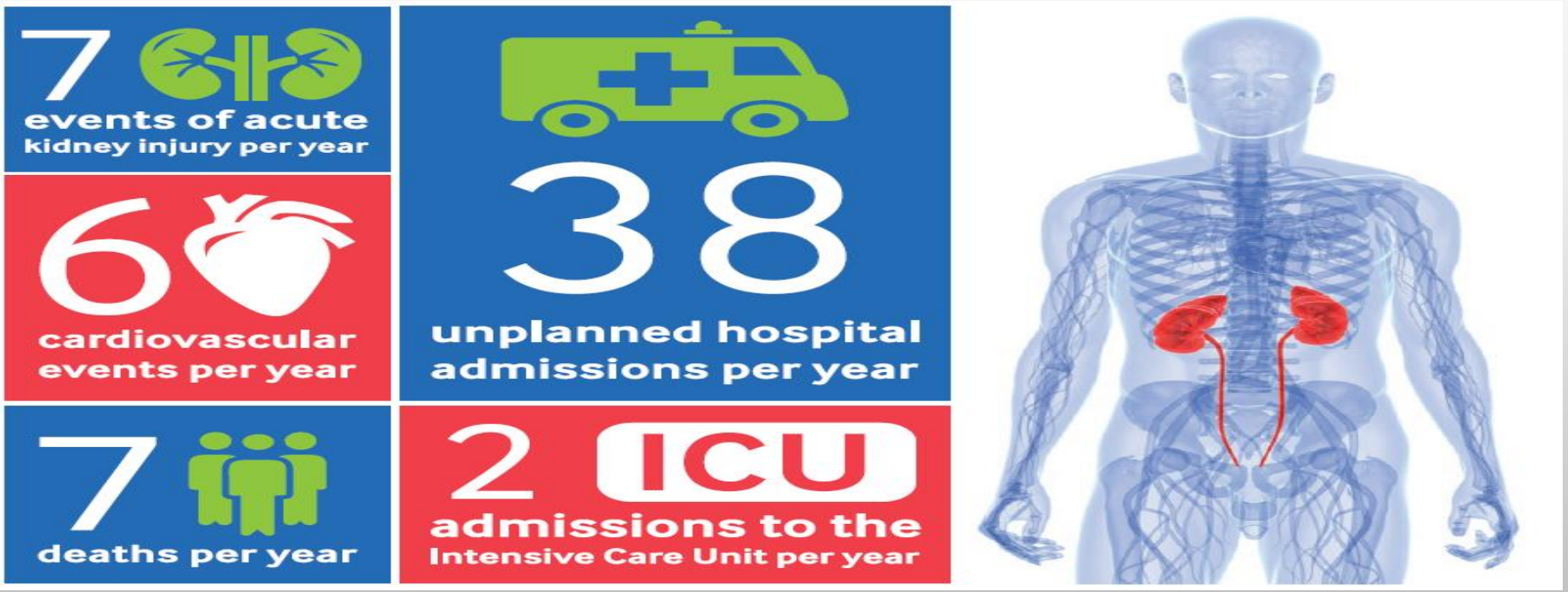
CHRONIC KIDNEY DISEASE

An opportunity to improve how your practice cares for this vulnerable group of patients.

Dr Richard Murray, William Murray

For every 100 patients with chronic kidney disease and moderate to severe kidney function impairment there are:



www.lshtm.ac.uk/ckdaudit

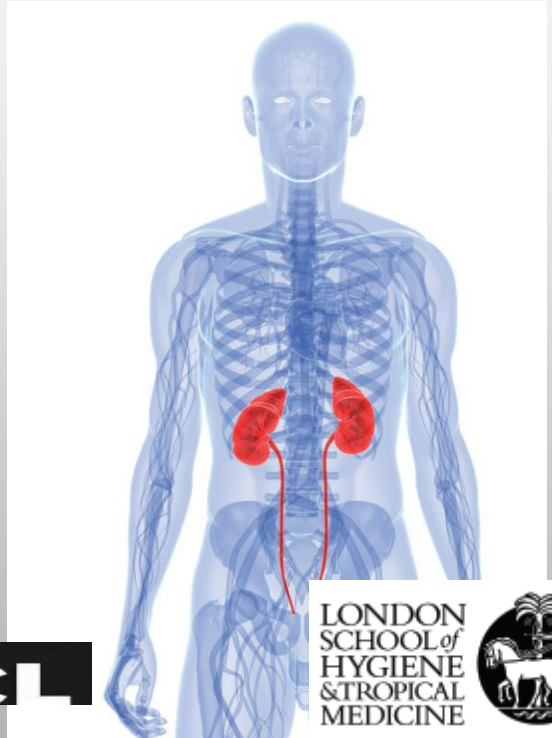
National
A quality improvement programme for chronic kidney disease
CKDAudit

Largest sample of patients with CKD in primary care globally

There was high variability between practices in rates of coding CKD 3-5 (the range lay between 0% and 80% potentially uncoded).

