

The future for diagnostic tests of acute kidney injury in critical care: evidence synthesis, care pathway analysis and research prioritisation

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Plain English summary

Future of diagnostic acute kidney injury tests in critical care

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Plain English summary

Acute kidney injury (AKI) occurs in many critically ill patients and leads to poor clinical outcomes and high mortality rates, resulting in high costs to the NHS. For these reasons it is important to identify patients who are at risk or who are developing AKI so that they can be treated earlier or more intensively to limit subsequent problems as much as possible. The diagnosis of AKI can be difficult; even with the best test that we currently have (serum creatinine) AKI may not become apparent until several days after damage to the kidneys has begun. There is currently no single test that can immediately diagnose AKI or tell us how severe it will become; however, there are several tests in development that offer this potential.

The AKI-Diagnostics project identified > 150 in-development tests. Three of these tests were subjected to detailed review. Although the quality of much of the published literature did not meet ideal standards, there was evidence that these tests can help with the early identification of AKI in the intensive care unit (ICU). All three tests have the potential to be cost-effective, although there is much uncertainty about this based on the current evidence. It is recommended that further research is carried out to better understand how common AKI is in the ICU and how a positive test result will change the way that patients are treated.

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