Effect of Clinical Pathway Regarding to Care of Neonates on Noninvasive Continuous Positive Airway Pressure

Thesis

Submitted for Partial Fulfillment
of Doctorate degree in
Pediatric Nursing

By

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Huwida Hamdy Abd-Elmenem

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List of Abbreviation

NICPAP	Noninvasive Continuous Positive Airway Pressure
NICU	Neonatal Intensive Care Unit
PVR	Pulmonary Vascular Resistance
RDs	Respiratory Distress Syndrome
ICP	Intra Cranial Pressure
CPP	Cerebral Perfusion Pressure
ADH	Anti Diuretics Hormone
VLBW	Very Low Birth Weight
PaCO2	Partial Pressure of Arterial Carbon-dioxide in blood
PO2	Partial Pressure of Oxygen
ABGs	Arterial Bblood Gases
Tcpco2	Total Concentration pressure of Carbone dioxide
AOP	Apnea of Prematurity
FRC	Functional Residual Capacity
PDA	Patent Duct Arteriours
Mas	Meconium Aspiration Syndromes
MAF	Meconium-Stained Amniotic Fluid
NC	Nasal Cannula
CDP	Continuous Distending Pressure
H2O	Two Hydrogen ion and oxygen
FiO2	Fraction of inspired oxygen
PAL	Pulmonary Air Leak
CO2	Carbon Dioxide
MMHg	Millimeter Mercury
L/M	Liter per Minutes

CBGs	Capillary Blood Gases
BPD	Bronco Pulmonary Dysplasia
Kg	Kilograms
PN	Parenteral Nutrition
CVCs	Central Venous Catheters
HCO3	Bbicarbonate
CSSD	Ccentral Sterile Services Department
SPD	Sterile Processing Department
CSD	Central Supply Department
CSS	Central Sterilizing Services
IFD	Infant Flow Driver
GP	General Practitioner
IPCT	Infection Prevention and Control Team
ICD	Infection Control Department
IC	Infection Control
NRD	Neonatal Respiratory Distress
IRDS	Idiopathic Resporatory Distress syndrom

Abstract

Neonates on noninvasive continuous positive airway pressure (NICPAP) are requiring special care from nurses' working in neonatal intensive care unit to insure maximum performance. By applying the clinical pathway, it provides opportunities for collaborative practice, promote critical thinking and enhance collaboration among disciplinary team to provide optimal care outcomes for neonates on NICPAP. The aim of this study was to assess nurses' knowledge regarding to clinical pathway, designing, implementing, and evaluating the effect of clinical pathway intervention on nurses toward care of neonates on noninvasive continuous positive airway pressure. The study was carried out at Children and Maternity& Gynecological Hospitals affiliated to Ain-Shams University, El-Fayoum University Hospital, El- Fayoum Teaching Hospital and El-Fayoum Health Insurance Hospital. The subjects of the study involved all available nurses (69) who provided care to (56) neonates on NICPAP. Tools of data collection involved a structured questionnaire by interviewing the studied nurses (pre/post intervention of clinical pathway), neonates' sheet and the clinical pathway formats & contents. Results of the study revealed that the majority of the studied nurses (95.7%) showed good knowledge about clinical pathway post intervention while, none of them showed poor knowledge. All of the studied nurses had good knowledge regarding to activities of clinical pathway post intervention. All of nurses had good knowledge regarding complications of NICPAP post intervention, while only 4.3% had poor knowledge about management of NICPAP complications. It can be concluded that, nurses were improved in their knowledge after the intervention concerning with the effect of clinical pathway and it is activities in care of neonates on continuous positive airway pressure (NICPAP).The researcher recommended the importance of raising awareness of multidisciplinary health team regarding advantages of clinical pathway and it is activities in care of neonates on NICPAP.

Key words: Clinical pathway, Neonates on NICPAP, Nurseś knowledge, intervention.

INTRODUCTION

Noninvasive continues positive airway pressure (NICPAP) is a management option for treatment of neonates with respiratory problems. It can be used to provide continuous positive pressure oxygenation to neonates with respiratory problems in an effective and safe manner. However, NICPAP remains the least invasive and one of the most easily administered respiratory treatment methods. Noninvasive continuous positive airway pressure is associated with less surfactant use and less exposure to mechanical ventilation, it has the benefits for alveolar recruitment and reduction of airway collapse ***(Diblasi, 2014).***

Clinical pathway is a strategy that reduces resource utilization while maintaining the quality of care and the most popular methods intended to meet intense pressures to reduce the costs of health care. It is a management plan that display goals for patients and provide the corresponding ideal sequence and timing of staff actions to achieve those goals with optimal efficiency ***(Annie and Justin, 2009).***

The clinical pathway represents standardize and integrated multidisciplinary care plan, which includes the assessment and care given by all disciplines involved patients care. Its purpose is to help coordinate health care services and decrease costs associated with duplication of effort. Using a clinical pathway helps to optimize quality efficacy and organization of health care delivery services. It requires the active understanding of care principles and participation of the health care team including paediatric patients ***(Stephen, 2010).***

Goals of pathways are to improve quality using printed standards of care, improve documentation of the care delivered, and improve communication about daily goals between all team members, patients and families, standardize inpatient chart format throughout the hospital, and increase efficiency of care. The pathway provides physicians and nurses with the standards of care and provides a mechanism for documentation at inpatient charts ***(Peterson, 2011).***