

GLOSSARY

MEDICARE

Health insurance program run by the US government for people aged 65 years and older or with certain disabilities, including end-stage renal disease

CYTOKINE

An intercellular soluble protein that activates and regulates inflammatory and immune responses through interactions with specific receptors

ACUTE RESPIRATORY DISTRESS SYNDROME (ARDS) NETWORK TRIAL

A trial of lower versus higher tidal volume ventilation in acute respiratory distress syndrome and acute lung injury, sponsored by the US National Institutes of Health

Medicare system for reimbursement of nephrologists suboptimal?

In 2004, the way in which MEDICARE reimburses nephrologists for the care of dialysis patients was redesigned to boost the frequency of patient–nephrologist interactions. A retrospective analysis of records at 12 dialysis facilities in Ohio indicates that the changes might so far have failed to improve patient care.

The study included all in-center hemodialysis patients who were treated for at least 6 months immediately before and after implementation of the new reimbursement system ($n = 1,600$). The mean number of nephrologist visits (both office and on rounds) per patient-month sharply increased following the policy change (1.52 before vs 3.14 after; $P < 0.001$). Despite this increase, there was no clinically significant improvement in most indicators of quality of care, including catheter use, ultrafiltration volume and number of hospital admissions. The reforms had no impact on health-related quality of life, as determined by a validated patient questionnaire ($n = 500$) assessing variables such as vitality, bodily pain, social functioning and mental health. Even the outcomes of individuals who had the least-frequent contact with nephrologists at baseline ($n = 136$) did not improve.

These findings might not be accurate when extrapolated to the US as a whole, and longer follow-up is needed to track the effects of the policy change over the long term. Nevertheless, it is concerning that the new system might be an inefficient use of physician resources. The authors propose reimbursement based directly on outcomes, rather than frequency of consultation, as an alternative.

Rachael Williams

Original article Mentari EK *et al.* (2005) Changes in Medicare reimbursement and patient–nephrologist visits, quality of care, and health-related quality of life. *Am J Kidney Dis* 46: 621–627

Salt sensitivity of blood pressure and diabetic nephropathy

A recent study has investigated the salt sensitivity of blood pressure among offspring

of patients with type 2 diabetes and diabetic nephropathy. The results indicate that these individuals are more likely to be ‘salt sensitive’ than the offspring of diabetic patients without diabetic nephropathy. This might suggest, say the researchers, that salt sensitivity of blood pressure represents an ‘intermediate phenotype’ in individuals genetically predisposed to diabetic nephropathy.

The study included two groups of 15 healthy, adult participants, all of whom had a parent with type 2 diabetes with (DN⁺) or without (DN⁻) diabetic nephropathy. The control group comprised 15 staff members with no family history of diabetes. Each participant underwent a low-salt and then a high-salt regimen, with each diet lasting for five days.

During the high-salt period, systolic blood pressure was significantly higher among the offspring of DN⁺ patients than among the offspring of DN⁻ individuals. The former group also had a significantly greater salt-induced difference in mean blood pressure between the two diets, and the proportion of salt-sensitive individuals was greater in this group than among offspring of DN⁻ patients (67% vs 20%; $P < 0.05$). Changes in plasma renin activity, plasma aldosterone and atrial natriuretic peptide were similar in both groups, although 11 β -hydroxysteroid dehydrogenase type 2 activity appeared to be lower among salt-sensitive subjects.

In summary, the relationship between salt intake and blood pressure appeared to differ according to the presence or absence of diabetic nephropathy in the diabetic parents of these study participants. These differences might correspond to an individual’s risk of developing diabetic nephropathy in future.

Ruth Kirby

Original article Strojek K *et al.* (2005) Salt-sensitive blood pressure—an intermediate phenotype predisposing to diabetic nephropathy? *Nephrol Dial Transplant* 20: 2113–2119

Urinary IL-18 as a diagnostic marker of acute renal injury

Urinary levels of the proinflammatory CYTOKINE interleukin (IL)-18 are a reliable biomarker of early-stage acute kidney injury (AKI) in critically ill patients, according to data from the ARDS NETWORK TRIAL. The authors of a case–control analysis of these data call for further studies to