Title	**Proteinuria testing & treatment in chronic kidney disease and type 2 diabetes mellitus**
Document Type	**Guideline**
Issue no	**DE/24/001**
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Distribution	**Clinical Boards, GPs, Nephrologists, Diabetologists, BGH Biochemistry Lab,**
Prepared by	**Dr Alan Mordue**
Developed by	**Proteinuria Working Group**
Equality & Diversity Impact Assessed	**7 September 2012**

Contents

Statement of Intent

This guideline seeks to implement the recommendations of the Business Case for Proteinuria Screening & Treatment (April 2012) from 1 October 2012, which were approved at the Clinical Executive Strategy Group on 10 May 2012.

Introduction

A review of renal services in March 2011 was presented to the Strategy Group and recommended proteinuria screening and treatment be examined in detail because of the potential for it to delay the onset of renal disease, its progression and the need for haemodialysis.

The Business Case presented in May 2012 provided this detailed analysis and recommended:

- annual protein creatinine ratio (PCR) testing of patients with chronic kidney disease (both non-diabetic and diabetic) followed by angiotensin converting enzyme inhibitor or angiotensin receptor blocker treatment of those with PCR > 50 mg/mmol
- no change to current practice for type 2 diabetes – that is dipstick testing and PCR for those positive for protein on dipsticks.

Standards

These recommendations have been incorporated into two flowcharts in the Appendix which provide pathways for patient management – one for chronic kidney disease (both non-diabetic and diabetic) and the other for type 2 diabetes (without chronic kidney disease).

The diagnosis of chronic kidney disease is usually based upon an estimated glomerular filtration rate (eGFR) less than 60 ml/min/1.73m2 on at least two occasions at a minimal interval of 3 months. Patient who fulfil these criteria should be entered onto the practice QOF register for chronic kidney disease and have annual PCR tests.

References

Metcalfe W, Mordue A, Murray J, Watson S. Review of Renal Service Activity, 2007-2010, NHS Borders March 2011

SIGN 103. Diagnosis and management of chronic kidney disease, 2008

SIGN 116. Management of Diabetes, March 2010

Responsibilities

Role	Responsibilities
Clinical Board Chairs	Will disseminate the guideline to GPs and relevant clinicians across NHS Borders and encourage them to adopt it.
General Practitioners	Will disseminate the guideline within their practices, encourage all GPs (principals, registrars and locums) to adopt it and support implementation.
Nephrologists & Diabetologists	Will disseminate the guideline within their clinical teams, encourage all their staff to adopt it and support implementation across NHS Borders.
Clinical Audit Support Team	Will support the audit process in relation to the standards.

Implementation Plan

1. Professional responsibilities

a. Clinical Board Chairs, GPs, Nephrologists & Diabetologists

- Disseminate the guideline prior to implementation from 1 October 2012.

b. Clinical Governance Department

- Support compliance with the guideline and support audit of compliance.

c. Clinical Executive

- Agree and sign off the standards.

d. Clinicians

- Ensure that their practice adheres to the standards.
- Participate in regular audit and engage in training and development as necessary.
- Respond to audit results and take corrective action when required.

2. Audit

The guideline should be periodically audited:

- The Clinical Audit Support Team will provide technical advice in relation to audit
- The Clinical Audit Support Team will offer support with data analysis and report writing

3. Review

- A multi-disciplinary group will review the guideline two years after issue or following any change in National Standards.
- The results of Clinical Audits will be used to inform the review.

