All things kidney: opportunities in integrated care

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Summary

- West Midlands Renal Network
  - Mainly secondary care renal
  - UHB (QE & HGS), UHCW, UHNM, RWH, RHH, SaTH
  - Commissioners
  - Patients
  - Recent peer review of services across the patch
  - GIRFT on it's way
- Focus today on primary / secondary interface

What do the kidneys do?

- ‘Clean the blood’
- Pass out toxins and waste products in the urine
- Control body water
- Control body salt composition
- Important for blood pressure control
- Important for bone formation and red blood cell production

Kidney function

- Good blood supply
  - Furring up of blood supply….
- Functioning kidney cells
  - Specific diseases
- Proper drainage
  - Urology: prostate and bladder

- Quickly over several days or weeks = *Acute Kidney Injury (AKI)*
  - Often reversible to some extent
- Slowly over many months or years = *Chronic Kidney Disease (CKD)*
  - Usually not reversible
  - Increased risk of cardiovascular disease

Testing kidney function

Blood tests

'how well are the kidneys cleaning the blood?'

- Serum creatinine (from muscle)
- **eGFR** is a calculated measure of kidney function
- calculation based on creatinine, age, sex, race of patients

- Normal is >90mls/min
- Naturally declines with age
- Disease hastens this

Urine tests

'is there damage to kidney filters?'

- Blood and protein
- Protein indicates filter damage

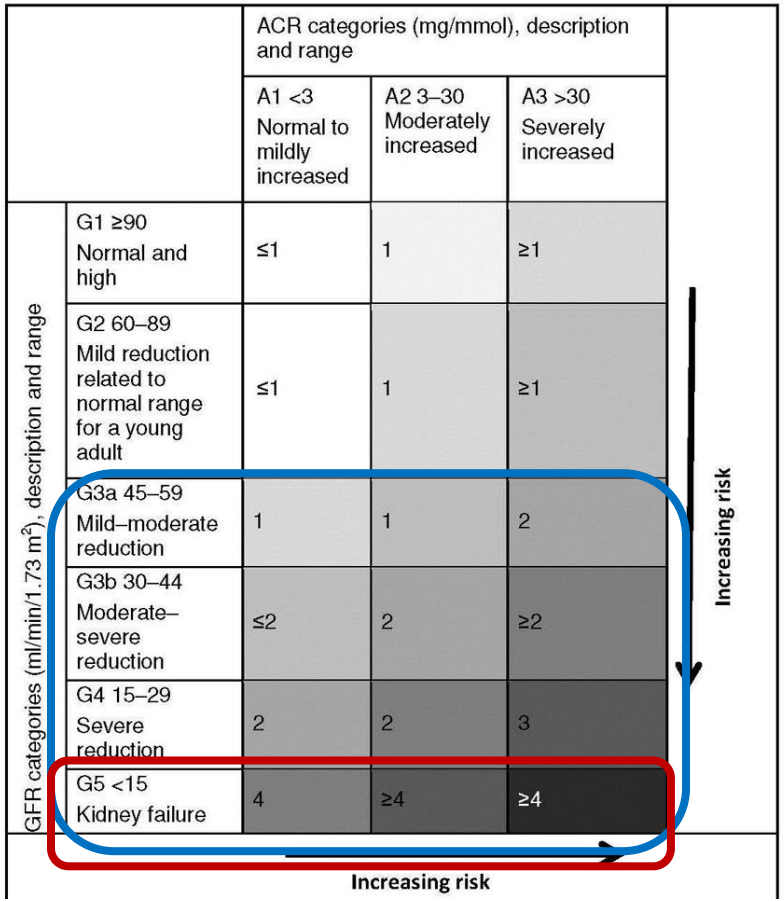
- Detected on dipstick
- Measured in lab as albumin:creatinine ratio **(ACR)**

- Increased risk of progression for given eGFR

Chronic kidney disease (CKD)

