

## **CARE BUNDLE**

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### **Introduction**

A care bundle is a set of interventions that, when used together, significantly improve patient outcomes. Multidisciplinary teams work to deliver the best possible **care** supported by evidence-based research and practices, with the ultimate outcome of improving patient **care**.

In 2000, there were 2.4 million deaths in the United States, and in 2010 there were 2.5 million . In both years, about one-third of these deaths occurred in short-stay, general hospitals , despite research that found that most Americans prefer to die in their own homes . This report presents National Hospital Discharge Survey (NHDS) data from 2000 through 2010 on patients who died during hospitalization.

Reorientation of the health delivery system and allocation of resources is required to enable the implementation of evidence-based strategies that can address this new challenge.

### **Bundles, According to the IHI (Institute for Health Care Improvement):**

A "**bundle**" is a group of evidence-based care components for a given disease that, when executed together, may result in better outcomes than if implemented individually.

The science supporting the individual treatment strategies in a bundle is sufficiently mature such that implementation of the approach should be considered either best practice or a reasonable and generally accepted practice.

IHI Vice President and patient safety expert, Carol Haraden, PhD, comments on the power and popularity of “bundles” in improvement initiatives. She clarifies what a bundle is and is not, and suggests tips for using bundles most effectively to get results.

### **Concept of bundle**

IHI developed the concept of “bundles” to help health care providers more reliably deliver the best possible care for patients undergoing particular treatments with inherent risks.

A bundle is a structured way of improving the processes of care and patient outcomes: a small, straightforward set of evidence-based practices — generally three to five in one bundle of care.

### **Origins of the Bundle Approach to Improving Care**

The first bundles developed in IHI initiatives, the Central Line Bundle and the Ventilator Bundle, were used subsequently in IHI’s critical care initiative in the IMPACT network starting in July 2002. Both the Central Line Bundle and the Ventilator Bundle were included as key interventions in IHI’s 100,000 Lives Campaign and 5 Million Lives Campaign.

Over 4,000 US hospitals participated in the Campaigns between 2006 and 2008. Those hospitals were surveyed in 2007 about results following bundle implementation; 65 hospitals reported going one year or more without a VAP (Ventilator associated pneumonia) in an ICU setting, and 35 hospitals reported six months or more of no CLABSI (catheter line associated blood stream infection) in at least one intensive care unit.

## **The First Two Bundles**

### **I. IHI Ventilator Bundle**

1. Elevation of the head of the bed to between 30 and 45 degrees
2. Daily “sedation vacations” and assessment of readiness to extubate
3. Peptic ulcer disease (PUD) prophylaxis
4. Deep venous thrombosis (DVT) prophylaxis

(Note: A fifth bundle element,

5. “Daily oral care with chlorhexidine,” was added in 2010.)

### **II. IHI Central Line Bundle**

1. Hand hygiene
2. Maximal barrier precautions
3. Chlorhexidine skin antisepsis
4. Optimal catheter site selection, with avoidance of using the femoral vein for central venous access in adult patients
5. Daily review of line necessity, with prompt removal of unnecessary lines

They measured compliance with the bundles by checking documentation of adherence to all elements of the bundle.

This measurement technique for bundles — called “all-or-none” measurement — focused attention on the importance of delivering all elements of the bundle to the patient, unless medically contraindicated.

### **Problem with how people use bundles...?**

The concept of a bundle has such traction that people are trying to use them more often and in more ways than they really should.

There’s a tendency to want to call *everything* a bundle, any checklist involving patient care procedures, *for example*. *But a bundle isn’t a checklist, and just taking an ineffective checklist and calling it a bundle won’t make it any better*

## **Key elements of a care bundle**

1. Group of 3–5 evidence-based interventions related to a particular condition, or event in patient care that when executed together result in a better outcome than if implemented individually
2. Each intervention should be widely accepted as good practice and widely applicable
3. Should be adhered to for every patient 100% of the time
4. Can be used to measure evidence based practice
5. Each step able to be audited, that is, done/not done/local exclusion
6. Audit focused on organizational aspects of performing intervention rather than how well intervention performed
7. Only compliant with bundle when every intervention completed or a step is excluded for pre-defined reason

## **Benefits**

- Direct benefit to the patient
- Shorter intensive care unit stay
- Reduced financial cost
- Improve resource utilization, and therefore, benefit to other patients outside the scope of the care bundle

## **Who can use the bundle?**

Anyone in the clinical setting with the agreement of the clinical team and Quality Improvement Leads can use the bundles.

## **Barriers**

- Fear to change
- Communication breakdown

## **Conclusions**

More and more data that the use of these patient-safety bundles are associated with improved outcomes, some clinicians disagree with the validity of the combined content. Nevertheless, it is becoming part of standard practice for us to document our awareness of these national patient-safety initiatives.

## **References:**

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