Practical guide on Care Bundles for Acute Kidney Injury

Purpose of this guide

Acute Kidney Injury (AKI) is common and is associated with poor patient outcomes, which in some cases appear associated with deficiencies in the provision of care. Care bundles are increasingly used for AKI and were a key element of the intervention in the Tackling AKI trial. The purpose of this document is to share the learning and reflections from the Tackling AKI project team on the design, implementation and rollout of AKI care bundles on a hospital wide level.

Contents

Background – what is a care bundle?

The existing definition of a care bundle from the Institute of Health Improvement (IHI) is:

'A structured method of improving processes of care and patient outcomes; a small, straight-forward set of evidence-based practices, treatments and/or interventions for a defined patient segment or population and care setting that, when implemented collectively, significantly improves the reliability of care and patient outcomes beyond that expected when implemented individually'.

This certainly has relevance to AKI, in which deficiencies in care have been linked to poor patient outcomes (e.g. NCEPOD report, 2009). Many hospitals have designed and are using care bundles for AKI. The results of Tackling AKI will contribute to the evidence base as to whether this approach is effective, and further reading in this area is provided alongside this document.

How should a care bundle be designed?

There are some important principles to consider when designing a care bundle.

! Most importantly, avoid the natural temptation to include all aspects of AKI investigation and management. This would make a checklist for AKI care, and generally results in only partial completion. Instead, think about how a care bundle is designed to be used (all actions completed for all patients with AKI) and pick a relatively small number of elements (e.g. 4-6) that each make a difference to patient outcome.

- Choose elements for the care bundle that are independent of each other (i.e. avoid duplication)
- Ideally, each element should have a strong evidence base but this is not always available for basic AKI management, so ensure that the elements are consistent with current guidelines.
- Try and pick elements that can all be completed at a single time point to help ease of use
- Engage the multi-disciplinary team in the design of a care bundle

Other aspects to consider in care bundle design

There are also some practical considerations to think about. We have seen very clearly that whilst the basic elements of an AKI care bundle generally remain the same, the content and format of care bundles has required customisation to suit the needs of different hospitals. So a good idea is to start with a few examples of care bundles from elsewhere but then consider how these could be adapted to best work in your hospital.

We have also found that the first draft of a care bundle is usually not perfect. In all of the sites for the Tackling AKI trial, AKI teams have found that testing the care bundle, collecting feedback and then refining the care bundle in response to this has been necessary. Not only does it help with usability, this approach helps engage the frontline staff and may increase the chances of uptake. We have also found that different clinical areas within the hospital may have different needs, and a 'one size fits all approach' may not always work. Think about: cardiology/heart failure areas; the emergency department; intensive care; and what may need to change depending on configuration of local nephrology services.

TIP: think about including 'inform patient about diagnosis of AKI' as one element of a care bundle. Just by doing this one simple thing, a number of other actions will follow that increase chances of correct management, appropriate follow up plans post-AKI and opportunities around medication and AKI prevention.

Depending on local resources, there may be the possibility to make the care bundle an electronic document, rather than the traditional paper format that is inserted into the hospital notes. An electronic version has advantages: it is more widely available; and there are options to link to AKI alerts or other aspects of the electronic record.

Implementing the care bundle

This is the tricky part! How do you engage front line staff across the hospital to start and then continue to use your AKI bundle? There is no one secret for success, but these ideas may help and have come from our experiences from across the five Tackling AKI sites:

- It is absolutely vital to have consultant colleagues 'buying in' to the project and leading by example. Without senior clinical leadership on the wards, it is very difficult to encourage systematic usage. This is important for the AKI project team to consider from the outset.

- At the same, time junior doctor and MDT champions can make a big difference. Involving the MDT has several advantages. Firstly, a joint approach to care bundle completion can work in some areas – nurse or pharmacist initiating a care bundle, junior doctor completing. In addition, MDT engagement helps to offset the recurrent change in junior doctor rotational posts.
- Sometimes, there is a lot of initial enthusiasm that then wanes. We have found that ward walks are a really effective way of keeping up awareness and encouraging usage. Across our teams this has been done by an AKI nurse, a project manager and a QI fellow. Other possibilities could include outreach teams. This is really about reminding front line staff that the care bundle is a useful clinical aid, and can also be a good way to collect data on how you are performing.
- Some hospitals have existing teams of educators or quality teams in place. Find out if your hospital does as they can be a great resource to tap into and help with roll-out and awareness. Critical care outreach teams have also been a powerful resource in some centres.
- Can you link AKI into 'board rounds' or safety huddles? This is a really effective way of ensuring that AKI is seen as a safety issue and can be a good way to initiate care bundles on those who need it.
- Don't forget about the simple practical things. For example, highly coloured paper care bundles are more likely to catch attention in the notes, make sure care bundles are easily accessible to those who need to use them, make sure clinical areas know how to order replacements etc.
- Traditional teaching (and our approach for Tackling AKI) was to use measurement for improvement to encourage usage. This refers to the process by which care bundle usage is regularly audited and results fed back to clinical staff, to show improvements and when extra efforts are needed and to understand reasons for reductions in usage and respond to these. In practice, this can be very difficult to achieve. Regular auditing of care bundle usage requires significant time that most people do not have. It may be that electronic bundles with regular IT reports will be a solution for more centres as technology evolves. So, whilst effective for small clinical areas or when there is dedicated resource to deliver this, measurement for improvement is currently very difficult for hospital wide implementation of AKI care bundles.

Resources to accompany this guide

1. 2 minute cartoon: care bundles 'how to guide', summarises key points from this document
2. Infographic – 'how care bundles are refined', example from Bradford showing how first version of an AKI care bundle was refined in response to user feedback
3. Review article: Bagshaw 'Care Bundles for AKI' by Sean Bagshaw
4. Review article: 'Care Bundles for AKI – Do They Work?' by Nick Selby
5. Original article: 'A Multifaceted Quality Improvement Programme to Improve Acute Kidney Injury Care and Outcomes in a Large Teaching Hospital ' by Ebah et al

6. Original article: ‘A whole system approach to improving mortality associated with acute kidney injury’ by Chandrasekar et al
7. Summary table: current published studies evaluating care bundles for AKI