People with CKD which is not recorded (and therefore not known to all those who are caring for that patient) are

- more likely to have **heart attacks and strokes**
- more likely to be **admitted to hospital**
- more likely to develop **acute kidney injury**
- more likely to **die** than those who have been identified in advance.



Queen Mary University of London
INFORMATICA SYSTEMS
UCL
LONDON SCHOOL of HYGIENE &TROPICAL MEDICINE

Is it safe to prescribe ?

Patient 1- Ramipril 5mgs	GFR 45 and volume depleting acute illness
Patient 2- Metformin	GFR<30
Patient 3- Gabapentin	GFR 40
Patient 4- Canagliflozin 300mgs	GFR 45

Is it safe to prescribe ? NOT ALWAYS

Patient 1- Ramipril 5mgs	GFR 45 and volume depleting acute illness	Hold on prescribing
Patient 2- Metformin	GFR<30	Stop
Patient 3- Gabapentin	GFR 40	Reduce dose by 50%
Patient 4- Canagliflozin 300mgs	GFR 45	Reduce to 100mgs

Is it safe to prescribe ? High Risk

Patient 1-Ramipril 5mgs	GFR /unknown/ not checked
Patient 2- Metformin	GFR /unknown/ not checked
Patient 3- Gabapentin	GFR/unknown/ not checked
Patient 4- Canagliflozin 300mgs	GFR /unknown/ not checked

Patients who are not coded are twice as likely to have an emergency hospital admission as patients who are coded for CKD

What did we do

1. We identified all patients with an eGFR <45 (CKD 3b-5) and flagged their files
2. We contacted all patients and arranged a doctor review
3. Review: education verbal and leaflets on lifestyle modification, nephrotoxic OTC drugs, checked urine for blood and sent for albumin/creatnine ratio (independent cardiovasc. risk factor).
4. Coding
5. We significantly changed our software so that the opening screen of each patient's file identified the patient as having chronic kidney disease with their CKD code, most recent blood pressure recording, lipid profile, BMI, haemoglobin, smoking status and chronic medication prescribed.

HEALTH one 2018 - [Test William - 03/05/1956 - M - 62 years]

File Edit HCR Insert View Analysis Tools Window Help

Family | Lab requests

Problems | Vaccine | Repeated drug - 3 | Allergy - 1 | Trends

Product name	Dosage
Lipitor 20 mg tablets	1 tabs daily
aspirin 75 mg	1 tabs daily
ramipril 5 mg	1 tabs daily

Transactions

Filter: Full

Moment of occurr...	Transaction name	Responsible HCP
Administrative chapter		
10/03/2019	identification	Dr. Richard Murray
Medical chapter		
28/04/2019		Dr. Richard Murray
09/03/2019	lab	Dr. Richard Murray
10/03/2019	lab	Dr. Richard Murray
10/03/2019	consultation	Dr. Richard Murray
10/03/2019	lab	Dr. Richard Murray
10/03/2019	lab	Dr. Richard Murray
10/03/2019	consultation	Dr. Richard Murray

6 transactions

Medical transaction | Billing | Action plan | Appointment | Text Message

Antenatal Referral OLLD/OLHN DLM PCSA_June_2018

subjective symptoms: cough with upper airway secretions
sxs for 1/52

objective findings: upper airway congestion
lungs clear to auscultation
apyrexial

diagnosis [M]: upper respiratory tract infection

10/03/2019 | 62 Year(s) | Consultation | General practice | Dr. Richard Murray

Risk Score

Dr. Richard Murray | SERVER SQL (SERVERSQL)

