

# Cost of Hospitalization for Premature Infants in Tertiary Care Hospital-Srinagarind Hospital

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**Background and Objectives:** Recent advances in neonatal transport system and care increase survival rate of premature infants in tertiary care hospitals. Caring of sick neonates requires numerous resources. Objectives of this study were 1) to determine current cost of neonatal care and length of hospital stay (LOS), especially premature infants, in the tertiary care hospital-Srinagarind Hospital and 2) to identify factors contributing to high cost and prolonged LOS.

**Methods:** This study was retrospective descriptive study, which obtained data from medical records of infants born in Srinagarind Hospital between January 1<sup>st</sup> 2010 and December 31<sup>st</sup> 2011. The infants were classified by gestational age and birth weight for the outcomes.

**Results:** There were 4,161 (89.12%) eligible data from 4,669 live births. Four hundred twenty three (10.17%) infants were preterm and 491 (11.80%) infants had low birth weight. The mean costs of premature and low birth weight infants' care were 18.7 and 19.4 million Baht per year, which represented 72.94 and 75.63% of all neonatal care costs each year. While the mean cost of hospitalization, LOS, and mortality rate of premature infant were 88,755 Baht, 24.0 days, and 4.73%, the mean cost of hospitalization, LOS, and mortality rate of term infant were

3,704 Baht, 4.0 days, and 0.24%, respectively. The cost of neonatal care inversely increased with decreasing infants' gestational age and birth weight.

When compared with previous report of any level of hospital care in Thailand in the same year, the mean cost of hospitalization, LOS, and mortality rate of premature infants born in Srinagarind Hospital were higher. Except for extremely low birth weight (ELBW) infant, the cost and LOS were higher but mortality rate was lower. Factors contributing to high cost and prolonged hospitalization were prematurity complicated by congenital anomalies, morbidities related to extremely prematurity, and birth weight less than 1,000 grams.

**Conclusions:** Although proportion of premature infants was small, the cost of prematurity care was predominant. The cost of neonatal care inversely increased with decreasing infants' gestational age and birth weight. Some factors contributing to high cost and prolonged hospitalization in tertiary care hospital were preventable, such as extremely premature birth and morbidities related to prematurity.

**Keywords:** Cost of hospitalization, length of hospital stay (LOS), premature infants, extremely low birth weight (ELBW), tertiary care hospital