3. Medication safety in neonatal care involves education and training of the staff; debriefs and shared learning from errors, and timely review of the practices.

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IS IGNORANCE REALLY BLISS? EFFECT OF PARENTAL AWARENESS ON NEONATAL MORTALITY IN CENTRAL INDIA

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Background Only with education can we create generalized awareness regarding better neonatal care at the societal level. It is well known that the people in many rural and tribal areas across the developing world tend to harbor grave misconceptions regarding pregnancy and neonatal care and lack the knowledge of danger signs. However, the level of parental awareness and its effect on neonatal mortality in the intensive care units in urban areas is often overlooked.

Objectives To assess the effect of parental awareness on the survival outcome of early preterm neonates in a tertiary care center providing referral services.

Methods After taking the approval of the institutional ethics committee, a cross sectional quantitative social research study was conducted. 140 neonates of gestational age ranging between 28–31 weeks and birth weight ranging from 1000 g to 2499 g; of both sexes born in a tertiary care institute of central India and admitted to its neonatal intensive care unit (NICU) within 1 hour of birth were enrolled in the study. Babies of gestational age <28 weeks and >31 completed weeks, birth weight < 1000 g, having lethal congenital malformations, delivery room deaths and those admitted after 1 hr of birth were excluded. The outcome measure was in the form of hospital death or discharge. The awareness of parents of the enrolled neonates, regarding neonatal care and danger signs, was assessed using a single response (yes/no type) 5 questions questionnaire, prepared in local languages. For parents referred from tribal areas, assistance was taken from translators available among relatives or hospital staff. Their responses were correlated with the outcome. The 'Yes' answers to 80% of the questions were considered a positive response, which was taken as an indicator of good awareness. Chi-square test and 2 × 2 table were used and the p-value was calculated; p < 0.05 was considered statistically significant. The questions asked were regarding the parents being aware of their baby's low birth weight or preterm status, its associated complications, benefits of breastfeeding, identification of each of the danger signs, and whether their response to those signs will be to consult a doctor immediately or to try home-based treatment first.

Results Male: female ratio was 0.92:1. The mean Gestational age was 30.27 ± 0.89 weeks, the mean birth weight being 1599.75 ± 282.35 grams. The total mortality in the cohort was 47.1% (66/140). For the mortality group (66), only 42.31% of parents gave a positive response. The survived group (74) was associated with a 58.30% positive response. Thus, the higher the positive response rate greater was the survival (p<0.007).

Conclusions Increased sensitization of parents regarding neonatal danger signs and care practices has a positive impact on neonatal survival, highlighting that parental education is the need of the hour. Improved parental education from the

grass-root level in rural areas up to the tertiary care centers in urban areas, regarding safe neonatal health practices, will help in reducing neonatal mortality rate and in achieving target 3 of Sustainable Development Goals.

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FIVE YEAR EVALUATION OF THE NEWBORN SCREENING PROGRAMME IN DUBAI, UNITED ARAB EMIRATES: A CROSS SECTIONAL STUDY

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Background The Newborn Screening Programme (NBS) screens for a group of congenital and genetic conditions including the inborn errors of metabolism. The population of the United Arab Emirates' presents uncharted ground for exploration of these disorders. High rates of consanguinity contribute to the higher prevalence of these rare diseases. Early diagnosis is key to lead to better prognosis.

Objectives To investigate the frequency of various neonatal disorders detected by a comprehensive newborn screening programme conducted in a tertiary care hospital over 5 years.

Methods A total of 14733 neonates born in our hospital between October 2012 and October 2017 were included in the study. Neonates underwent a heel prick test at 48 hours of birth which was sent for screening of various disorders. The results of these tests were collected as well as demographic variables including, gender, birth weight, gestational age and birth year. Statistical analysis was carried out through Statistical Package for the Social Sciences SPSS v.24. Qualitative variables were tabulated as frequencies and percentages and the continuous variables as means ± Standard deviation.

Results Of the 14,733 neonates 7049 (47.85%) were females. Average gestational weeks and weight were 37.9 (±2) weeks and 3127 (±561) grams respectively. 14 (0.1%) tested positive for inborn errors of metabolism. Of whom 2 (0.01%) had fatty acid disorders, 11 (0.07%) had amino acid disorders, and 1 had cystic fibrosis. Of the amino acid disorders, 2 neonates had Phenylketonuria. Three (0.02%) newborns tested positive for congenital adrenal hyperplasia and 8 (0.05%) for congenital hypothyroidism. 161 (1.1%) newborns tested positive for glucose-6-phosphate dehydrogenase deficiency and another 172 (1.2%) were carriers. Breakdown of genetic analysis for glucose-6-phosphate dehydrogenase deficiency revealed the most common mutation being C563T Mediterranean mutation occurring in 115 (71%) of neonates. Furthermore, 296 (2%) newborns were found to have a variety of hemoglobinopathy spectrum with only another 13 (0.09%) newborns being positive for a hemoglobinopathy disorder.

Conclusions Glucose-6-phosphate dehydrogenase deficiency G6PD was the most commonly detected condition. However, this rate is lower than these reported in previous studies. Hemoglobinopathy carriers were the highest detected abnormality. A higher frequency of inborn errors of metabolism, hemoglobinopathies, congenital hypothyroidism, and congenital adrenal hyperplasia than worldwide figures was noted. Several factors such as higher regional consanguinity rates and a multi-ethnic population were identified as potential explanations.