World-first dialysis study set to reduce health costs

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(PhysOrg.com) -- The results of a world-first controlled trial of dialysis start-time in patients with Stage V chronic kidney disease is set to have major impact on the cost and infrastructure of chronic kidney disease (CKD) treatment and dialysis services.

The groundbreaking results of A Randomized, Controlled Trial of Early versus Late Initiation of Dialysis were recently published in the New England Journal of Medicine and show that worldwide trends toward early initiation of dialysis are unlikely to improve clinical outcomes.

"We know that these results are extremely important because early-start dialysis rates increased in the 10 years since 1996 from 19 to 45 percent," said Dr Bruce Cooper, a lead author of the study from the Sydney Medical School and the Department of Renal Medicine at Royal North Shore Hospital.

"This increase was due to observational studies indicating that there was a survival advantage with an earlier dialysis start. Our study highlights the importance of close clinical follow up of patients with CKD and making sure that dialysis access is ready for use should it be required."

The trial was conducted by a team lead by Dr Cooper and included University of Sydney's Professor Jonathan Craig (the Department of Nephrology, Children's Hospital at Westmead, Sydney School of Public Health), Professor David Tiller (the School of Rural Health, Sydney Medical School), Professor David Harris (the Centre for Transplantation

and Renal Research, Westmead Millennium Institute,) and Professor Carol Pollock (the Department of Renal Medicine, Royal North Shore Hospital, Sydney Medical School).

The Initiating Dialysis Early and Late (IDEAL) study was designed to determine whether initiating dialysis early in people with Stage V chronic kidney disease reduces the rate of death; with a secondary aim to determine whether early initiation of dialysis could be associated with a reduction in cardiovascular problems and infections, and in complications of dialysis.

Over eight years, 828 patients from Australia and New Zealand were randomly assigned to early initiation or late initiation of dialysis.

The practice of starting dialysis treatment early has become an increasingly prevalent trend worldwide with guidelines from the Canadian Society of Nephrology and the National Kidney Foundation advocating for an early start on dialysis treatment when the glomerular filtration rate (GFR) is approximately 12ml per minute or 15ml per minute respectively.

A late initiation dialysis treatment is when the GFR is between 5 and 7ml per minute.

The results of the IDEAL study show that with careful clinical management, dialysis may be delayed until either the GFR drops below 7ml per minute or more traditional clinical indicators for the initiation of dialysis are present.

The results highlight the importance of close clinical follow-up of patients who have low levels of renal function and of initiating dialysis once more traditional indicators for dialysis are present and suggest that dialysis should not be started on the basis of an estimate of GFR alone.

Provided by University of Sydney