Healthcare associated infections (HAI) cause significant and life-threatening harm to patients and incur major additional costs. Patients with kidney disease are especially susceptible to HAI, due to the harm associated with central dialysis catheter use. These catheters, essential to the delivery of life-sustaining dialysis treatment, are widely used and are a major driver of bloodstream infection and increased mortality seen in patients receiving dialysis.

Background:
The REDUCTION Partnership Project, has the following aims:
1. To define the national, clinical and economic burden of dialysis catheter infections in Australia.
2. To implement an evidence-based and systematic intervention package using a stepped-wedge cluster design with the objective of reducing dialysis catheter related bacteraemia.
3. To establish a framework for monitoring dialysis catheter related bacteraemia and sustaining improvements from the intervention phase.

Aims:
• This evidence implementation study will use a stepped-wedge, cluster trial design, involving over 35 renal dialysis units across Australia.
• The study intervention is a multifaceted, evidence-based intervention (encompassing components of care throughout dialysis catheter use) applied at a unit level, with the timing of the study intervention randomly determined.
• The major outcomes will be catheter-related bacteraemia and infection.

Methods:
• The project will form the basis of first coordinated national approach to reduce dialysis catheter bacteraemia.
• Such an approach has the potential to reduce thousands of cases of dialysis catheter-associated infections, with associated reductions in morbidity and healthcare expenditure.