

CENTRAL VENOUS CATHETER
CARE BUNDLE:
INTRODUCTION

What is a Care Bundle?

- A set of individual components which when combined make a set of quality indicators for a specific system, procedure or treatment
- e.g. ventilator care bundle, central venous line bundle, sepsis bundle

Characteristics of a Care Bundle

- collection of best practices or processes
- best practices based on existing level 1 or 2 research evidence - "standard of care"
- individual component improves care, but when applied together result in substantially greater improvement

Characteristics of a Care Bundle

- bundle components are dichotomous:
yes/no answers
- bundle compliance measured as "all or none"
- emphasis initially on process rather than outcome
- eventual endpoint is outcome improvement

Goals of care bundle

- To ensure ALL patients receive the best care or treatment, based on evidence, 100% of the time
- Improve delivery of clinical care to achieve better outcomes
e.g. prevent avoidable morbidity, reduce length of stay
- Reduce unwarranted clinical variation
- Provide equity of care

What is the Central Venous Catheter (CVC) Care Bundle?

- Group of evidence-based interventions for patients with CVC that, when implemented together, result in better outcomes than when implemented individually
- The science supporting each bundle component is sufficiently established to be considered standard of care

Key Components of Central Venous Catheter Care Bundle

1	Hand hygiene
2	Maximal barrier precautions before insertion
3	Chlorhexidine skin antisepsis
4	Optimal Catheter site selection-with Subclavian vein as preferred site
5	Daily review of CVC necessity with prompt removal of unnecessary lines

CVC Care bundle

- Not intended to be a comprehensive list of all elements of care related to CVC
- Bundle promotes teamwork and collaboration
- Need to get all staff involved

How to audit compliance?

	Yes	No	Exclusion
Hand hygiene	√		
Maximal barrier precautions	√		
Chlorhexidine skin antisepsis	√		
Catheter site selection	√		
Daily review	√		

Bundle compliance **YES**

How to audit compliance?

	Yes	No	Exclusion
Hand hygiene	√		
Maximal barrier precautions	√		
Chlorhexidine skin antisepsis	√		
Catheter site selection		√	√
Daily review		√	Nil

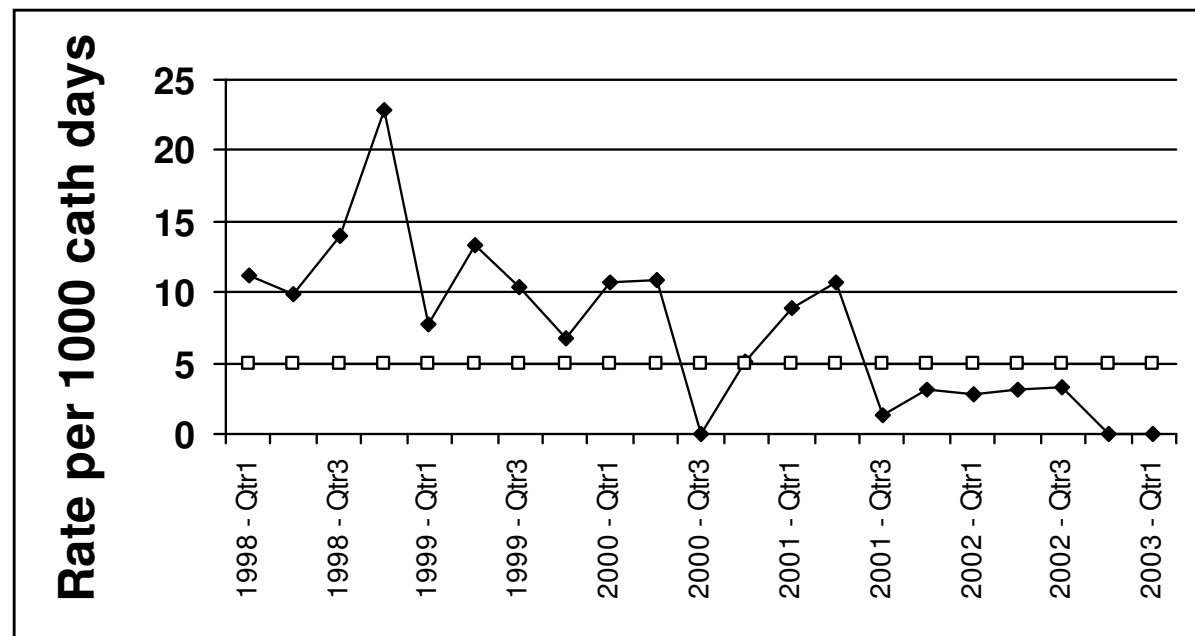
Bundle compliance **NO**

How to audit compliance?

	Yes	No	Exclusion
Hand hygiene	√		
Maximal barrier precautions	√		
Chlorhexidine skin antisepsis	√		
Catheter site selection		√	√
Daily review	√		

Bundle compliance **YES**

Impact of CVC care bundle



Berenholtz SM, Pronovost PJ, Lipset PA, et al. Eliminating catheter-related bloodstream infection in the intensive care unit. *Critical Care Medicine*. 2004;32:2014-2020.

Impact of CVC care bundle

- Success of these interventions is due to a combination of the mindfulness that develops when regularly applying the elements of the bundle