CKD Practice Development Meeting

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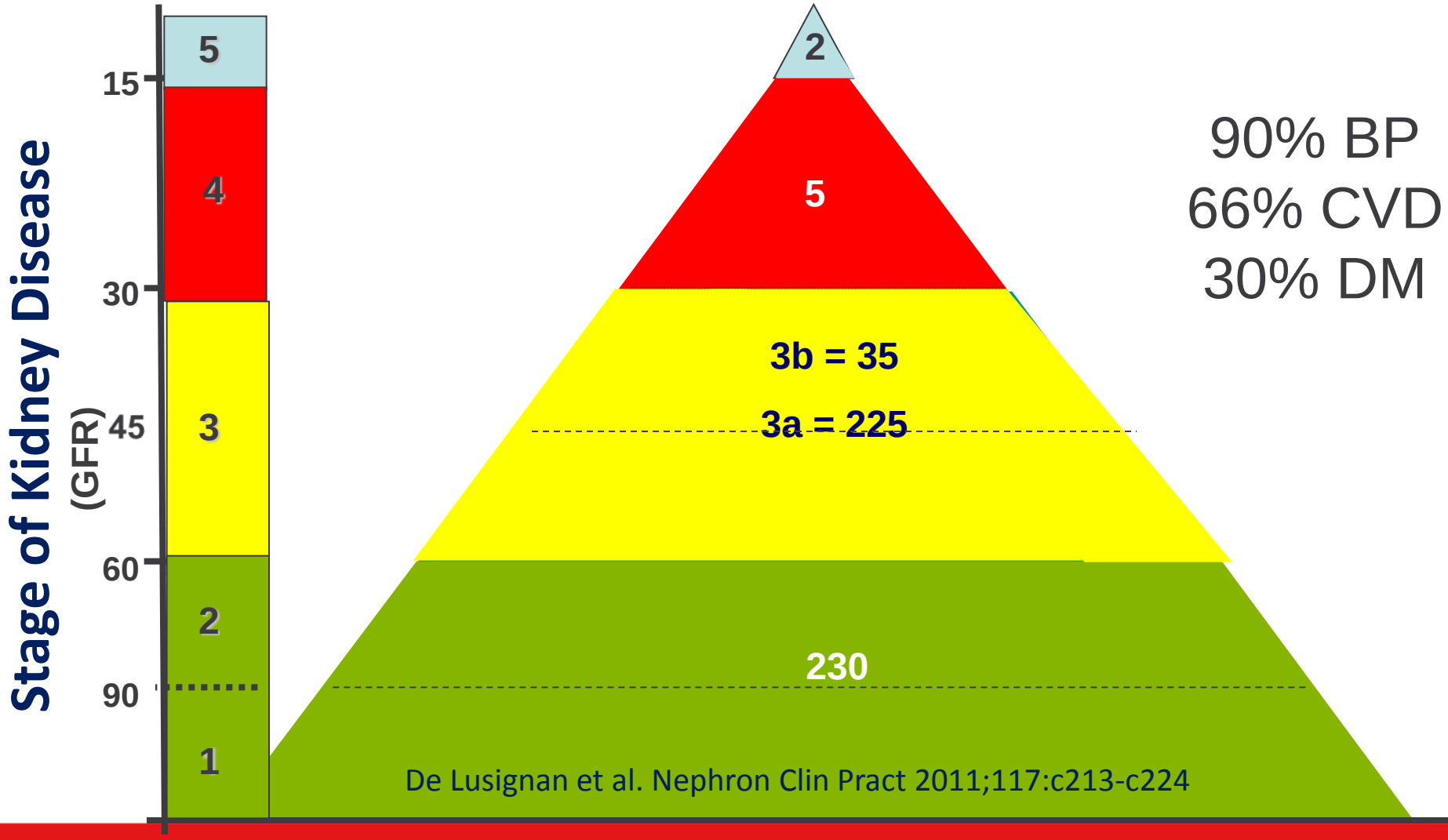