- Screen high risk:
  - **Primarily disease of blood vessels**
  - **Diabetics, hypertensives, those with vascular disease**
  - Minority have inflammatory disease directly affecting kidneys
  - Anatomical disorders

Chronic kidney disease (CKD)

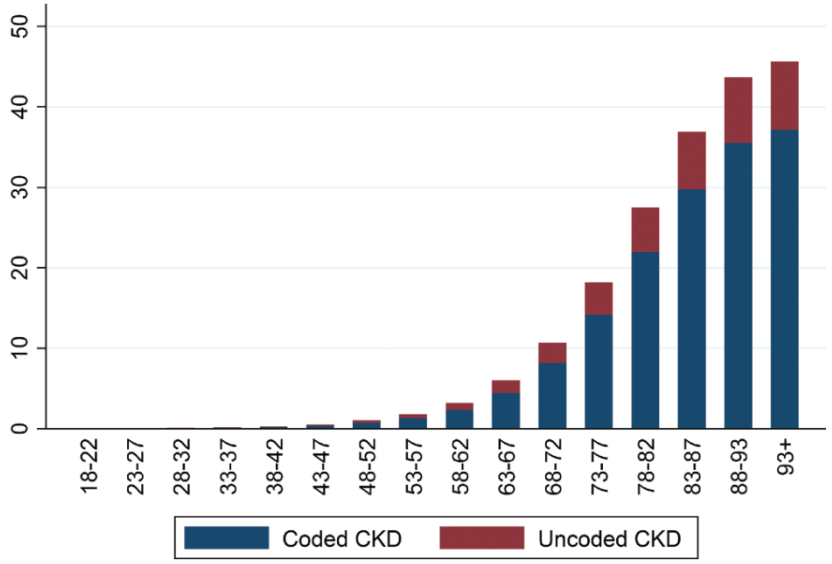


GFR categories (ml/min/1.73 m²), description and range	ACR categories (mg/mmol), description and range		
	A1 <3 Normal to mildly increased	A2 3–30 Moderately increased	A3 >30 Severely increased
G1 ≥90 Normal and high	≤1	1	≥1
G2 60–89 Mild reduction related to normal range for a young adult	≤1	1	≥1
G3a 45–59 Mild–moderate reduction	1	1	2
G3b 30–44 Moderate–severe reduction	≤2	2	≥2
G4 15–29 Severe reduction	2	2	3
G5 <15 Kidney failure	4	≥4	≥4

- Management then divided by:
  - Degree of impairment of kidney function
  - Amount of protein in urine
- Severe needs renal replacement therapy as dialysis or transplant, or supportive care

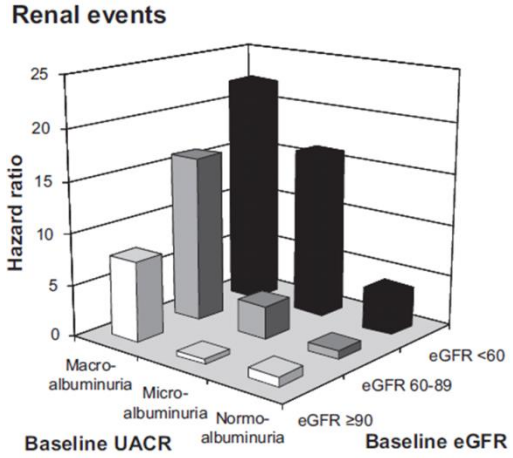
CKD; facts

- 6% of adult population have significant CKD. Very common in elderly
  - 3million+
- Only 50,000 in England have kidney failure
- Increased risk of cardiovascular disease. Far more will die from this than reach kidney failure

