

THE DEVELOPMENT AND EVALUATION OF A SELF-MANAGEMENT PACKAGE FOR PEOPLE WITH DIABETES AT RISK OF CHRONIC KIDNEY DISEASE (CKD)

Thomas, N¹, Makanjuola, D² and Bryar, R¹

¹School of Community and Health Sciences, City University, London

²SW Thames Renal Unit, St Helier Hospital

PROBLEM: Progression of CKD in diabetes can be slowed by strict blood pressure and blood sugar control, prescription of medicines that modify the renin-angiotensin system and lifestyle changes, such as smoking cessation. Because of the large numbers of people with diabetes whose condition progresses (and eventually require dialysis or transplantation), it is possible that management remains sub-optimal.

PURPOSE: The purpose of this study is to develop and test an educational package that aims to help people to self-manage their risk of CKD progression.

METHOD: Seven GP surgeries participated in the study. One surgery acted as a control. Practice list size ranged from 7900–14200 patients. The practice population had 3.14% prevalence of diabetes. The multi-method study entailed:

- case-finding of all patients with diabetes at risk of kidney disease (defined by the presence of two abnormal albumin-creatinine ratio (ACR) results in March 2005)
- interviews with 15 patients at high-risk of progressive kidney disease
- subsequent development of a self-management package
- evaluation of the package in an interrupted time series design with a non-equivalent control group, where patients in 6 practices were compared with patients in the control surgery.

Findings from interviews showed that few people had good understanding of the possible risk of kidney disease, and had little idea of exactly how they themselves could control the condition. These findings informed the development of the self-management package. The package comprised written information; a 20-minute DVD filmed with patients; a fridge magnet (with key messages); a monitoring diary; and a blood pressure machine if required. The package was given to 116 patients during the time period September 2006 to September 2007.

RESULTS: 23% of the practice population diagnosed with either Type 1 or Type 2 diabetes had positive ACR results (average screening rates for ACR were 86%). There were 497 patients with positive ACR results in the study. Results from three groups were compared: patients in the participating surgeries who did not receive a self-management pack (group 0); patients in the participating surgeries who did receive a pack (group 1); and patients in the control group (group 2).

In groups 0 and 1 systolic blood pressure was significantly reduced during the first four data collection periods compared with the control group 140/77 vs. 134/77 mmHg in March 2005 to 129/76 vs. 135/77 mmHg in November 2006 ($p=0.06$ for systolic BP). At the end of the study period in January 2008 the patients who had received the self-management package (group 1) had a mean systolic BP of 132 mmHg vs. 136 mmHg in the control group ($p=0.15$).

CONCLUSION: One of the main aims for primary care management of diabetes is to minimise the risk of cardio-vascular complications. This study has shown the importance of self-management techniques to control blood pressure, which in turn can slow the rate of CKD progression and reduce cardio-vascular risk.