

Research Progress of Care Bundles in Nursing Practice

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Abstract. Evidence-based nursing has been introduced into China for more than ten years, and many researches have been conducted on evidence-based nursing in recent years. Based on the background of this clinical research, care bundles were put forward in 2001, and then there was an endless stream of research on cluster nursing. The purpose of this study is to expound the clinical practice of care bundles application at home and abroad, and to understand the general principles and characteristics of cluster nursing, so as to provide reference for future research.

The Concept of Care Bundles

The concept of care bundles is first proposed by the Institute for Health care Initiatives (IHI), which is a series of interrelated evidence collection to solve various clinical problems in specific situations. The IHI defines care bundles as ^[1]: A structured method of improving processes of care and patient outcomes; a small, straight-forward set of evidence-based practices, to treat and/or to interference for a defined patient part or population and care setting that, when implemented jointly, it can greatly improve the reliability of care and patient outcomes beyond that expected when implemented solely.

The General Principles of Care Bundles

2.1 The bundle of care is more targeted and narrower than clinical practice guidelines. The application of series of evidence can provide reliable evidence-based evidence for clinical nursing practice and improve the outcome of patients effectively. The various measures that make up the cluster care are not static. With the emergence of new evidence and guidance, the content of the cluster will be continuously improved.

2.2 The care bundles has 3-5 elements, which are easier, more direct, and targeted, each has strong stakeholder agreement.

2.3 Each element in the care bundles is relatively independent. In the formulation of care bundles, if one of the care bundles is not implemented, the remaining measures will not be affected.

2.4 The implementation of this bundle is accomplished by multidisciplinary cooperation. Multi-disciplinary cooperation can improve the accuracy of bundles, promote communication among different disciplines and enhance the possibility of success.

2.5 A scheme is used in the same hospital for a particular patient population.

2.6 Care bundles have integrity, one nursing measure is not completed, and the cluster care is not completed. However, it should also be emphasized that the care bundles are not mandatory, and if the patient has symptoms of discomfort, the nursing measures should be stopped immediately. Different diseases can also have different cluster care measures. Cluster care should be performed on selected patients continuously, rather than intermittently or only one or two of them.

The Characteristics of Care Bundles

Measures of diversity and flexibility; Recombinability of the scheme; Diversity of specific programmes; The concrete implementation plan is composed of each element; Supported by sufficient clinical evidence; The feasibility, effectiveness and safety of each measure. A complete programme should include complete and comprehensive measures; Specific operation procedures, execution frequency and evaluation rules; Clarify the system, set up regular meeting time and effect feedback system.

Clinical practice of Care Bundles

Ventilator-associated Pneumonia

The concept of care bundles was first applied in the prevention of ventilator-associated pneumonia(VAP),and implementation of VAP bundles care could reduce the incidence of VAP at surgical ICUs ^[2], Subsequently, it was widely accepted by medical staff and applied to clinical practice.

Heart failure

Studies have shown that cluster of nursing can effectively reduce the total adverse reaction for heart failure patients ^[3], reduce the incidence of pressure ulcers ^[4] and incidence of falls^[5],improve health outcomes of patients after colostomy^[6] and other sensitive indicators.

Catheter Related Urinary Tract Infection

The implementation of cluster nursing measures to prevent catheter related urinary tract infection has significantly reduced patient's indwelling catheter time, ICU hospitalization time and hospitalization expenses, alleviated the pain of patients, and significantly reduced the incidence of catheter related urinary tract infection^[7].

Chronic Obstructive Pulmonary Disease(COPD)

COPD exacerbation care bundle improves mean length of stay, 30-day readmission rates, 60-day readmission rates, and decreasing morbidity and the financial burden^[7].

Decompensated Cirrhosis

Care bundles was associated with increased rates of diagnostic paracentesis and antibiotic prophylaxis with variceal hemorrhage in patients with decompensated cirrhosis^[8].

Ischemic Stroke

The application of cluster care in patients with ischemic stroke can significantly reduce the death rate of 30d and 6 months, and increase the possibility of discharge to usual residence at 6 months^[9].

Deep vein Thrombosis(DVT)

DVT nursing strategy, accurate assessment, timely early functional exercise, physical therapy and drug treatment combined with comprehensive prevention, actively carry out health education, strengthen psychological care, reduce the incidence of DVT, reduce the suffering of patients, improve the quality of life of patients^[10].

Summary

The development of cluster nursing has achieved good results in many clinical fields at home and abroad .However, the application of high quality cluster care to improve the health outcomes of patients with chronic heart failure has not been reported. Researchers must strictly follow the evidence-based procedures in the formulation of cluster care to ensure the best measures to be made.

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