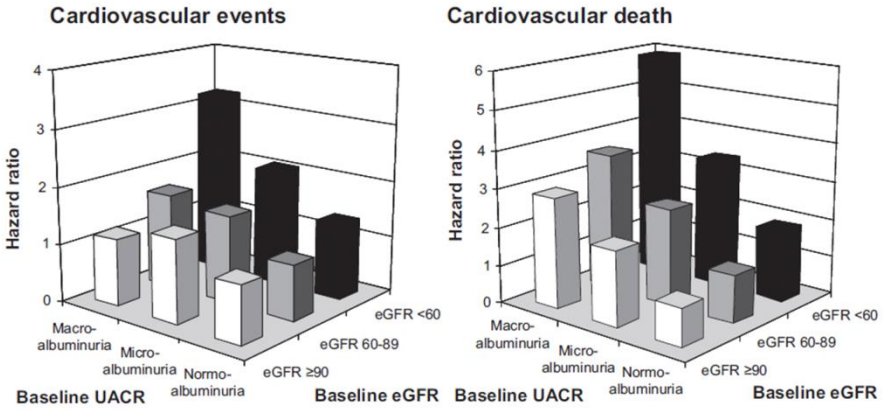


We have treatment…

- Use statins to reduce CV risk
- Treat diabetes to target
- Lower blood pressure



- Use ACE inhibitors and ARB to reduce proteinuria and reduce risk of death / renal progression



How do we do within the region?