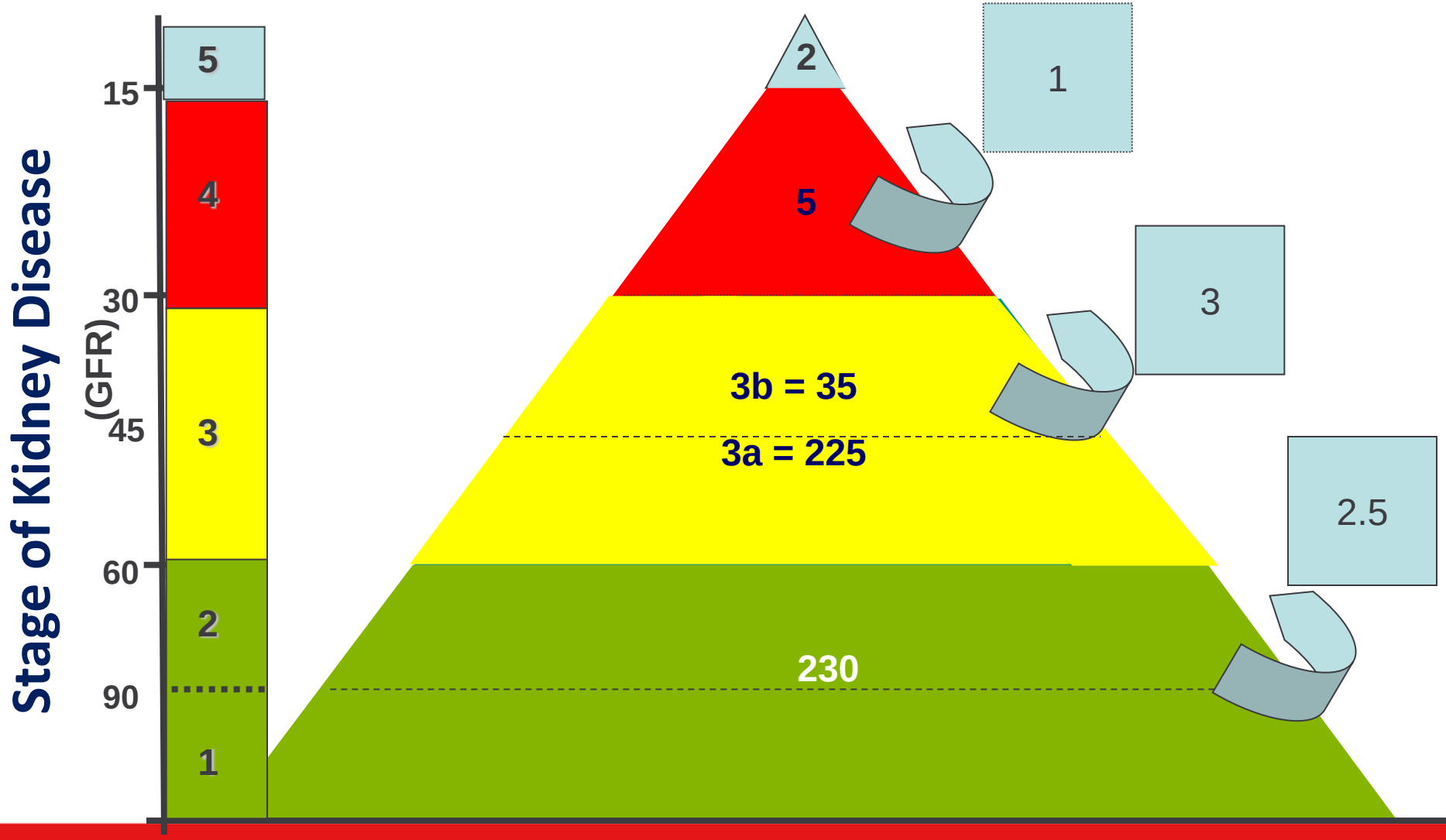
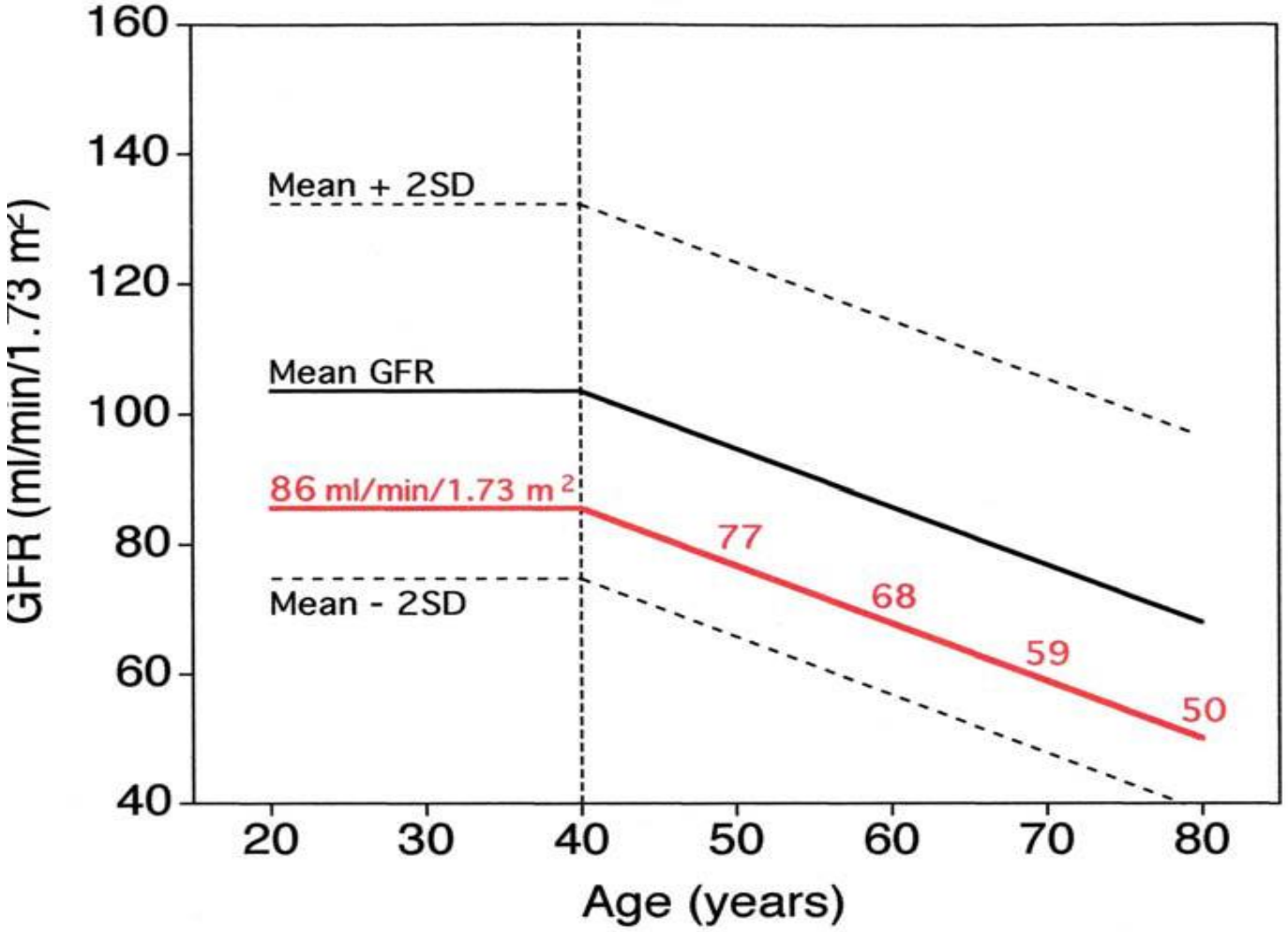
A typical GP practice of 5,000



