

# New care package can improve treatment of people with acute kidney injury, study finds

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A large clinical trial involving people with acute kidney injury has found that a new package of interventions can significantly improve the diagnosis and treatment of patients, as well as improving their care experience.

Acute kidney injury (AKI) is a sudden or rapid decline in kidney function that can lead to [hospital admission](#), longer hospital stays, increased mortality risk and long-term kidney damage. It is increasingly common and often arises due to certain [health problems](#) or medical treatments that deprive the kidneys of normal blood flow or damage [kidney](#) tissue.

In the UK, around 100,000 deaths are linked to AKI each year and research shows that 30 percent of these could be prevented with better diagnosis and treatment. The costs to the NHS are estimated to be up to £1.2 billion per year, more than breast cancer, lung cancer and skin cancer combined.

Now a team of experts from the University of Nottingham and five UK hospitals has tested a specially selected package of interventions and measured the impact on the delivery of AKI care and on patient outcomes. The results are published in the *Journal of the American Society of Nephrology (JASN)*.

The clinical trial studied around 24,000 cases of [acute kidney injury](#), half of which had standard care and half had the package of interventions. This package consisted of an electronic alert within hospital IT systems, an AKI care-bundle, and an educational programme (a care bundle is a small, straightforward set of evidence-based practices aiming to improve the process of care).

The results show that overall the mortality rate at 30 days after onset was the same in both groups, but significantly, hospital length of stay was reduced, the duration of AKI episodes was shorter, and there was also an increase in AKI incidence explained by improved diagnosis. The interventions also led to improvements in several metrics related to AKI care, including AKI recognition, best use of medication, and fluid assessment by clinicians.

Associate Professor of Nephrology, Dr. Nicholas Selby, from the University's School of Medicine, said: "This is the first multicentre randomised clinical research study in this field of medicine and the results will be very useful in informing future best practice. Importantly, the intervention we tested is readily scalable, meaning that it can be implemented in other hospitals if shown to be effective.

"We have shown that AKI recovers more quickly and that some people can go home from hospital earlier, albeit that this approach didn't have any effect on survival rates. Together with previous studies, these results show that strategies to improve the systematic delivery of supportive AKI care can lead to improvements in patient outcomes. Furthermore, the reduction in [hospital](#) length of stay seen in this study could translate into a significant health [economic benefit](#), given the large numbers of people who develop AKI."

Provided by University of Nottingham

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