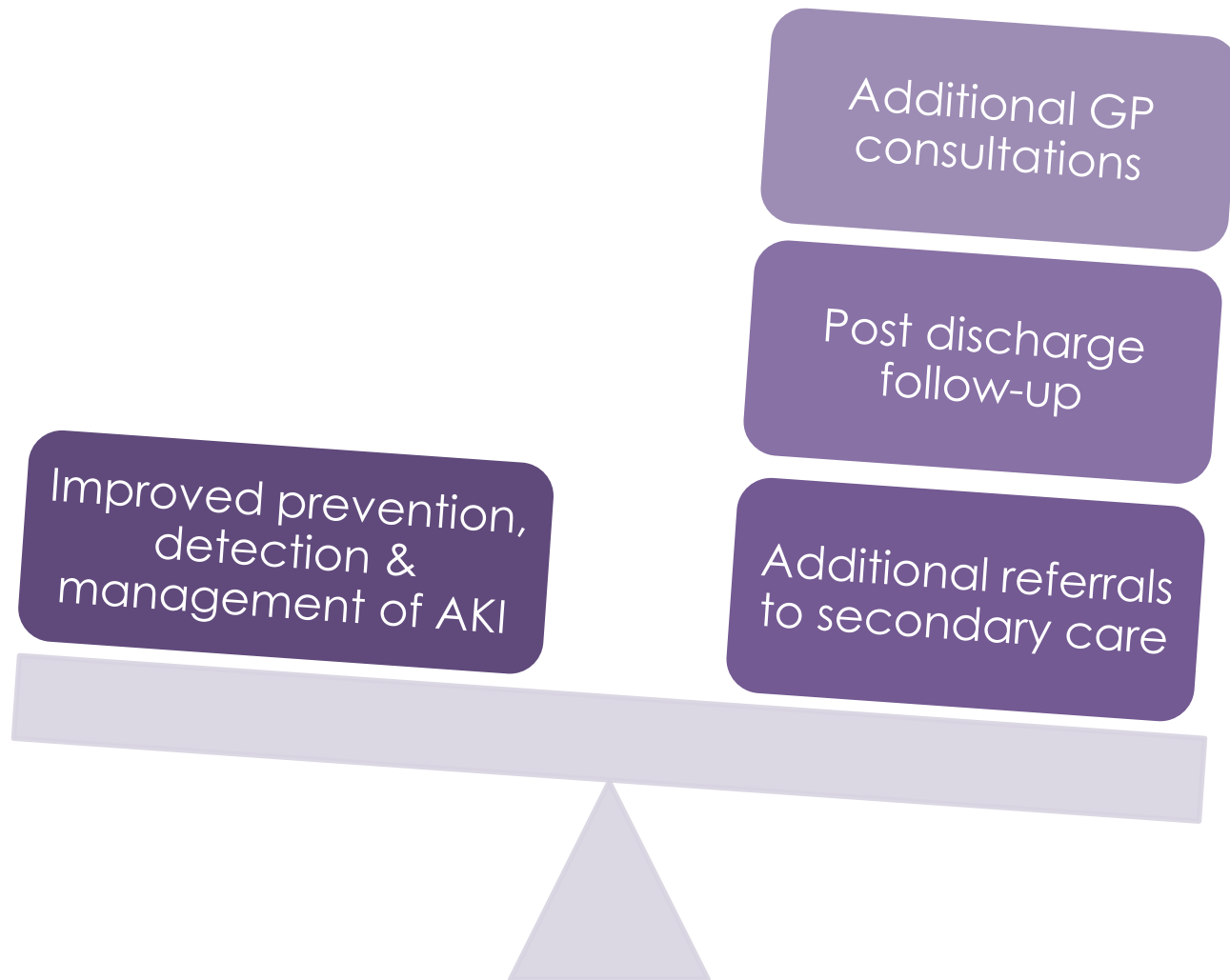


**No target daily input** (no space on current chart)

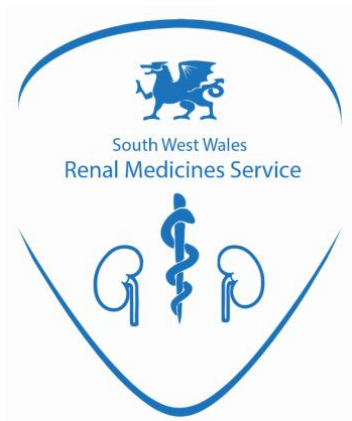


**No calculated total daily input**

# Balancing Measures







## Pharmacy Pathfinder, AKI

Interventions

# Interventions

- Education programme for nursing home staff
- Kidneys sticker

# Kidneys sticker



# Interventions

- Fluid input, food & urine colour charts
- **Blue tableware**
- AKI app:

<http://app.rx-guidelines.com/View/ABMU-Renal/Neph>

# What next?

Short-term

Cardiff School of  
Art & Design

Feedback &  
Evaluation

September  
2016

Sep/Oct 2016

Oct/Nov  
2016

December  
2016

Nursing home  
staff education

Implementation



Pharmacy Pathfinder, AKI

The best use of resource?

# WG plan for 1° care

“Strong **leadership**”

“**Working as a coordinated & integrated team**”

“Innovation includes new **technology**, products & services, and working with **universities**”

“A skilled local workforce”

“**Equitable access to 1° care**”

“We want **specialists**, who are traditionally **hospital-based**, to play a greater role in supporting 1° care services”

“...much more effective working between different professionals and services, including **social** services”

“**Detecting & addressing problems early leads to improved outcomes**”

“We want people working in **care homes** to feel well informed & supported in meeting the needs of residents & **avoid inappropriate emergency admissions**”

“**Avoidance of avoidable harm is our watchword**”

# Moving services to the community

- Ease GP pressures by detecting & addressing AKI early
- Reducing referrals and admissions for AKI & conditions exacerbated by dehydration



# Long-term goals

1

- An innovative & sustainable pharmacist-led national AKI programme
- Continued support from nephrology, WG, 1° care & PHW
- A well informed & motivated 1° care workforce with increased awareness of AKI to improve its prevention, detection & management

# Long-term goals

2

- An exemplar for other pharmacist-led nursing home services to provide equity & access for patients
- An effective, engaging & informative patient & public education campaign

# Challenges

- Financial resource in Wales:

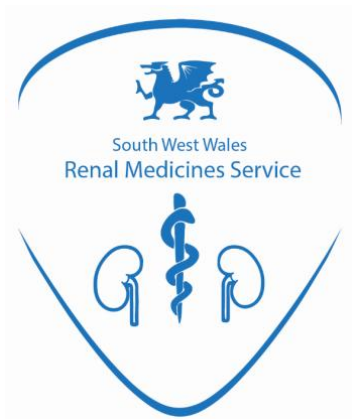
The 'Think Kidneys' campaign is a collaboration between NHS England & the Renal Registry. It has received a significant investment

- CKD indicators no longer attract payment for GPs through QOF:

No financial incentive for GPs to monitor renal function in this at-risk patient group

# Summary

- ☒ Identify a significant problem
- ☒ Identify patients with the greatest need
- ☒ Collect baseline data
- ☒ Co-produce novel & innovative material
- ☐ Proof of success.....*awaited*



*Thank you,*

*Owain*

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# *Discussion – 21<sup>st</sup> Sept 2016*

- 1 in 5 admissions to hospital have AKI; 15% are preventable
- Currently no financial incentive through QOF for GPs to monitor kidney diseases
- Evidence indicates lack of awareness of risk of AKI for patients in care homes
- Emphasis on data and design is good – replicable:
  - Kidney stickers to prompt action for drugs with risk if patient dehydrates
  - Blue tableware to prompt need for extra hydration
  - AKI App for GPs – feedback that may not use; better to have device for recording biochem in real time to diagnose AKI/CKI
- Example of a secondary care specialist (renal pharmacist) working in primary care; exemplar for other pharmacist-led nursing home projects
- Multiple benefits – reducing harm through dehydration (national agenda for this); potential for cost-savings and useful to quantify.
- Current prevalence of AKI in community is unknown – need for baseline measure.
- In AKI should look for the underlying causes and have integrated/collaborative services in which everyone looks for / recognises the triggers.
- Potential for standard biochem on admission to make diagnosis of AKI/ at risk of AKI
- Links to work of Chris Hancock