Progression to ESKD over 5 years



Change in GFR with ageing

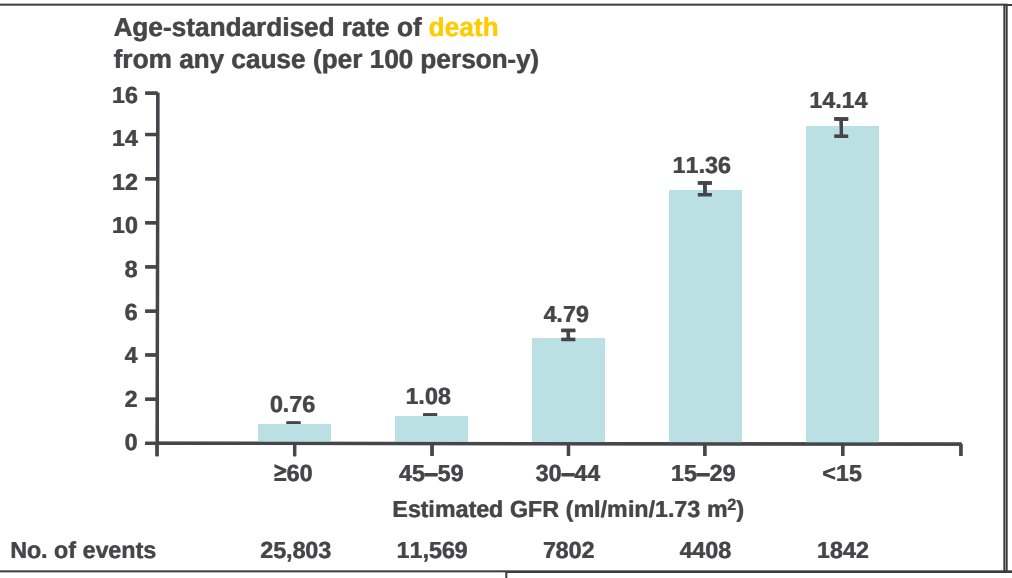


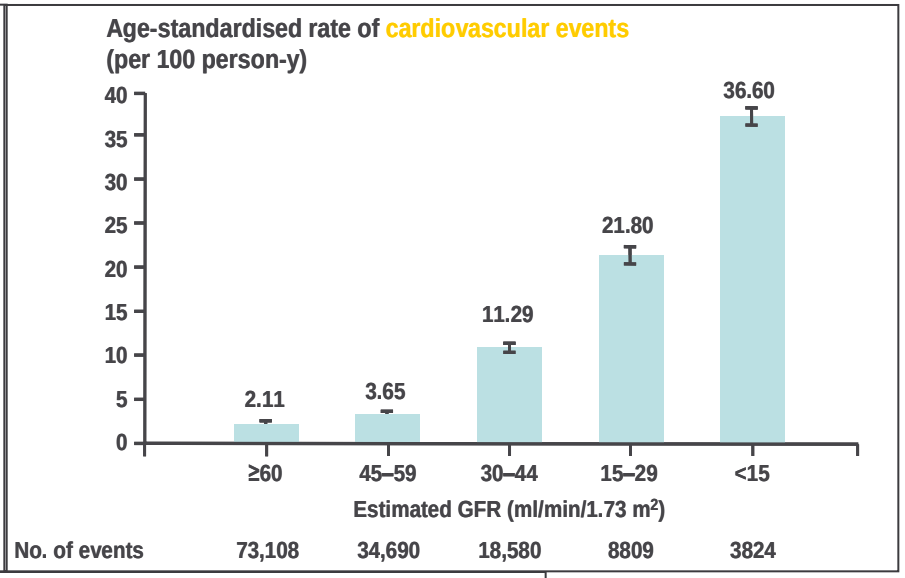
Outcomes: mortality/dialysis

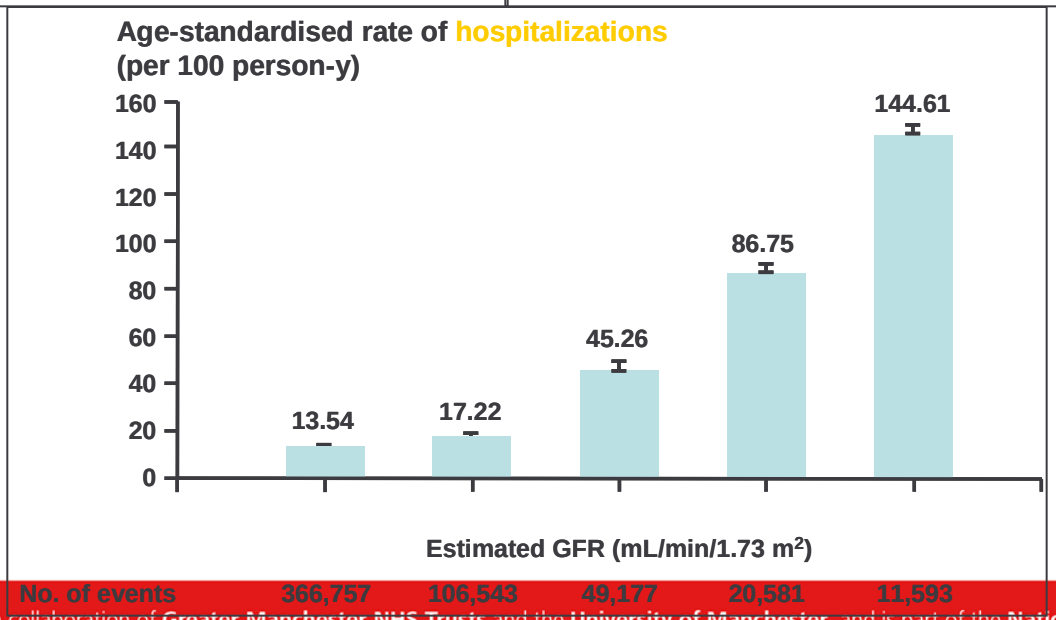
Stage	GFR (ml/min)	RRT	Death
2	60-89	1.1%	19.5%
3	30-59	1.3%	24.3%
4	15-29	19.9%	45.7%

27,998 CKD patients followed for 5 years

Keith DS, AIM 2004;164:659-663







Go et al NEJM
2004

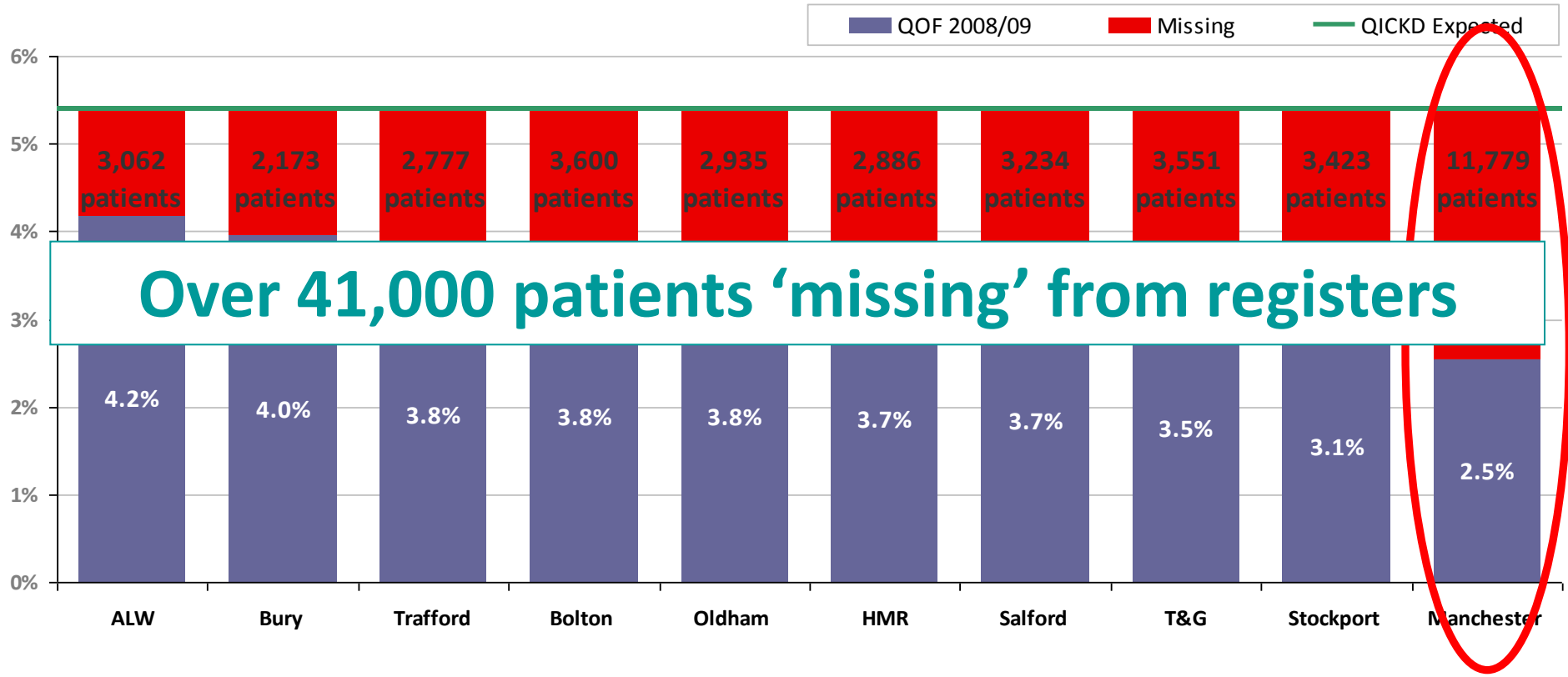
CKD cost information

NHS Salford	
Description	**Cost**
ACR testing for the population with recorded stage 3–5 CKD	£ 12,220
CKD test for the population with risk factors	£ 72,112
Cost of haemodialysis per person/1year	£ 29,800
Net expenditure for renal problems (17b Programme Budgeting Category)	£ 3,794,125 (2.77% Total expenditure) [1]
Split for:	
Primary care	**£ 117,204 (3%)** [1]
Secondary care	**£ 3,681,350 (97%)** [1]
Net Expenditure for Problems of Circulation (10 Programme Budgeting Category)	£ 14,078,855 (8.4% Total expenditure) [1]