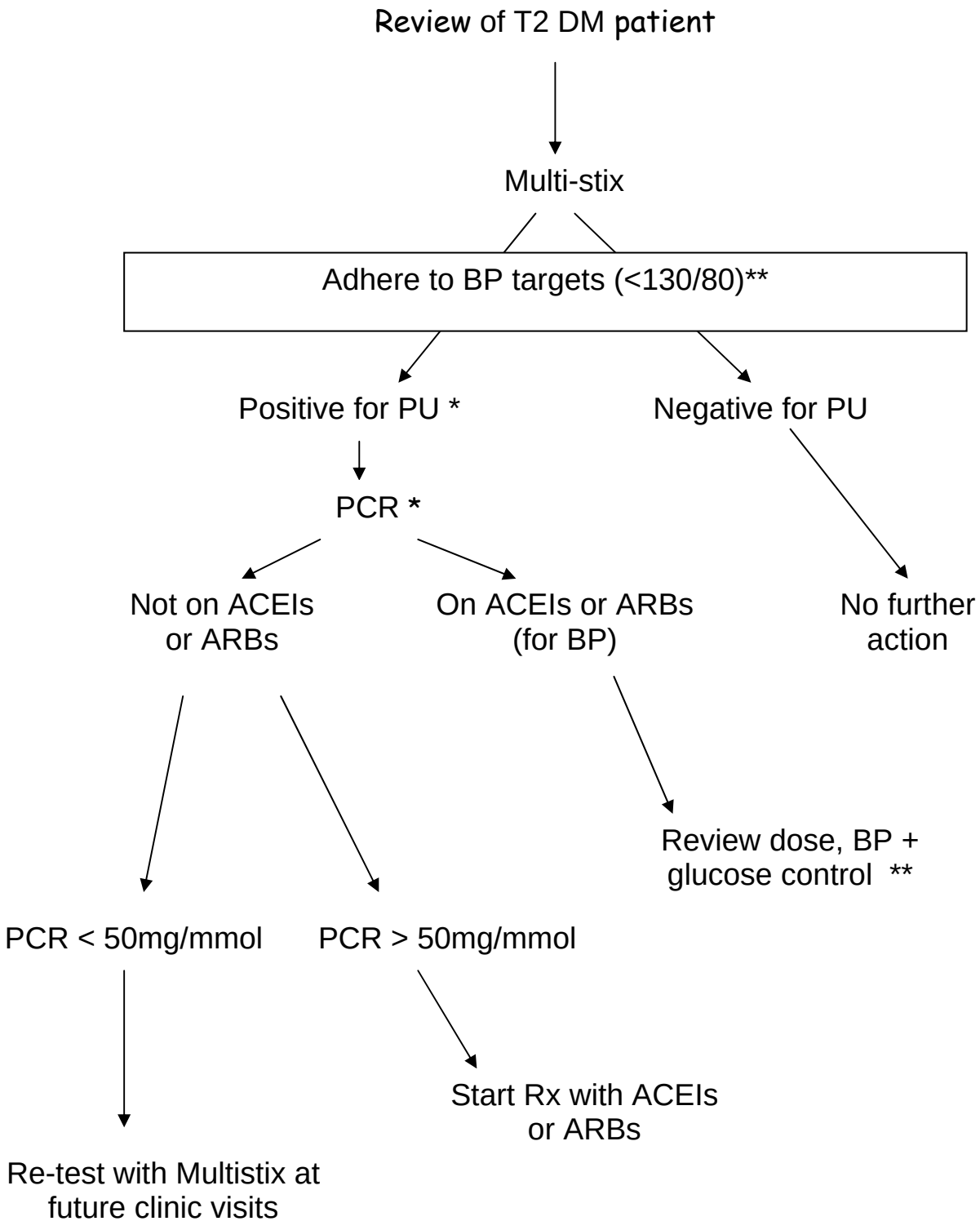
Development/Review Group

Bobby Alikani	Performance & Planning Officer (until October 2011)
Jane Goddard	Consultant Nephrologist
Olive Herlihy	Consultant Diabetologist
Alan Mordue	Consultant in Public Health Medicine (Chair)
John O'Donnell	Consultant Biochemist
Jackie Scott	Senior MLSO & Biochemistry Department Manager

Appendix

Flowchart for Type 2 DM

(without CKD, eGFR >60)