Public Health England

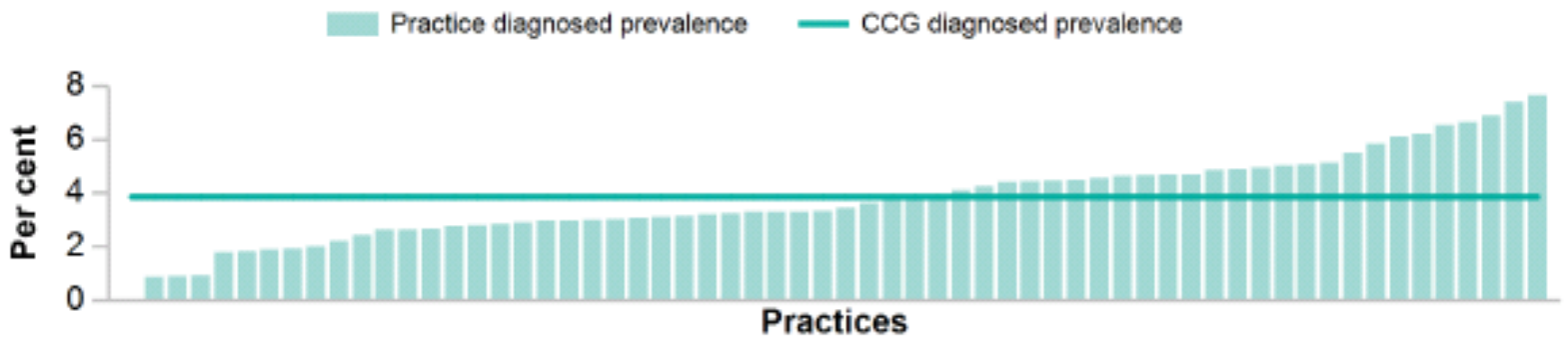
CVD Profiles - Kidney Disease

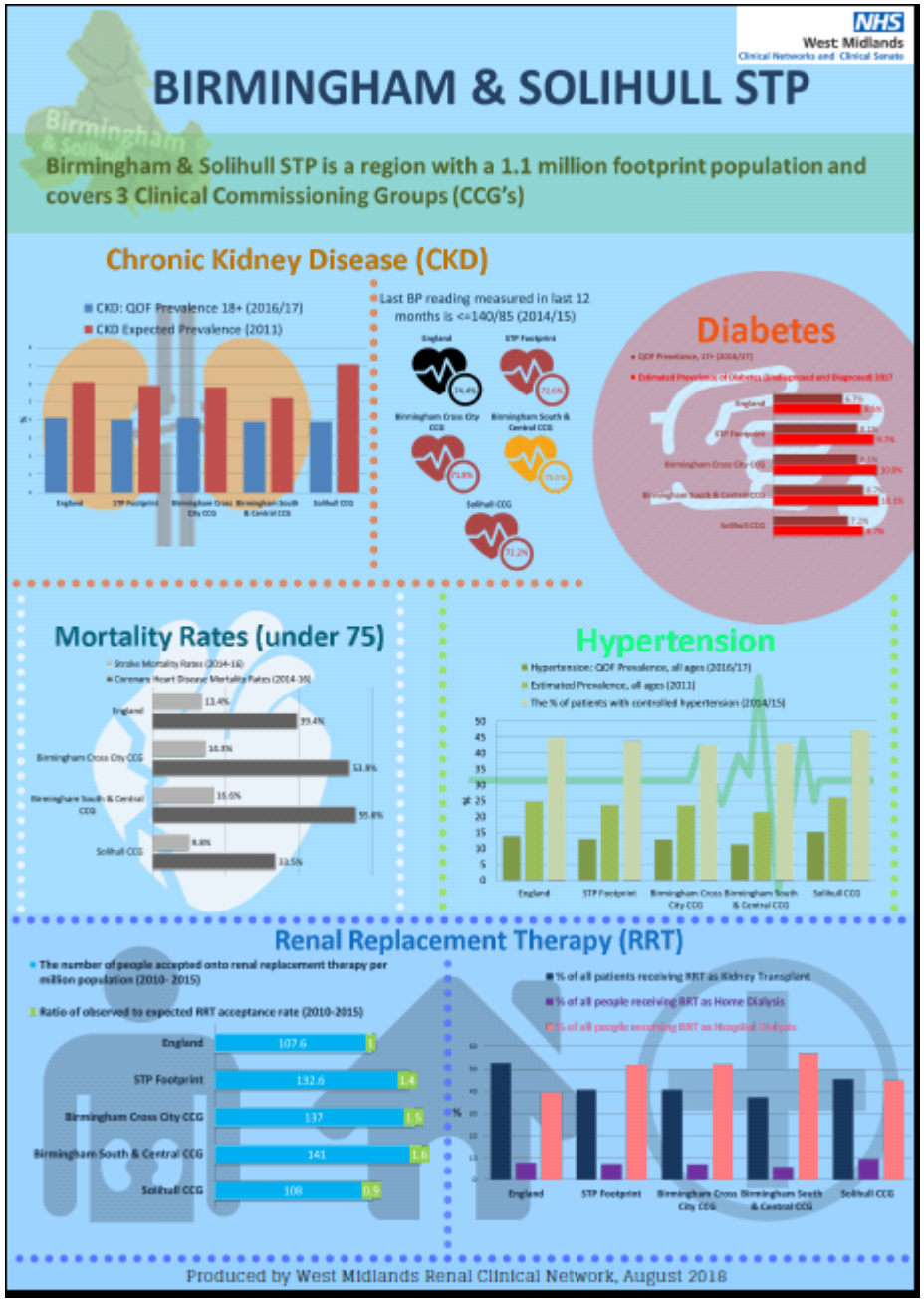
February 2018

NHS Birmingham South And Central CCG

Key Facts	CCG	Similar CCGs	STP	England
Observed prevalence of CKD (per cent)	3.9	3.5	4	4.1
Estimated prevalence of CKD (per cent)	5.2	-	5.9	6.1
Patients diagnosed with CKD whom the last blood pressure reading is 140/85 or less (per cent)	75.5	75.5	72.6	74.4

Variation by general practice of chronic kidney disease prevalence, 2016/17 (per cent)





For each STP:

Data currently available via PHE

Emphasising CKD as factor within cardiovascular disease as a whole

Some information on renal replacement therapy

Difficult to draw comparative conclusions on practice from this data as generally illustrates population difference

Could do more for CV risk factors and thus CKD….

How do we do nationally?

