

Take the Challenge - Life is for Once

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Abstract

Despite numerous programmes aimed at improving the health of woman and child, the neonatal mortality remains low. In this longitudinal study spanning about 3 years from May 2006 to April 2009, conducted in a Kolkata hospital, the neonates admitted in three years were studied in context of care provided to them. It is concluded that survival of neonates with normal and low birth weight was higher than others due to the skilled care and help of advanced medical equipment.

I shall make this planet fit for a child to live in, to the newborn, this is my pledge - Sukanta Bhattacharya.

Considering the above expression, I can state that about twenty-five year's service to the Government of West Bengal really provided me a scope to save the humankind. It has been observed that the females, especially mothers, who are physically (who have poor health), mentally (dominated by the male members of the family) and socially abused and exploited, in spite of so many programmes launched by Government of India, e.g. Family Welfare Programme (1977), Universal Immunisation Programme (1985), Reproductive & Child Health Programme 1 & II (1997 & 2005), Child Survival & Safe Motherhood Programme (1992) etc. continue to serve the mother as well as care taker of the newborn babies. Unfortunately the babies are born in the laps of poor mothers, who suffer from nutritional deficiencies throughout their life. Naturally, the newborn babies also suffer from lack of immunity. They are poorly breastfed too.

The above mentioned scenario reflects the actual position of the mother and child care in West Bengal.

We had to accept the challenge against inequities in service provision and uptake disparities in maternal health outcomes. In this context working in Dr BC Roy Memorial Hospital for Children, I undertook a project on sick, hospitalised newborn babies.

Objectives

The objectives of the current survey were to :

- Establish separate neonatal unit with proper

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warmth, clean environment and initiation of breast feeding;

- Determine the mortality rate of the neonates in the neonatal wards;
- Compare the death rates of the neonates in the neonatal wards with those of neonatal intensive care units.

Methodology

It is a longitudinal study, started from May 2006 to April 2009 (for about 3 years). Data were collected from Hospital Record Register and computer database.

In the first year in two neonatal wards (21-bedded) each proper warmth and clean environment was provided. Babies were kept in baby cots and radiant warmers. Wall mounted oxygen and vacuum suction apparatus were provided. Mothers took rest inside the wards, they were encouraged to initiate breast feeding and to keep clean. They were also taught about hand washing before touching their own babies.

In the second year (May 2007), 10-bedded neonatal intensive care unit (NICU) was opened by the Government of West Bengal. Radiant warmer beds were provided for every baby. Each of these beds were separately equipped with cardiac monitors, infusion pumps, pulse oxymeters etc. Four mechanical ventilators were available for emergencies. Round the clock medical attention was provided by several experienced medical officers. Nursing staff were allotted on a one-to-one basis for 24 hours. From May 2007 to April 2009, 150 patients were transferred to NICU from neonatal or general wards,

Table 1: West Bengal Key Indicators

Parameters	Once (%)	Three and more (%)	First Trimester (%)
Antenatal checkup	96.1	67	42.4
Post-natal checkup (after 2 weeks of delivery)		-	56.9
Children fully immunized		-	75.8
Exclusively breastfed (0 – 5 months)		-	43.7

Table 4: Frequency and percentage distribution of neonates as per age, body weight at birth, gestational age, place of birth and type of delivery, from May 2007 to April 2009

Characteristics	Range	Frequency	Percentage
Age			
	0 – 3 days	80	63
	> 3 to 7 days	20	17
	> 7 days	25	20
Body weight at birth			
	1 kg to 1.5 kg	22	18
	> 1.5 kg to 2 kg	49	37
	> 2 kg to 2.5 kg	51	43
	> 2.5 kg	3	2
Gestational age			
	Full term (32 weeks and above)	72	60
	Pre-term (less than 32 weeks)	53	40
Place of Birth			
	Home	50	11
	Hospital / BPHC	78	65
	Nursing Home	32	24
Type of delivery			
	Normal	76	55
	LUCS	49	45

Table 2: Quarterly frequency distribution of neonates admitted and died from May 2006 to April 2009