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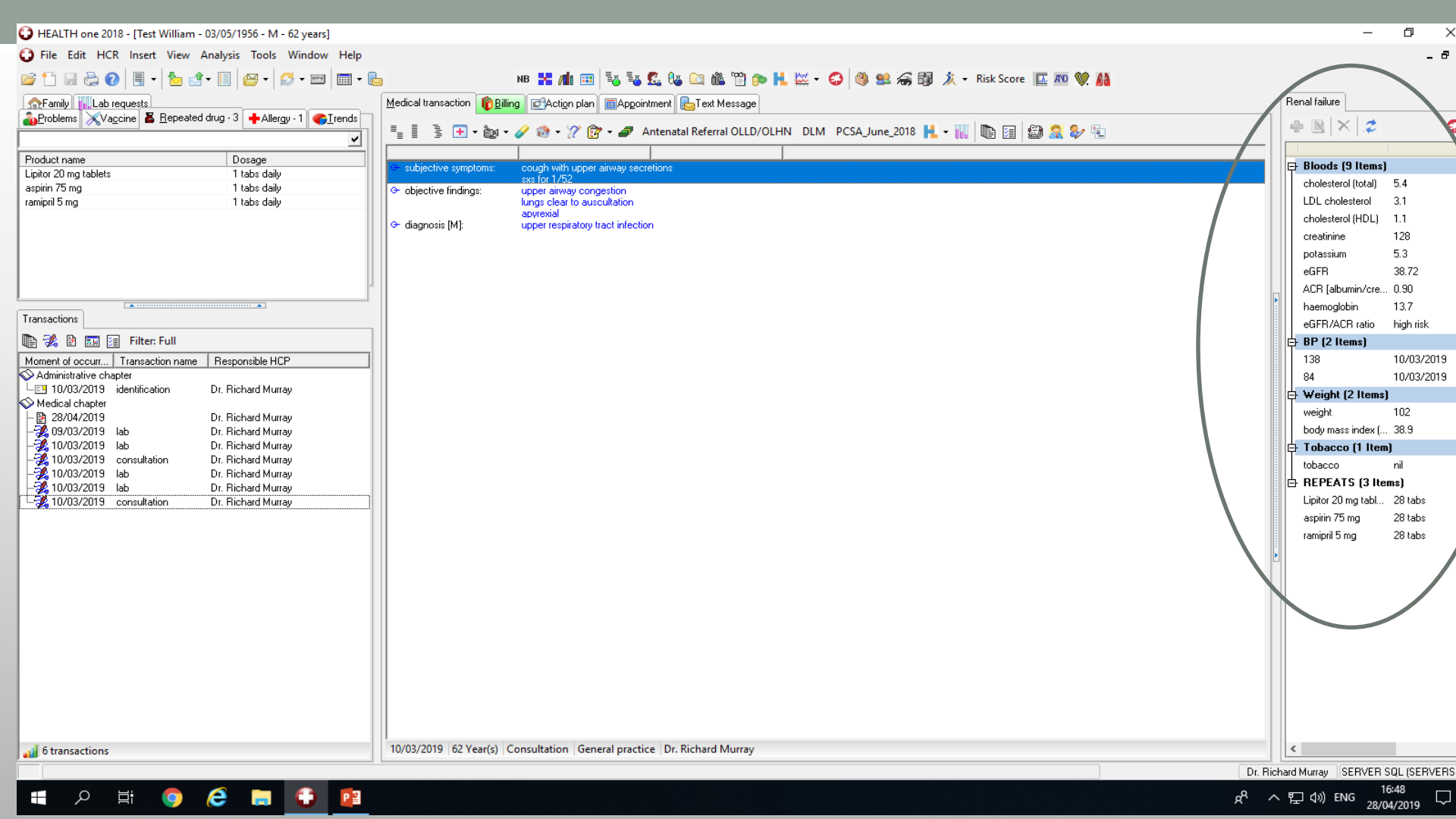
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apyrexial
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10/03/2019 | 62 Year(s) | Consultation | General practice | Dr. Richard Murray
Renal failure
Bloods (9 Items)
cholesterol (total) 5.4
LDL cholesterol 3.1
cholesterol (HDL) 1.1
creatinine 128
potassium 5.3
eGFR 38.72
