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Acute kidney injury, mortality, length of stay, and costs in hospitalized patients

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Case Study: BACKGROUND
Acute kidney injury (AKI) is well known to be associated with mortality, longer hospital length of stay (LOS), and costs in hospitalized patients. In recent years, it has become apparent that even very small increases in serum creatinine (SCr) levels in hospitalized adults undergoing cardiac surgery are associated with poor hospital outcomes. This study aims to describe the marginal effects of acute kidney injury on in-hospital mortality, LOS, and costs.

METHOD
Population-based cohort studies from adults who were admitted to an urban academic medical center, also including who had two or more serum creatinine (SCr) determinations was evaluated by searching PubMed, EMBASE, and the Cochrane Library database up to May 2021.

RESULT
Modest changes in SCr were significantly associated with mortality, LOS, and costs, even after adjustment for age, lifestyle, education, gender, admission International Classification of Diseases, Ninth Revision, Clinical Modification diagnosis, severity of illness (diagnosis-related group weight), and chronic kidney disease.

CONCLUSION
AKI is associated with significantly increased mortality, LOS, and costs across a broad spectrum of conditions. Moreover, outcomes are related directly to the severity of AKI, whether characterized by nominal or percentage changes in serum creatinine. Although less obvious to clinicians than severe AKI requiring dialysis, non–dialysis-requiring AKI may be of equal or greater importance from a public health perspective. Prevention and effective treatment of hospital-acquired AKI should be a national priority.

Keyword:
Acute kidney injury, mortality, length of stay, costs