



Evaluating the quality of the processes of care and clinical outcomes of premature newborns admitted to NICU Najran

DR ATIQUR RAHMAN KHAN
MBBS, DCH, MD.

OBJECTIVES:

To develop quality of care (QoC) indicators, evaluate the quality of the processes of care (QPC) and clinical outcomes, and analyze the association between the QPC and severe clinical outcomes of preterm newborns admitted to neonatal intensive care units (NICUs).

DESIGN:

Mixed methods approach: (1) development of QoC indicators via modified RAND/UCLA method; (2) cross-sectional study of QoC evaluation and (3) multiple logistic regression analysis to ascertain the association between the QPC and severe clinical outcomes.

SETTING:

Two NICUs belonged to the Ministry of Health Najran city.

PARTICIPANTS:

About 489 preterm neonates (<37 weeks of gestation) without severe congenital anomalies.

MAIN OUTCOME MEASURE(S):

The QoC indicators; $\geq 60\%$ of recommended QPC and severe clinical outcomes.

RESULTS:

The QoC included 10 QPC indicators across four domains: respiratory, nutrition and metabolism, infectious diseases, and screening, and five outcome indicators. The lower QPC indicators were for the nutrition and metabolism domain (17.8% started enteral feeding with human milk, and 20.7% received sodium bicarbonate appropriately). The higher QPC indicator was for the screening domain (97.6% of neonates <30 weeks gestation underwent early (≤ 14 days) transfontanelar ultrasound). The mean recommended QPC that neonates received was 47.5%. Only 26.6% of neonates received $\geq 60\%$ of recommended QPC. About 60.7% of neonates developed severe clinical outcomes including mortality and healthcare-related major morbidity. Receiving $\geq 60\%$ of recommended QPC was associated with a decrease of nearly half of odds of severe clinical outcomes.

CONCLUSION:

The evaluation of the QoC in NICUs is essential to address modifiable gaps in quality.