ACR [albumin/cre... 0.90
haemoglobin 13.7
eGFR/ACR ratio high risk
BP (2 Items)
138 10/03/2019
84 10/03/2019
Weight (2 Items)
weight 102
body mass index (... 38.9
Tobacco (1 Item)
tobacco nil
REPEATS (3 Items)
Lipitor 20 mg tabl... 28 tabs
aspirin 75 mg 28 tabs
ramipril 5 mg 28 tabs
Dr. Richard Murray
SERVER SQL (SERVERS
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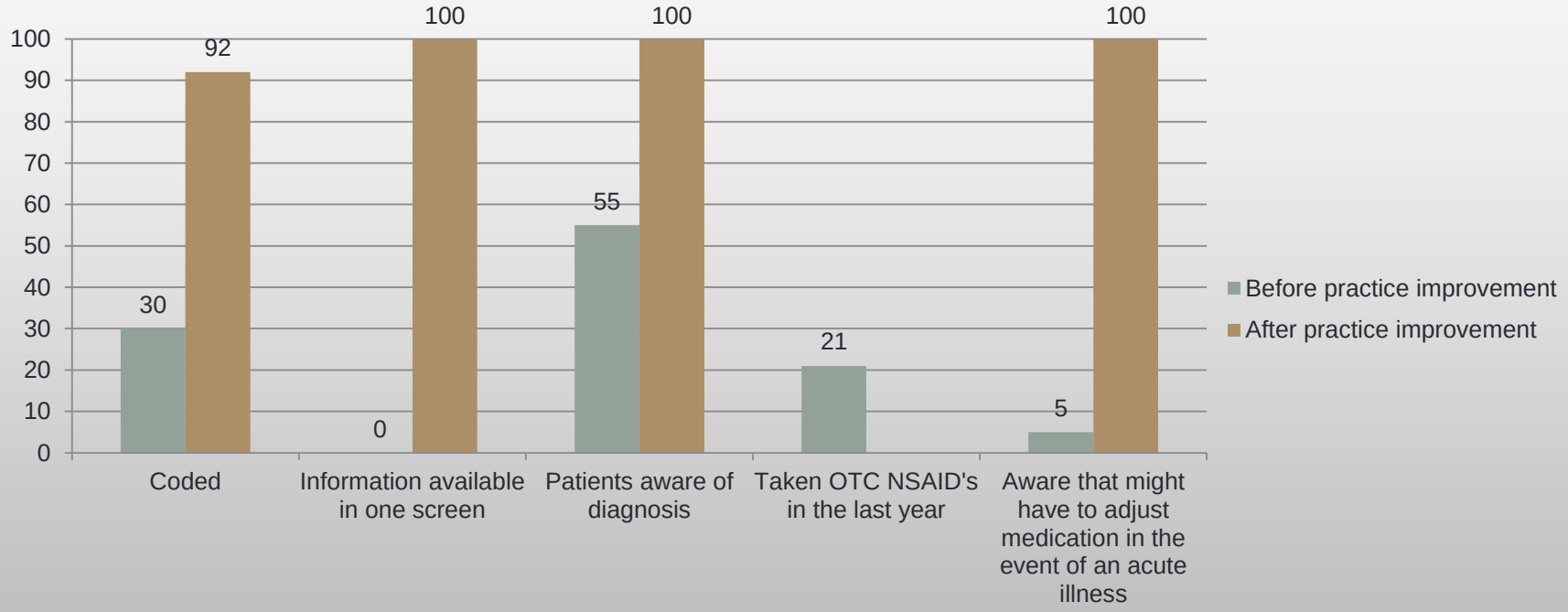
28/04/2019

