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NHS National Institute for Health Research

Collaboration for Leadership in Applied Health Research and Care (CLAHRC) for Greater Manchester

Getting evidence into practice in the management of Chronic Kidney Disease

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The CLAHRC for Greater Manchester is a collaboration between the University of Manchester and 20 NHS Trusts across Greater Manchester. Its five year mission is to improve healthcare and reduce inequalities in health for people with cardiovascular conditions (diabetes, heart disease, kidney disease and stroke). This poster describes the results of the Chronic Kidney Disease (CKD) Collaborative, a project designed to tackle the gap between evidence and practice in relation to the management and identification of CKD in primary care.

Background: CKD significantly increases the risk of cardiovascular events such as heart attacks or strokes[1]. Prevalence estimates and evidence from QOF suggest that there are 41,000 people with undiagnosed CKD in Greater Manchester and that only 85% of those diagnosed are receiving appropriate care[2,3].

Aim: Based on existing evidence and the views of an expert panel, our aim was:

To reduce the gap between expected and recorded prevalence by 50% and to ensure that 75%* of all patients on CKD registers were treated to NICE blood pressure targets (140/90 for those without proteinuria and 130/80 for those with proteinuria). *No exceptions

Methodology: We selected the Institute for Healthcare Improvement's Breakthrough Series Methodology[4] as the framework. Nineteen practices from four PCTs worked together in this Collaborative to test changes using Plan, Do, Study, Act cycles and learn from each other's improvements. Practices' improvement work and the spread of knowledge between them was facilitated by Knowledge Transfer Associates, whilst data was collected and analysed monthly to provide regular feedback reports.

Results:

What practices learnt about how to improve care

Figure 1: The key steps that led practices to improved care for their CKD patients

The 19 practices discovered that there are several key steps to improving care for patients with CKD (figure 1):

- ✓ Creating a solid foundation that will facilitate change
- ✓ Identifying patients with previously undiagnosed CKD
- ✓ Working with patients for optimal management of their condition
- ✓ Developing systems that will ensure improved care continues

The Collaborative report[5] provides more detail on each of these steps and an Improvement Guide will be available in 2011 for practices interested in improving care in their own organisation.

Practices' success in improving recorded prevalence of CKD

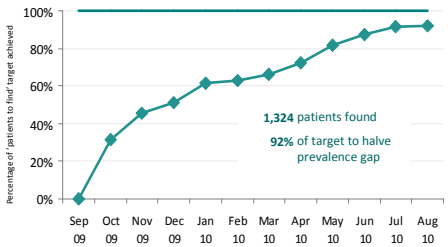

Figure 2: Achievement for the whole Collaborative in finding previously undiagnosed patients

In order to halve the gap between baseline and expected prevalence, the 19 practices needed to find 1,441 patients. After 12 months there were an additional 1,324 patients on CKD registers – this is 92% of the overall Collaborative target (figure 2).

The majority of patients were already on cardiovascular risk registers and had had initial tests showing low kidney function but required formal diagnosis and/or repeat eGFR tests.

There was considerable variation between PCTs, with progress in finding patients ranging from 61%-199% of target.

Achievement in the individual practices also varied from 44%-480%. However there was also considerable variation in the number of patients to find in each practice (5-251), so some of those who did not reach their target had nevertheless made great progress in finding patients (figure 3).

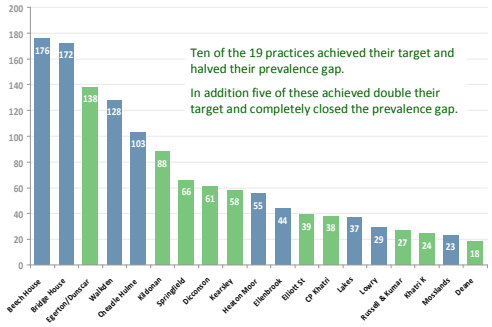

Figure 3: The number of patients found by each of the 19 practices, with those achieving their target highlighted in green.

Practices' success in improving CKD management

Accurate knowledge of proteinuria is very important both for understanding a patient's risk of cardiovascular events and for optimal blood pressure management. At the start of the Collaborative only 23% of patients had been tested but we have seen this increase to 78% of patients being tested (figure 4).

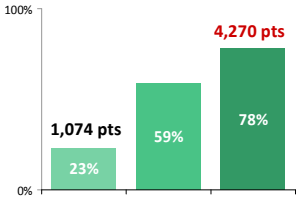

Figure 4: The increase in the number of patients tested for proteinuria

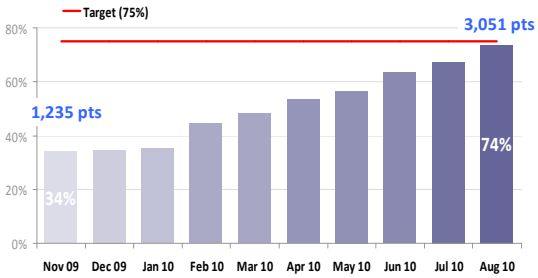

Figure 5: The increase in recorded number of patients with blood pressure managed to NICE recommended targets

Accurate data on blood pressures was very difficult to obtain, but data shows that recorded management to NICE targets has risen from 34% to 74% (figure 5). This equates to 1,816 patients with an improved record of blood pressure management. In September 2010 individual practices had between 51% and 91% of their patients treated to the NICE targets, with nine of the 15 practices who focused on improving blood pressure achieving the 75% target.

Conclusion and potential impact:

The 19 practices achieved an overall prevalence increase of 1.2%. If this increase was seen across all of Greater Manchester this would equate to 26,000 patients being added to practice registers (see fig 6).

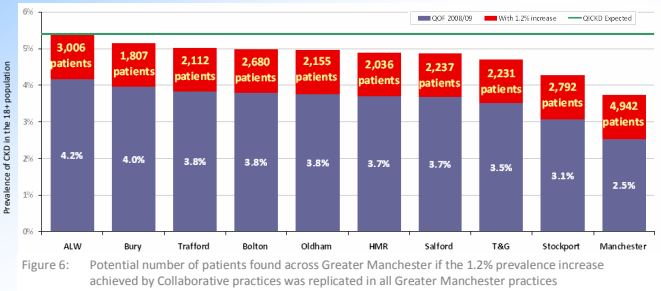

Figure 6: Potential number of patients found across Greater Manchester if the 1.2% prevalence increase achieved by Collaborative practices was replicated in all Greater Manchester practices

CKD is a health issue that is often unrecognized or inadequately managed. The 19 practices involved in the Collaborative have greatly improved their patient care and have increased knowledge and confidence in treating CKD, achieved through collaborative working, information sharing, dedicated support and education.

REFERENCES:
1. Whitfield &Holmes, 2007. A cost and clinical effectiveness evaluation of a "disease management programme" for Chronic Kidney Disease (CKD). ScHARR, Sheffield; 2. De Lusignan et al, 2011 "Creatinine Fluctuation Has a Greater Effect than the Formula to Estimate Glomerular Filtration Rate on the Prevalence of Chronic Kidney Disease." *Nephron Clinical Practice*, 117:213–224; 3. Quality and Outcomes Framework data 2007/2008, available on www.ic.nhs.uk; 4. IHI 2003. The Breakthrough Series: IHI's Collaborative Model for Achieving Breakthrough Improvement. IHI Innovation Series white paper. Boston. 5. CLAHRC CKD Collaborative report available online at http://clahrc-gm.nihr.ac.uk