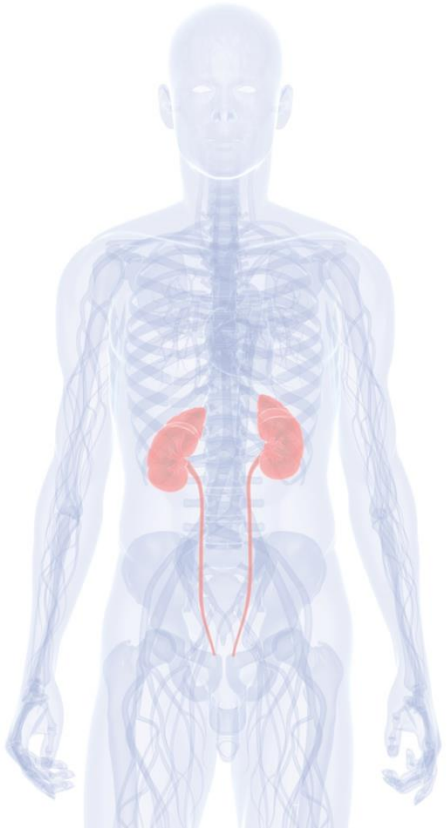
National Chronic Kidney Disease Audit

A quality improvement programme for chronic kidney disease

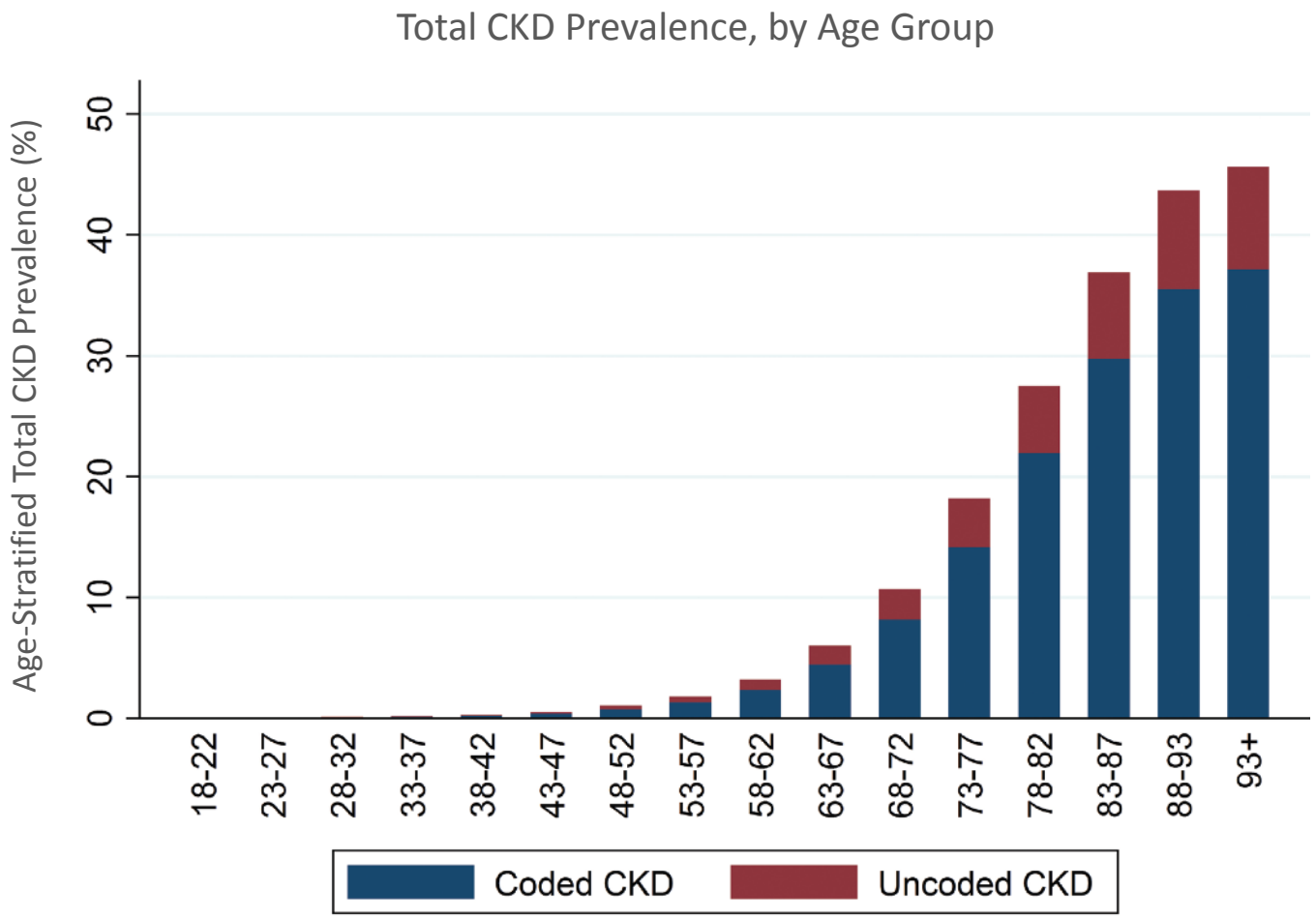
National CKDAudit

Commissioned by: HQIP Healthcare Quality Improvement Partnership

Delivered by: Queen Mary University of London; London School of Hygiene & Tropical Medicine; UCL; Informatica Systems

