

Nutrition Care Process in Pediatric Intensive Care Unit (PICU)

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DESCRIPTION

Pediatric intensive care nutrition is a developing field that remains at the intersection of three important domains: pediatrics, critical care medicine, and nutrition/dietetics.

Nutrition Therapy (NT) is vital in the treatment of severely ill children. Inadequate feeding results in malnutrition, which raises the patient's risk of morbidity and mortality. Only 10% of the cases received Parenteral Nourishment (PN), with the remaining 10% receiving mixed NT (EN (Enteral Nutrition)+PN (Parenteral Nourishment)). Nutrition deficiency is linked to physiologic instability and an increased need for care in critically ill children, and it may have an adverse effect on growth and brain development, particularly in younger children. Because it is usual to restrict liquids and terminate feeding for diagnostic and therapeutic procedures, as well as some patients have digestive intolerance; therefore, NT in the PICU is a challenge. Nutrition intervention is critical, and most PICUs should develop their own protocols as well as multidisciplinary teams to provide nutrition support. Some consider nutritional therapy to be a component of therapy during pediatrics critical illness, while others consider nutrition in critically ill children to be essentially supportive care. Nutrition is a fundamental building component of life and hence a requirement for everyone, particularly children in their early years who are growing and developing. Nutrition is therefore shown as standard care instead of a therapeutic intervention.

Malnutrition occurs frequently (30%-50%) during Pediatric Intensive Care Unit (PICU) admission and is associated with a longer period of automatic ventilation as well as greater rates of mortality and nosocomial infections. Oral feeding was frequently impossible in the PICU. However, determining nutritional status and appropriate energy requirements for children in the PICU remains difficult.

For critically ill children admitted to the PICU, optimal dietary support has been considered vital. Nutritional support is thought to be vital in the outcome of pediatric critical illness. There is an inadequacy of randomized trials to give assessment guidelines

that contribute to inequities in PICU procedures. Nutrition, which is related to the growth of brain structure and functions, may potentially be a modifiable risk factor.

As a result, it is a predictor of neurocognitive functioning. Especially during critical illness, when most children are unable to eat normally, it is crucial to understand which dietary strategy results in the positive outcome. Two large Randomised Controlled Trials (RCTs) assessed the impact of various feeding methods on short-term and long-term outcomes up to four years after PICU admission. Nutrition research in the PICU population has shifted dramatically over the last 40 years, from observational studies to major RCTs combined with long-term follow-up studies on neurocognitive function.

Nutritional support in critically ill children is considered to be an important component of enhancing medical management of such kids in the PICU. Many studies reported significant differences in nutrient requirements, administered nutrition support, and nutrient delivery, which may result in significant calorie and nutrient deficiencies in critically ill children hospitalised, as well as deterioration of protein catabolism state and clinical outcomes.

CONCLUSION

Nutrition is regarded a therapeutic strategy for the successful management of critically ill children, but only as an additional support to other medical, pharmacological, and surgical approaches. NT is essential in the treatment of severely ill children. Inadequate feeding leads to malnutrition, which increases the patient's risk of morbidity and mortality. Most PICUs should develop their own protocols as well as interdisciplinary teams to provide nutrition support. Nutritional support is considered to be important in the outcome of pediatrics critical illness. Protein-energy malnutrition was identified in newborns admitted to the pediatric intensive care unit, and it has been associated to poor clinical outcomes and randomised trials are inadequate for providing assessment guidelines, which contributes to differences in PICU therapies.

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Received: 29-Nov-2022, Manuscript No. MPN-23-21578; **Editor assigned:** 01-Dec-2022, Pre QC No. MPN-23-21578 (PQ); **Reviewed:** 15-Dec-2022, QC No. MPN-23-21578; **Revised:** 22-Dec-2022, Manuscript No. MPN-23-21578 (R); **Published:** 30-Dec-2022, DOI: 10.35248/2472-1182.22.7.180

Citation: Wetal J (2022) Nutrition Care Process in Pediatric Intensive Care Unit (PICU). *Matern Pediatr Nutr*.7: 180.

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