[1] £ per 100,000 population

Source: NICE, 2008. Programme Budgeting, 2006-07

Where did we start in 2009? Missing patients across Greater Manchester



Over 41,000 patients 'missing' from registers

Using QICKD expected prevalence of 5.4%* (18+ prevalence from QOF 2008/09)

***5.4% may be an underestimation for GM population – perhaps more like 6%**

Professional perceptions of CKD

Kidney disease is part of the normal ageing process

- The ***label*** 'chronic kidney disease' can induce ***fear and is stigmatising*** for patients
- A low eGFR level/***declining renal function is normal for the elderly***

Issues surrounding giving a patient a CKD diagnosis

- Informing patients they have been classified CKD stage 3 ***unduly raises patient anxiety*** – some think they require a kidney transplant
- GPs ***should not put CKD 3 diagnosis*** on a patient's record ***without informing*** them – medical-legal requirement
- *Not adequate time* in 10 min consultation ***to explain*** to patients the significance of an eGFR score

Crinson I et al. Br J Gen Pract 2010 Jun;60(575):403-9

To summarise…

- *Moderate/severe CKD is as prevalent as e.g. diabetes*
- *Vast majority are mild/moderate and stable (stage 1,2,3a disease)*
- *Numbers going through to RRT at practice level are tiny*
- *Costs of RRT to patients and NHS are huge*
- *CKD is a vascular condition and like all vascular diseases morbidity and mortality is high*

- **YOU ALREADY KNOW HOW TO MANAGE CARDIOVASCULAR RISK VERY WELL**

- **There are some knowledge skills and confidence gaps in identifying patients and managing risk in CKD in primary care that this project will help you overcome**

Key clinical messages re CKD

Offer people testing for CKD if they have any of the following risk factors:

– diabetes

– hypertension

– cardiovascular disease (ischaemic heart disease, chronic heart failure, peripheral vascular disease and cerebral vascular disease)

– structural renal tract disease, renal calculi or prostatic hypertrophy

– multisystem diseases with potential kidney involvement – for example, systemic lupus erythematosus

– family history of stage 5 CKD or hereditary kidney disease

– opportunistic detection of haematuria or proteinuria.

Stage[b]	eGFR (ml/min/ 1.73 m^2)	Description	Typical testing frequency[c]
1	≥ 90	Normal or increased GFR, with other evidence of kidney damage	12 monthly
2	60–89	Slight decrease in GFR, with other evidence of kidney damage	
3A	45–59	Moderate decrease in GFR, with or without other evidence of kidney damage	6 monthly
3B	30–44		
4	15–29	Severe decrease in GFR, with or without other evidence of kidney damage	3 monthly
5	< 15	Established renal failure	6 weekly

Test eGFR[c]:

- Annually in all at risk groups.
- During intercurrent illness and perioperatively in all patients with CKD.
- The exact frequency should depend on the clinical situation. The frequency of testing may be reduced where eGFR levels remain very stable but will need to be increased if there is rapid progression.

[a] This updates stage 3 of the classification of CKD adopted by the 'National service framework for renal services' (the US 'National Kidney Foundation kidney disease outcomes quality initiative' [NKF-KDOQI]).

[b] Use the suffix (p) to denote the presence of proteinuria when staging CKD, and define proteinuria as urinary ACR ≥ 30 mg/mmol, or PCR ≥ 50 mg/mmol.

[c] The information on testing frequency is based on GDG consensus and not on evidence.

Increased accuracy in proteinuria coding

People with CKD without diabetes

Urine results (mg/mmol)		Blood results (ml/min/1.73 m²)			
		eGFR ≥ 60		eGFR 30–59	eGFR < 30
		No risk factors for CKD	+ Risk factors for CKD	Confirmed by a repeat test within 14 days	Confirmed by a repeat test within 14 days
ACR < 30 or PCR < 50		No further action[a]	Repeat eGFR in 12 months		
ACR 30–69 or PCR 50–99 confirmed on early morning sample	No haematuria	See pages 11–14 on the management of CKD			
	+ Haematuria	Consider referral for specialist opinion			
ACR ≥ 70 or PCR ≥ 100					

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People with CKD and diabetes

Urine results (mg/mmol)	Blood results (ml/min/1.73 m²)		
	eGFR ≥ 60	eGFR 30–59	eGFR < 30
ACR ≤ 2.5 (men) or ACR ≤ 3.5 (women)	Measure eGFR annually	See pages 11–14 for the management of non-diabetic renal disease	Refer to specialist
ACR > 2.5 (men) or ACR > 3.5 (women)	Offer ACE inhibitor (or ARB if intolerant) Treat blood pressure. Aim for Systolic: 120–129 mmHg Diastolic: < 80 mmHg		