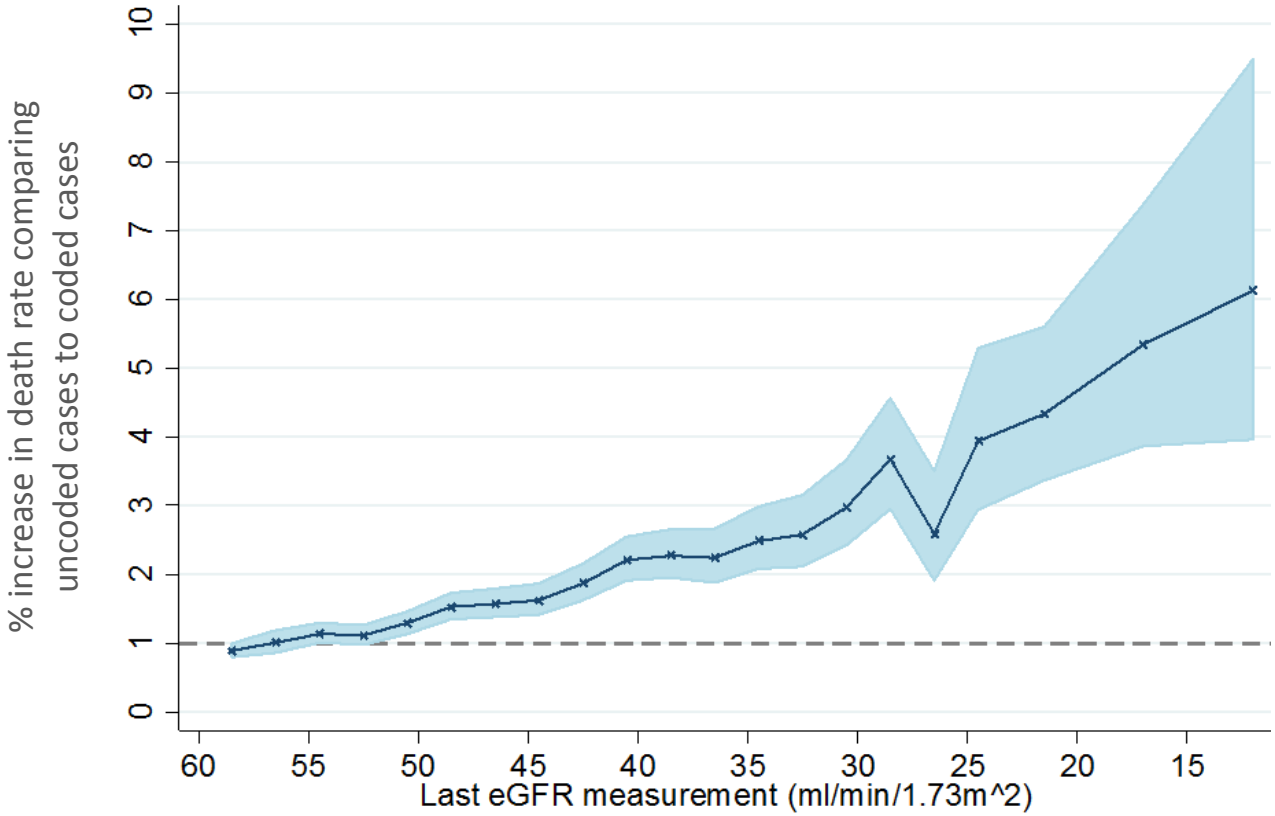


Findings


Total CKD Prevalence, by Age Group
Age-Stratified Total CKD Prevalence (%)
0
10
20
30
40
50
18-22
23-27
28-32
33-37
38-42
43-47
48-52
53-57
58-62
63-67
