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Editorial

Implementing care bundles to improve outcome

The initial concept of a "care bundle" was from the Institute of Healthcare Improvement (IHI), Cambridge, Massachusetts in 2001 to improve critical care processes to a high reliability thereby vastly improving outcomes[1]. The concept is expected to enhance teamwork and communication in multidisciplinary teams creating the conditions necessary for safe and quality care of the critically ill.

What is a "bundle"? It is a set of evidence based practices which when performed effectively and reliably as a whole are found to improve patient outcome. Each element is independent so that even if not performed for a medical indication, would not affect the others. Each element should also be descriptive rather than prescriptive so that it can be adapted to the local environment. The entire bundle should be used in the defined population in one location and the compliance is measured using all – or –none measurement with a goal of 95% or greater. The elements in a bundle are not new. They are well established practices. But they are not often performed uniformly so that treatment becomes unreliable. A bundle puts the elements together in a package of must be performed elements.

Are bundles a check list? No. A bundle has features that make it unique. A checklist has a mixture of "nice to do" tasks or processes which are useful but not evidence based and "have to do" processes, which are proven by randomized controlled trials. The nice-to-do processes can be missed without an effect on the patient. A check list will also have many elements. On the contrary a bundle has a limited number of evidenced based set of processes. Missing any one of them would result in an adverse outcome to the patient. A bundle is the responsibility of a person or team and this focus and accountability gives a 'bundle' a lot of power.

The first bundles developed by the IHI were the central line bundle and the ventilator bundle. The use of these bundles dramatically reduced the rates of catheter related blood stream infections (CRBSI) and ventilator associated pneumonia (VAP). Infact the 35 ICUs that used the ventilator bundle with high compliance showed a 44.5% reduction in VAP rates[2]. Other bundles that we are familiar with are the sepsis resuscitation bundle and the sepsis management bundle. Developing bundles for use by clinical teams are constantly done by the IHI.

We know that these bundles consist of simple elements which can be easily implemented.
The bundle ties the elements together into a package which must be followed for every patient every single time. All elements are necessary and all must be completed to succeed. Each element is a result from a randomized controlled trial; they are accepted, well established and there is no controversy. The all or none measurement will say whether you have accomplished the entire bundle or not. The measurement of the practice of bundles should occur every day at a given time, maybe on the ward rounds or every six hours.

Implementing quality care for the critically ill patients was addressed by Dr Kumudini Ranatunga, the President of the College of Anaesthesiologists of Sri Lanka in her Presidential address last year[3]. She expressed her keenness to implement care bundles in our practice. The college is currently collaborating in an audit of ICU care practices in Sri Lanka. Many of our colleagues would be using care bundles in

management of the critically ill even at the moment. The current need is to implement island wide, a practice appropriate to our environment and facilities and more importantly to ensure a sound monitoring system to audit the process and outcome.

There is undoubtedly increasing evidence confirming that using a bundle approach is an effective strategy for improving care. We must understand that success is not by just 'doing' the bundle. We must remember that a bundle does not provide comprehensive total care for a patient, but is a strategy to prevent serious complications and save lives. Implementation involves constantly looking at the work processes, communication strategies and infrastructure along with vigilance and measurement of the processes.

References

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