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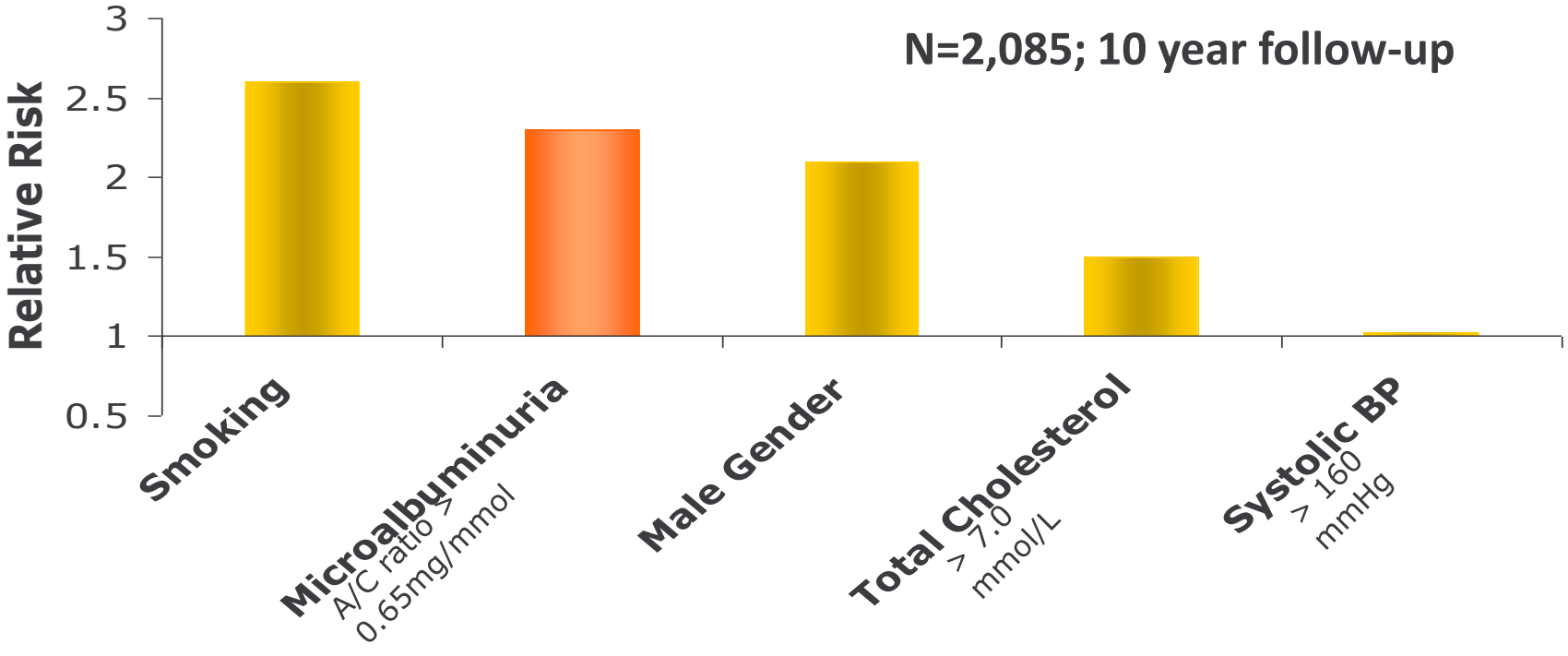
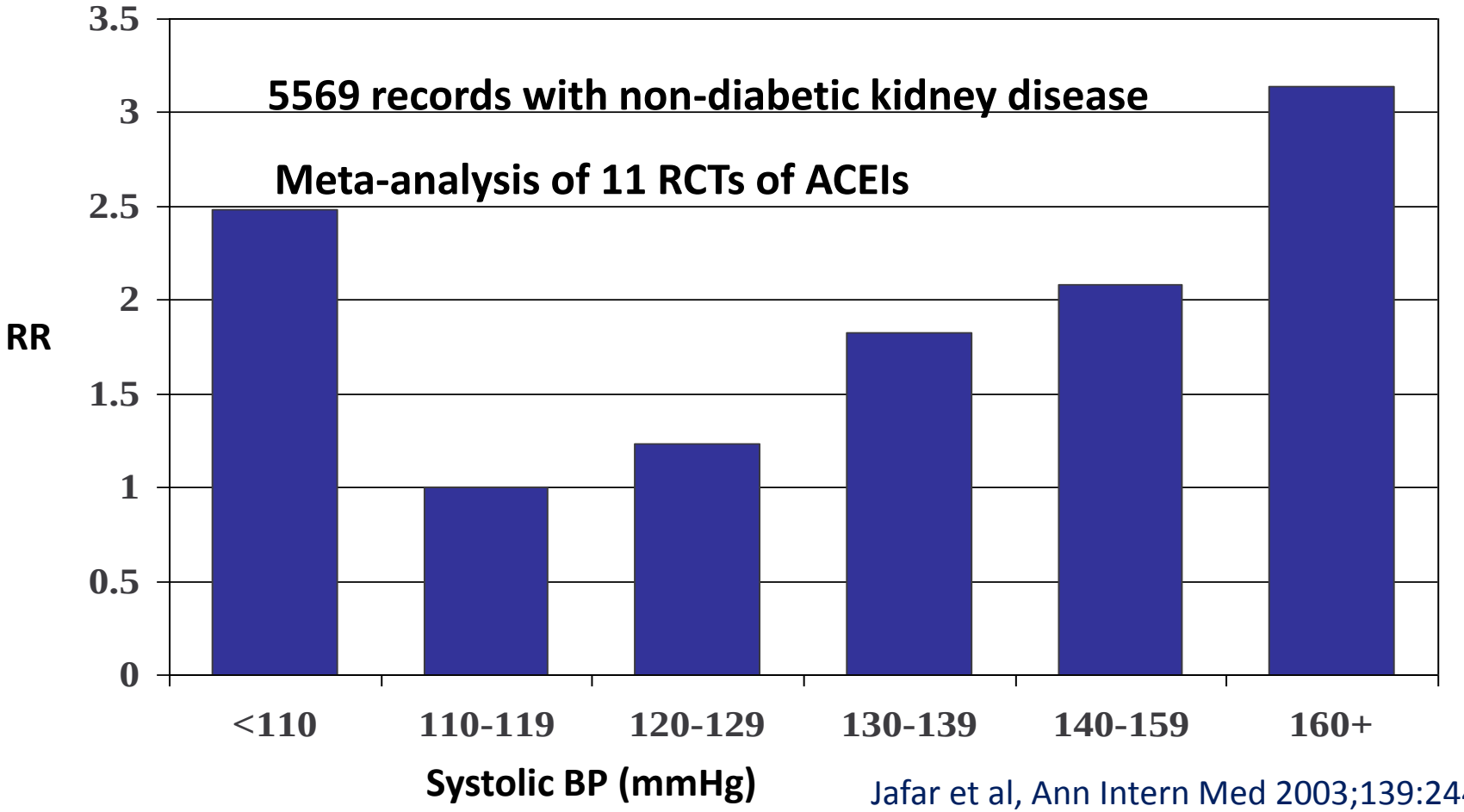
Microalbuminuria compared to traditional risk factors for Ischaemic Heart Disease