68-72
73-77
78-82
83-87
88-93
93+
Coded CKD
Uncoded CKD

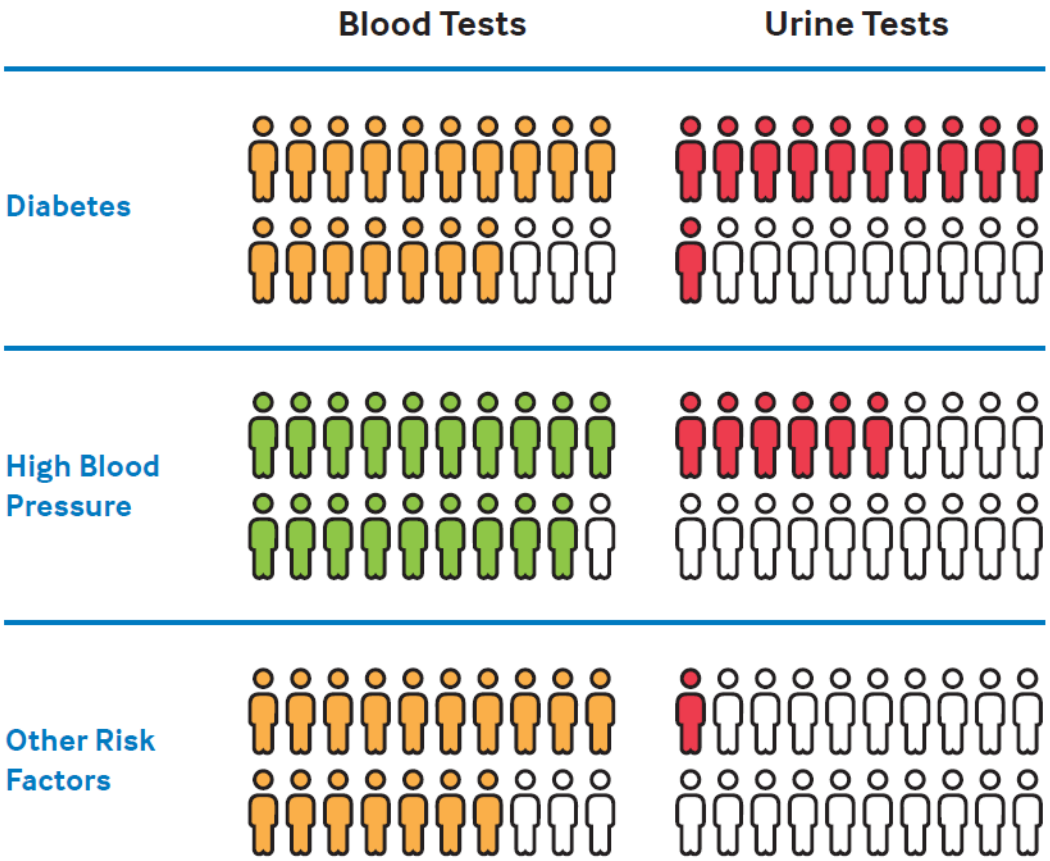
Findings

Comparison of death rates between uncoded and coded patients with biochemical CKD stages 3-5