Period (Interval of 3 months)	Total Neonatal Admission	Total Deaths of Neonates	Percentage of Death
May 2006 to July 2006	490	198	39.32
Aug 2006 to Oct 2006	761	246	32.32
Nov 2006 to Jan 2007	463	220	47.51
Feb 2007 to April 2007	564	203	35.9
Total of first 12 months	2278	867	38.05
May 2007 to July 2007	701	252	35.94
Aug 2007 to Oct 2007	865	255	29.47
Nov 2007 to Jan 2008	731	229	31.32
Feb 2008 to April 2008	626	219	34.98
Total of second 12 months	2923	955	35.07
May 2008 to July 2008	769	278	36.15
Aug 2008 to Oct 2008	1088	338	31.06
Nov 2008 to Jan 2009	749	268	35.78
Feb 2009 to April 2009	747	179	23.96
Total of third 12 months	3353	1063	31.70

Fig 1: Comparison of death rate of neonates in 3 years

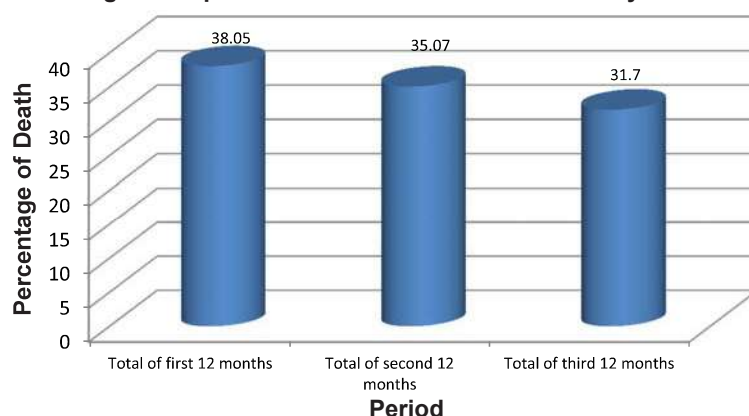


Table 3 : Data of the neonates in NICU

Period	Death rate in neonatal unit			Death rate in NICU		
	Admission	No. of deaths	%age	Admission	No. of deaths	%age
May 2007 to April 2008	2840	955	33.6	73	6	8.2
May 2008 to May 2009	3276	1064	32.4	77	5	6.5

who recovered completely with the exception of 11 critically ill babies, with very low birth weight. The babies were registered and categorised according to their age, time of admission, place of birth, gestational age, birth weight and type of delivery.

Findings

In West Bengal, infant mortality rate is 48 and neonatal mortality stands at 57 as against national figures of 37 and 39 respectively.

Table 1 shows the key infant health indicators of West Bengal. Table 2 and Fig 1, show that the

neonatal death rate gradually decreased from 2006 to 2009. The difference between the first twelve months and the second twelve months is about 3 percent and difference between second twelve months and third twelve months is above 3 percent for a period of three years from May 2006 to April 2009. Death rate of neonates decreased by more than 6 percent.

Fig 2 shows that the tendency of neonatal death rate has been downwards.

Fig 3 shows the comparison of neonatal death rate in different periods (an interval of three years) of the year. Death rate shows an upward curve twice in a year, i.e. the months of May to July and the months of November to January. Table 3 shows the data related to neonates in NICU. Frequency and percentage distribution of neonates in terms of age, body weight etc. are in Table 4.

Among 150 neonates admitted to the NICU II babies died with neonatal sepsis, hypothermia and hyperbilirubinemia.

Conclusion

Babies who come to this hospital mostly suffer from birth asphyxia and hypothermia leading to neonatal

sepsis with complications like hyperbilirubinemia, meningitis etc. A few patients (55 out of 2423) were admitted to neonatal wards between May 2007 to April 2009 with severe pneumonia and 47 out of 2423 with congenital malformation.

It can be concluded that those neonates who were admitted earlier with normal and low birth weight survived due to the care provided by the skilled health team with advanced knowledge and also with the help of advanced medical equipments.

Acknowledgements

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Reference

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2. Computerised data of census of Dr BC Roy Memorial Hospital for Children
3. Google

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