Data


100
90
80
70
60
50
40
30
20
10
0
30
92
0
100
55
100
21
5
100
Coded
Information available in one screen
Patients aware of diagnosis
Taken OTC NSAID's in the last year
Aware that might have to adjust medication in the event of an acute illness
Before practice improvement
After practice improvement

Is it safe to prescribe ? High Risk

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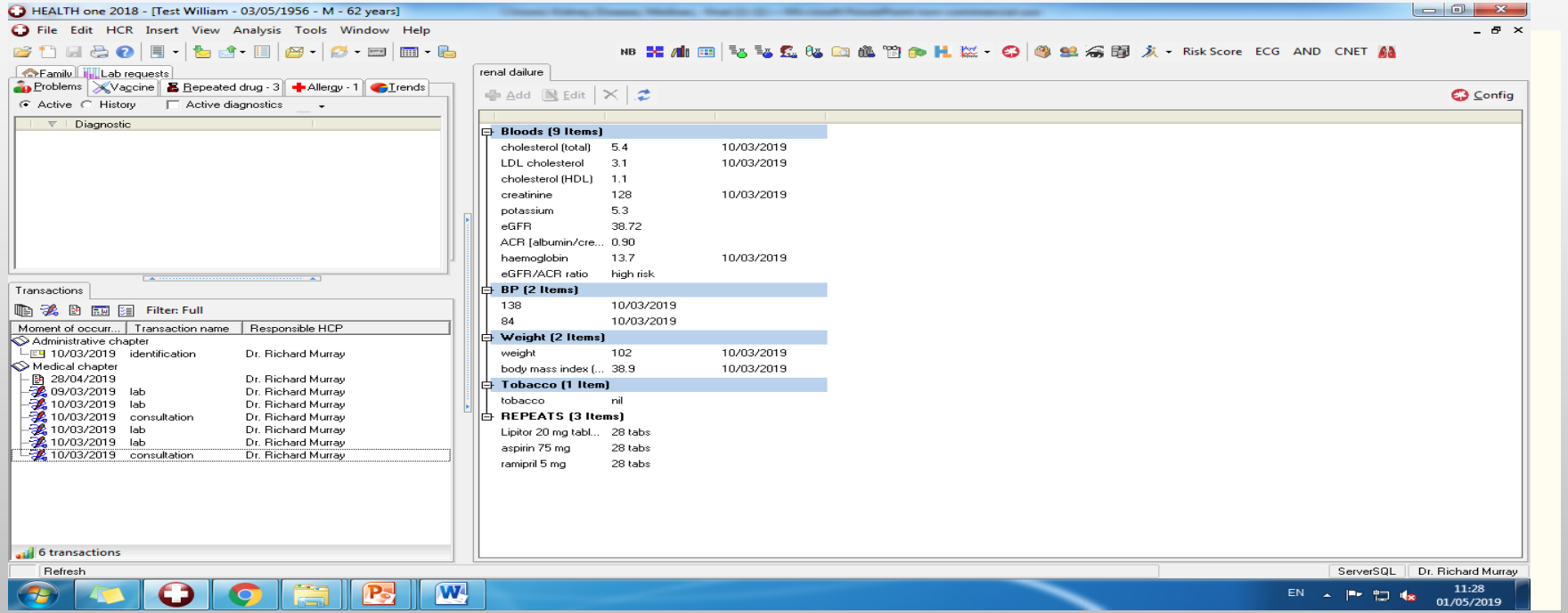
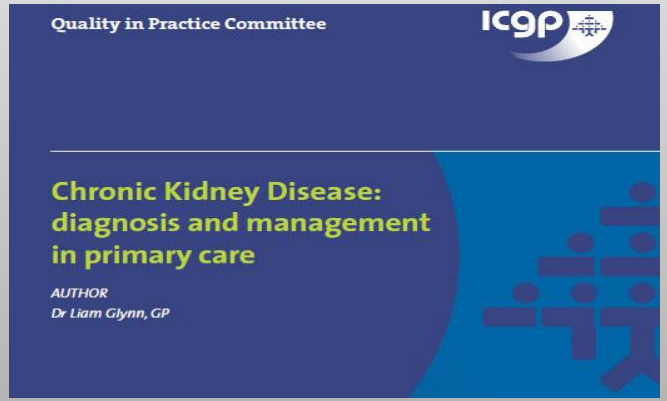
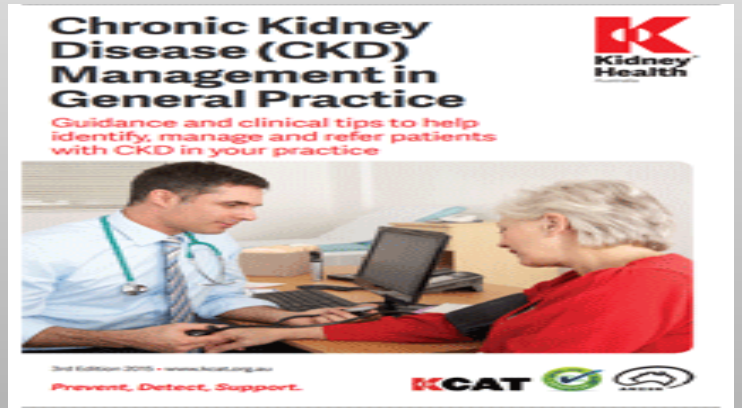
Crucial to have all relevant data to hand



Summary

- Is it important ? Yes (For every 100 patients with moderate to severe CKD there are 7 deaths, 38 unplanned admissions,7 acute kidney and 6 cardiovascular events per year).
- Can a General Practioner make a difference ? Yes ((Following changes : 62% increase in patients coded, 100% increase in all relevant data recorded in one screen, 45% increase in patients aware of their diagnosis, 100% of patients now educated on OTCmedications to avoid and how to manage acute illnesses).
- Can we rely on secondary care to do this ? No (majority of CKD patients managed solely in the community)

Thank you for listening
Any Questions?

"where CKD is recognised in this population, patients are often nihilistically treated"

- "there is building high-level evidence that the presence of CKD is a greater risk factor for cardiovascular disease than is diabetes"