Findings

Proportion of patients with different risk factors for CKD who **have had blood and urine tests**



Key: *There are no formal targets in the guidance, but the audit selected 70% and 90% as quality markers.*

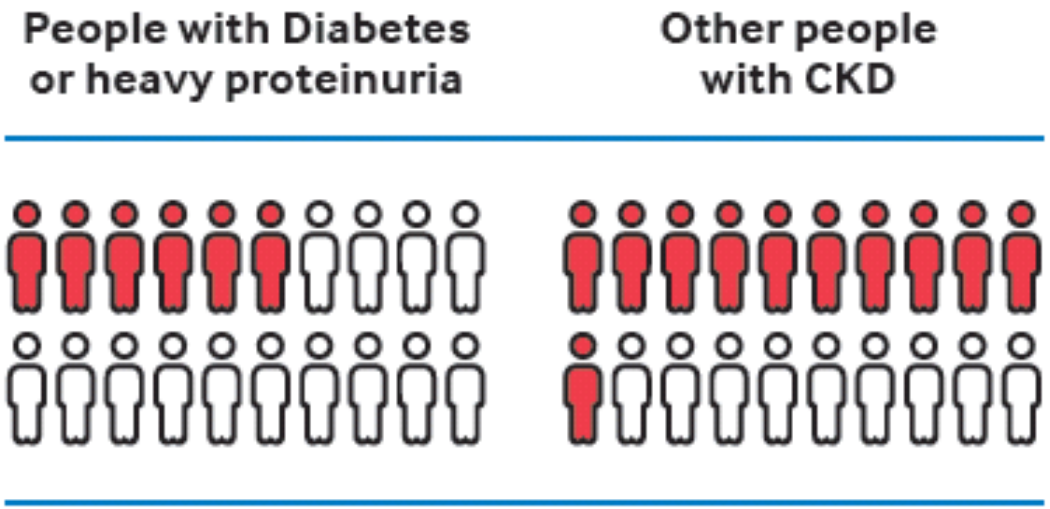
Red < 70% **Amber 71-90%** **Green > 90%**

Nitsch D, Caplin B, Hull S, Wheeler D. National Chronic Kidney Disease Audit - National Report (Part 1). 2017

CKD Management

The NCKDA found that the blood pressure of most patients with CKD at highest risk of kidney failure doesn't meet targets.

The charts below show the proportion of people with CKD achieving blood pressure targets. A lower target is advised in those with diabetes or proteinuria but fewer people achieve this.



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Problems….

<u>For Primary Care</u>

- Multi-morbidity
- Episodes of AKI
- Poor communication between primary and secondary care
- Poor understanding of kidney disease by some of primary care
- ACEin need monitoring

<u>For Patients</u>

- Multi-morbidity
- Lots of doctors
  - Specialists
  - Lack of continuity
- Lots of tablets
- Poor health literacy
- (Poor access to health care)

Problems: health infrastructure

- CKD retired from QoF…..
- Different labs
- Hospitals are a nightmare for elderly and frail
- Different referral routes; requires choice
  - Choose and book acute providers
  - Advice and guidance acute providers
  - CKD community
  - Hospital renal clinics
  - Diabetic renal clinics
- Most are fee per service
  - Prevents queries which can be used for education

Our vision

- Patients have prompt access to high quality, consistent CKD care wherever they are seen
- Seen by right person at right time; as close to home as possible. Reserve secondary care for those who need it
- Patients supported to understand kidney disease, their medication and their self-management strategies
- Primary care have easy access to advice to enable high quality care within multi-morbidity setting

Across the West Midlands

- Kidney disease management is usually provided in only one secondary centre for the area or with defined boundaries
- All keen to be involved more with primary care and support
- Problems with purchaser provider split inhibits doing what is best for the patient
- Good model to try out innovative, integrated systems