

**UNIVERSITY OF BIRMINGHAM AND YORK HEALTH  
ECONOMICS CONSORTIUM**

**(NICE EXTERNAL CONTRACTOR)**

**Health economic report on piloted indicator**

**Pilot QOF indicators:**

The percentage of patients with a new diagnosis of hypertension in the preceding 1st April to 31st March who have a record of a test for haematuria in the three months before or after the date of entry to the hypertension register.

**Potential output:** Recommendations for NICE Menu

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## Introduction

This briefing paper presents a cost effectiveness analysis for a potential indicator from pilot 8 of the NICE Quality and Outcomes Framework (QOF) indicator development programme:

***The percentage of patients with a new diagnosis of hypertension in the preceding 1st April to 31st March who have a record of a test for haematuria in the three months before or after the date of entry to the hypertension register.***

This paper sets out our assessment of the economic evidence on the indicator.

## Economic Rationale for the Indicator

People with blood pressure persistently over 140/90 are defined as being hypertensive. High blood pressure can be caused by, or causal to, a number of other health conditions, notably organ damage through chronic kidney disease, coronary heart disease/failure and urological cancer [1]. Testing newly diagnosed hypertensive patients for target organ damage linked to hypertension could detect kidney damage at a stage where treatment could be more effective and cost effective than treating the hypertension alone.

The NICE guideline on hypertension states that a range of tests should be conducted on patients newly diagnosed with hypertension to ensure the hypertension is not linked to organ damage [1]. The guidance recommends that all people with hypertension should have a urine sample tested for the albumin:creatinine ratio (ACR) and for haematuria. Both of these tests are reported to be specifically for renal disease and reference is made to the NICE guideline on chronic kidney disease (CKD) [2].

The clinical guideline on CKD states that both ACR and haematuria should be tested in patients at risk of CKD. The CKD diagnostic pathway is based

around ACR testing, with haematuria testing being used to determine whether a patient should be sent to a specialist for further tests [3].

The NICE clinical guidelines for hypertension and CKD do not include an economic model for haematuria testing. No published economic evidence from other sources could be identified for haematuria testing for CKD.

It is assumed, therefore, that the economic benefit of haematuria testing will derive from effective condition management resulting from referring someone with CKD to a specialist, as opposed to treating them in primary care. (The hypertension guideline also cites an additional benefit of haematuria testing indicating urine tract malignancy but this is not the primary goal of the test.)

There is, therefore, an absence of evidence to consider the explicit cost-effectiveness of haematuria testing for target organ damage in isolation or in combination with ACR in people with newly diagnosed hypertension.

However, there is potential to augment the cost effectiveness analysis for the potential QOF indicator on the use of ACR for identifying target organ damage, if the following assumptions are made:

- Haematuria testing does no harm;
- Haematuria testing is an integral part of the CKD diagnosis pathway and should be included as a cost in the ACR economic model.

If these assumptions hold then haematuria testing can be added as a cost to the model developed for the QOF indicator on ACR testing. Alternatively, the Committee may want to consider the value of carrying out a haematuria test if an ACR test has already proved to be within the 'normal' range of values.

The model used for the ACR test indicator found that ACR testing was highly cost effective, with the indicator being still cost-effective at 217 points at £20,000/QALY using baseline assumptions. Costs of delivering the indicator could rise by £1,977 from baseline and the indicator would still be cost effective at 5 points. The cost of laboratory testing for haematuria is

estimated at £60 [4]. Stick testing has a lower cost at around £0.10 for the stick and a few minutes of clinician time to interpret the result.

Adding haematuria testing to ACR testing would, therefore, not stop the ACR test indicator being cost effective, nor would offering some additional points for the inclusion of haematuria testing to that indicator. This is the case if the assumptions about the test doing no harm and it being an integral part of the CKD care pathway are valid.

## Summary

The base case considered by the economic subgroup of the NICE QOF Advisory Committee was that five points should be considered for an indicator relating to haematuria testing. There would be economic justification for offering up to ten points for a combined indicator involving ACR and haematuria testing for CKD.

## References

- [1] National Institute of Health and Clinical Excellence. Hypertension: Clinical management of primary hypertension in adults. 2011
- [2] National Institute of Health and Clinical Excellence. Chronic kidney disease: Early identification and management of chronic kidney disease in adults in primary and secondary care. 2008
- [3] NICE Pathways: Chronic Kidney Disease  
<http://pathways.nice.org.uk/pathways/chronic-kidney-disease>
- [4] Rodgers M, Nixon J, Hempel S. Diagnostic tests and algorithms used in the investigation of haematuria: systematic reviews and economic evaluation. Health Technology Assessment 2006; Vol 10, No 18.