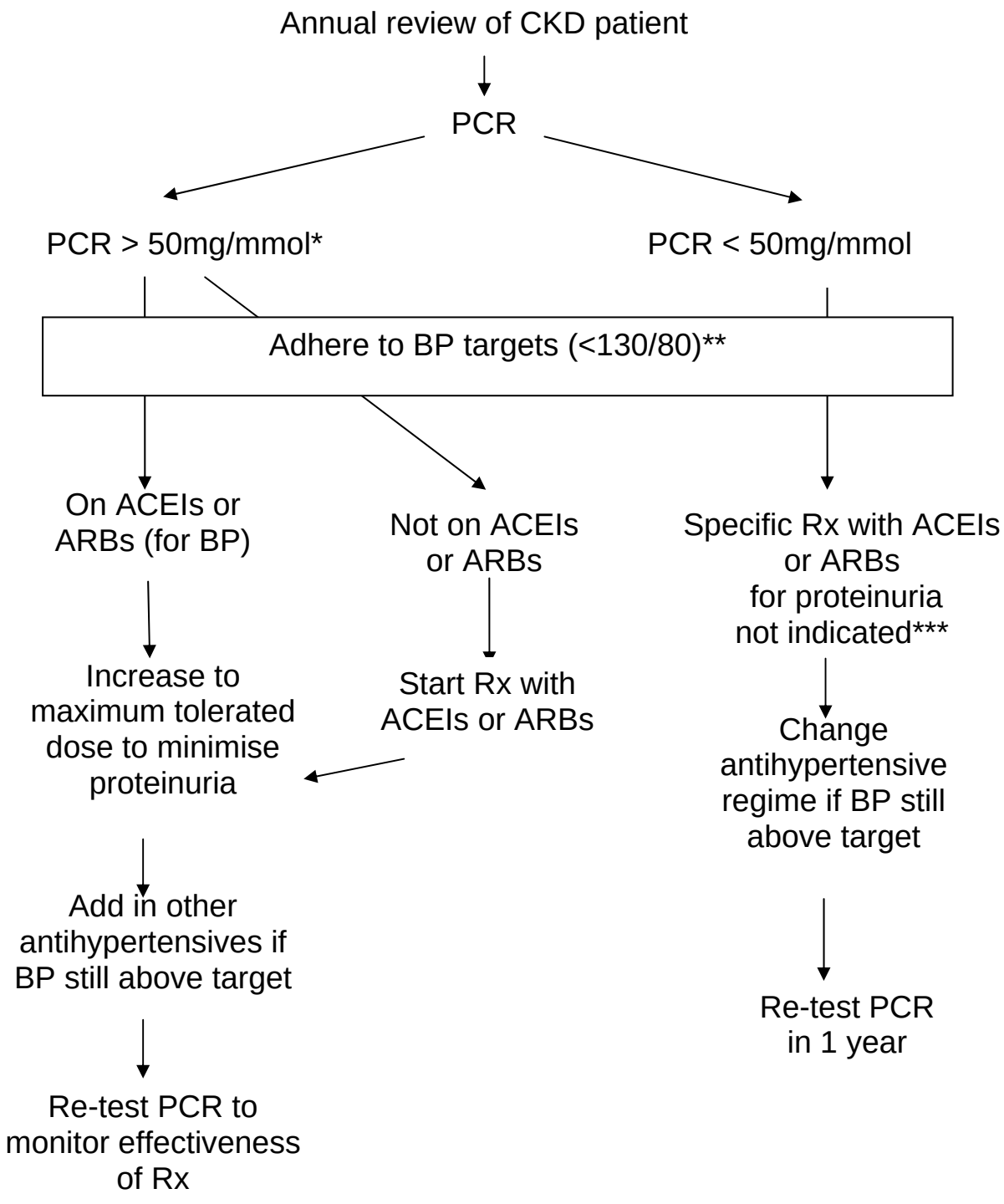
PU = Proteinuria

** Proteinuria is a strong surrogate marker for progression of renal disease and good evidence exists linking reduction in proteinuria with slower rates of CKD progression*

*** Blood pressure control is essential to reduce proteinuria. ACEIs and ARBs have additional intra-renal effects over and above their antihypertensive effects to lower proteinuria.*

Flowchart for CKD

(eGFR <60, with or without DM)



** Proteinuria is a strong surrogate marker for progression of renal disease and good evidence exists linking reduction in proteinuria with slower rates of CKD progression*

*** Blood pressure control is essential to reduce proteinuria. ACEIs and ARBS have additional intra-renal effects over and above their antihypertensive effects to lower proteinuria.*

**** With non-diabetic CKD, if the PCR is <50mg/mmol, there is no evidence for ACEIs or ARBs giving more renoprotection than other antihypertensive agents*

For further information please see SIGN 103: Management of Chronic Kidney Disease