

# Practice and outcomes of neonatal resuscitation for newborns with birth asphyxia at Kakamega County General Hospital, Kenya: a direct observation study.

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## Introduction

About three - quarters of all neonatal deaths occur during the first week of life, with over half of these occurring within the first 24 hours after birth. The first minutes after birth are critical to reducing neonatal mortality. Successful neonatal resuscitation (NR) has the potential to prevent these perinatal mortalities related to birth asphyxia.

**Objective:** This study described the practice of NR and outcomes of newborns with birth asphyxia in a busy referral hospital.

**Methods:** Direct observations of 138 NRs by 28 healthcare providers (HCPs) were conducted using a predetermined checklist adapted from the national pediatric resuscitation protocol. Descriptive statistics were computed, chi - square tests & Logistic regression models assessed the relationship between the survival status at 1 hour versus the NR processes and newborn characteristics.

## Results:

⇒ Nurses performed 72.5% of the NRs. A warm environment was maintained in 71% of the resuscitations. Only 40% of newborns were correctly cared for in case of **meconium presence in airway**. About 86.2% of resuscitated newborns survived after 1hr .

**Table 1: Relationship between the NR processes and the neonatal outcomes**

NR PROCESS	OR	P - VALUE	95% CI
<b>Drying/stimulation (n = 138)</b>			
Wet cloth removed	2.90	0.035*	1.08 – 7.76
Baby kept warm	3.30	0.018*	1.22 – 8.88
<b>Airway clearance (n = 123)</b>			
Meconium present in airway	0.34	0.042*	0.12 – 0.96
Suctioning airway before stimulation in meconium presence (n = 57)	5.02	<b>0.051</b>	1.00 – 25.34
<b>Bag and Mask Ventilation (n = 66)</b>			
BMV within the Golden minute	1.11	0.843	0.38 – 3.24
HR checked at 1 minute (n = 30)	2.08	0.429	0.34 – 12.72
<b>Newborn Characteristic</b>			
Gestation age (weeks)	1.38	<b>0.007*</b>	1.10 – 1.75