



Primary health care should play bigger role in treating chronic kidney disease

*A new review article suggests that primary health care should play a bigger role in managing early-stage chronic kidney disease. **Olivier J. Wouters** and **Dr. Panos G. Kanavos**, two of the co-authors of the study, discuss these findings.*

Chronic kidney disease (CKD), which involves the gradual loss of kidney function, is one of the most common health conditions in the world and a major cause of kidney failure. CKD affects more than 10 per cent of the adult population in many high-income countries, and it is estimated that more than \$1 trillion is spent worldwide on kidney failure treatment.

Although CKD is a leading public health concern, there is disagreement about what constitutes appropriate care. Various clinical guidelines and health organizations—like the National Institute for Health and Care Excellence in the UK and the American College of Physicians in the USA—offer differing recommendations about the screening, diagnosis and treatment of CKD, especially for the early stages of the disease.

With colleagues from Salford Royal NHS Foundation Trust and the US National Institutes of Health (NIH), we conducted a literature review to analyse which interventions are most effective for early-stage CKD. We also explored what the optimum time is to provide clinical care for patients with early-stage CKD and what model of care is most suitable for these patients. Our findings were published in *Nature Reviews Nephrology*.



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We found that primary care interventions should play a more prominent role in the treatment and management of patients in the early stages of CKD than it currently does. The evidence suggests that:

- Type 2 diabetes and high blood pressure are usually the underlying causes of CKD; CKD can worsen if these related diseases are left uncontrolled;
- CKD care should focus more on preventing the deterioration of health in those with related conditions than on costly specialist care;
- Preventive measures – for example, healthy eating habits, regular exercise, smoking cessation and cholesterol and blood pressure control – can improve cardiovascular and kidney health outcomes;
- There are substantial shortcomings in the way CKD patients are currently being treated and managed in primary care, notably suboptimal prescribing and management for those patients who also have hypertension and Type 2 diabetes;
- More research is needed to better understand the risk factors for CKD progression; this would allow clinicians to focus their attention on the patients who are most likely to develop kidney failure.

However, the available evidence for CKD is of variable quality. In comparison to other common diseases, such as Type 2 diabetes and stroke, there is a lack of evidence on the clinical and economic benefits of different care strategies for early-stage CKD.

Researchers and policymakers should examine how to improve health-care delivery to high-risk populations. Importantly, more evidence is needed on how to better coordinate care between primary-care physicians and nephrologists and other kidney disease specialists. Researchers should evaluate different models of CKD care in terms of value for money, and economic analyses should ideally be conducted alongside health-outcome evaluations.

The development of CKD registries would further our knowledge about the effectiveness of various treatment strategies. Registries – databases which contain information on the health status, health-care use, and health-care costs of patients with a particular condition – should be set up to facilitate economic analyses. Such analyses can guide future models of care.

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Wouters OJ, O'Donoghue DJ, Ritchie J, Kanavos PG, Narva AS (2015) [Early chronic kidney disease: diagnosis, management, and models of care](#), *Nature Reviews Nephrology*, 11, 8, 491-502.

About the authors

Olivier J. Wouters is a Ph.D. candidate in health economics at the LSE and a health policy researcher within LSE Health. His research interests include the pricing and reimbursement of medicines, the availability and affordability of medicines, and the quality of pharmacologic care.

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Dr. James Ritchie is a consultant renal physician at Salford Royal NHS Foundation Trust. His research focuses on the effects of clinical presentation and medical therapy on prognosis in atherosclerotic renovascular disease. He is also interested in how novel analytical methods can increase the value of large-scale observational datasets.

Dr. Panos G. Kanavos is an associate professor in international health policy at the LSE, deputy director of LSE Health, and director of the Medical Technology Research Group of LSE Health. His research focuses on the economics of medical technologies, health technology assessment, the quality of medical care, and the socio-economic determinants of health.

Dr. Andrew S. Narva is the director of the National Kidney Disease Education Program at the US National Institutes of Health (NIH). He was previously the chief clinical consultant for nephrology in the US Indian Health Service (1989-2006).

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