Borch-Johnsen K et al. Arterioscler Thromb Vasc Biol. 1999;19(8):1992-1997

Systolic blood pressure and progression of CKD – AIPRD study group



Jafar et al, Ann Intern Med 2003;139:244-252

Who to refer (or discuss) for specialist assessment?

– stage 4 and 5 CKD
– higher levels of proteinuria (ACR ≥ 70 mg/mmol, *(approx PCR 100 mg/mmol or urinary protein excretion 1 g/24 h)* unless known to be due to diabetes and already appropriately treated
– proteinuria (ACR 30 mg/mmol (*approx PCR 50 mg/mmol, or urinary protein excretion ≥ 0.5 g/24 h*) together with haematuria
– rapidly declining eGFR (> 5 ml/min/1.73 m2 in 1 year, or > 10 ml/min/1.73 m2 within 5 years)
– hypertension that remains poorly controlled despite the use of at least four antihypertensive drugs at therapeutic doses
– people with, or suspected of having, rare or genetic causes of CKD
– suspected renal artery stenosis (>25% decline in eGFR on

Local CKD Improvement project

Objective 1: To halve the gap between recorded and estimated CKD prevalence on practice registers

Objective 2: 75% of all registered patients to be tested for proteinuria and managed to NICE blood pressure targets by August 2013

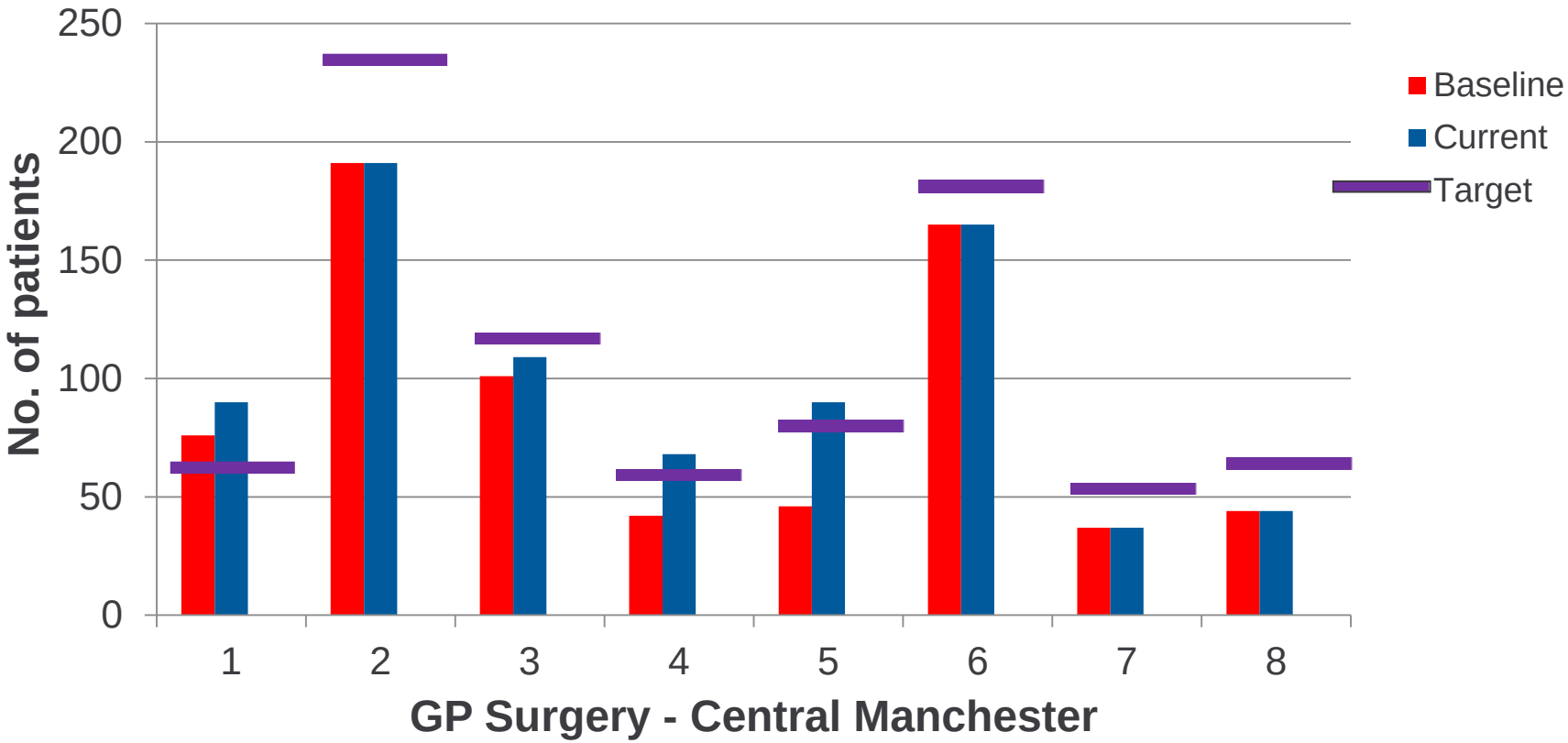
NHS Manchester

Breakdown per practice

GP Practice	Number of patients on CKD register	Target	+/-
Moss Side (Dr Ahmed)	76	60	(-16)
Robert Darbishire Practice	191	233	42
Cornbrook Medical Practice	101	115	14
Moss Side (Dr Hussain)	42	57	15
Wilmslow Road Medical Centre	46	76	30
The Arch Medical Centre	165	178	13
The Docs	37	52	15
The Whitswood Practice**	44	64	20
TOTAL	**702**	**835**	**133**

***Merged practices: Alexandra Range Medical Practice (P84635) and Alexandra Park Health Centre (Dr Chaudury's Practice (P84668)*

Target 1: Halving prevalence gap (July 2013)



1= Moss Side (Dr Ahmed), **2**=RDP; **3**=Cornbrook; **4**=Moss Side (Dr Hussain); **5**= Wilmslow Road; **6**=The Arch; **7**=The Docs; **8**= Whitswood

Improving care in the real world: CKD case studies

Janet Hegarty
Viv Entwistle

Case Study 1: Telling the patient

A 64 year old female has recently been diagnosed with CKD stage 3B at your practice. She has well controlled blood pressure and is already prescribed medication for heart failure. She is stable on her current medication, and her GP decides not to tell her about her chronic kidney disease as she is stable and he 'doesn't want to scare her'.

A month later she catches a virus which causes her to suffer from diarrhoea and vomiting.

What are the risks for this patient? What would you have told her in your practice?

Case Study 1: Telling the patient

Because the patient was not given the diagnosis of CKD, she doesn't know she has it. Consequently, she wasn't made aware that continuing to take her medication whilst she was ill acted as a diuretic and is likely to further damage her kidneys. She is now at an elevated risk of acute kidney injury. By discussing her diagnosis of CKD and advising her to contact the GP in the event of illness they can both manage the risk.

Case study from: 'Top tips for Chronic Kidney Disease' presentation by Dr Kathryn Griffith, Clinical Cardiovascular (CVD) Lead for York and North Yorkshire Primary Care Trust

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From Times Online

June 11, 2009

'Thousands of Britons dying as doctors miss signs of kidney failure'

David Rose

RECOMMEND? (2)

Thousands of patients are dying unnecessarily because hospital doctors are missing the signs of kidney failure, a national inquiry reports today.

Half of people who die from acute kidney injury (AKI) do not receive a good standard of care because of lapses in "basic bedside medicine", the National Confidential Enquiry into Patient Outcome

EXPLORE HEALTH

- EXPERT ADVICE
- HEALTH FEATURES
- MENTAL HEALTH
- ALTERNATIVE MEDICINE
- CHILD HEALTH
- HEALTH CLUB

Case study 2

- 70 year old male
- Incidentally found to have BP 160/98 mm/Hg
- Urine dipstick: Protein ++
- Albumin:creatinine ratio 100 mg/mmol
- U+Es: Creatinine 180 µmol
  eGFR 40 ml/min/1.73m^2

What stage kidney disease does he have? How should he be managed?

Case Study 2: Actions

- Use ACEI as the 1st line, switch to ARB if not tolerated
- Titrate up to maximum tolerated dose
- Measure U+E at 1-2 weeks
- Accept fall in eGFR up to 25%

Application in practice –

• ACEI/ARB therapy has been shown to outperform placebo in many studies

• There is evidence of renoprotection from ACEI/ARB above BP reduction alone in patients with diabetes or significant proteinuria

• Evidence for proteinuria threshold varies upon the clinical situation

Jafar TH et al. AIM 2001;135:73-87

Case study from: British Geriatric Society: Autumn 2011, Laurie Tomlinson, University of Cambridge

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Case Study 3

A 59 year old female with hypertensive disease and CKD stage 3B without proteinuria. She has a good blood pressure of 125/65 mm/Hg.

- Latest urine test shows positive ACR of 40 mg/mmol
- Latest renal profile shows a decline in eGFR of 4ml/min/1.73 m^2
- She is complaining of frequency of micturition and feeling generally unwell
- She is a 35 pack year smoker

What four actions would you take to manage this patient?

Case Study 3: Actions

The actions in order to best-manage this patient include:

1) Obtain a urine sample for bacteriology to exclude a urinary tract infection
2) Request a repeat sample for ACR
3) Encourage the patient to stop smoking and direct her to appropriate lifestyle service (e.g. health trainer)
4) If positive ACR persists for this patient refer her for specialist assessment

Application in practice – Patients at CKD stage 3 have been subdivided into 3A and 3B as those at stage 3B are at far higher risk of CVD and end-stage renal disease than those at 3A – and should therefore be regarded as an important target group in primary care.

Case study from: NHS employers – Chronic kidney disease frequently asked questions (page 17), http://www.nhsemployers.org/SiteCollectionDocuments/Chronic_kidney_disease_FAQs%20-%20ja040711.pdf

Thank you for your time