

# The Current Practice of Neonatology in Malaysia

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More than 95% of Malaysian infants are born in hospitals where the healthy majority are discharged home within 24 to 48 hours. Postnatal home visits are then carried out by the maternal and child health nurses provided that the latter are informed of the birth. In most small towns and rural areas, the newborns receive good care from maternal and child health staff who visit their homes every alternate day for the first 10 day of life. However, in big cities such as Kuala Lumpur, such home visits are often much fewer in number or none altogether. Although we have one of the best maternal and child health services among developing countries, the recent rapid and massive urban migration of our population has caused concern among doctors working in big cities and towns, where more neonatal problems are seen with the fewer postnatal home visits by health staff. Thus, despite the fact that routine screening of cord blood for glucose-6-phosphate dehydrogenase (G6PD) deficiency has been in practice for more than a decade, severe jaundice in G6PD deficient neonates requiring readmission and exchange blood transfusion is still a common problem in big towns and cities. Furthermore, although efforts have been intensified to promote breast feeding, the rate of successful breast feeding is still not high among Malaysian mothers. For the sick neonates admitted to hospitals, rooming-services are often insufficient to accommodate all the mothers to help them continue breast feeding their babies. In the big towns, the lack of family support for small nuclear families and the fewer maternal and child health visits are some of the common factors which contribute to the low success rate of breast feeding.

When neonates become very ill or are diagnosed to have conditions which require surgery and ventilatory support, they are usually transferred to the nearest hospitals which have such facilities. The transport of sick newborns are usually arranged by the referring hospitals or maternity homes. The infants are transported either in a transport incubator provided by the referring hospitals, or in the arms of the nurses or relatives following delivery at home or private maternity home. The sick infant is usually accompanied by a nurse and, sometimes, one of the most junior doctors of the referring hospital (i.e. the house officer). Under such circumstances, hypothermia and/or further deterioration of the condition of the newborn on arrival at the referral hospital are common problems encountered by the receiving doctors.

During the last decade, the increased number of paediatricians and neonatologists in the country initiated tremendous changes in the practice of neonatal intensive care services in Malaysia. These changes include the taking over of ventilatory care of sick neonates from anaesthetists in general intensive care units to the neonatal intensive care units<sup>1</sup>, the increasing widespread use of ultrasonography for cot-side diagnosis by neonatal or paediatric specialists<sup>2</sup> and recently the use of surfactant replacement therapy for respiratory distress syndrome, as is reported in this issue by Lim *et al*<sup>3</sup>. However, our neonatal mortality rates, especially those in the government hospitals, are still very high when compared with those in the developed countries<sup>4</sup>.

In many government hospitals, a common problem encountered by the neonatal doctors is the inadequate number of basic facilities for optimal care of the sick newborns. These include basic hand washing facilities to prevent infection outbreaks, infant incubators and warming facilities against hypothermia, dextrostix for monitoring of blood sugar, and facilities for monitoring hypoxia and hyperoxemia. Compared with the amount of money spent on antibiotics for treatment of hospital-acquired multi-resistant neonatal infections, the cost of prevention of infection in neonatal nurseries is relatively very cheap. The basic facilities against infection outbreaks include clean hand paper towels, antiseptics, anti-splash sinks, clean disposable suction catheters and apparatus, and disposable endotracheal tubes<sup>5-7</sup>. Although these items are supplied to the neonatal units, the problems are that either their supplies are often interrupted or the amount is insufficient to meet the demand of the large number of deliveries. Whenever supply of these basic facilities is insufficient or interrupted, outbreaks of infection occur<sup>8</sup>. This invariably demoralises the busy neonatal staff in many overcrowded, understaffed and under-equipped neonatal intensive care units. The labour rooms in most Malaysian hospitals and maternity units are air-conditioned. Such a cool environment is comfortable for the staff and mothers-in-labour. However, this is one of the common predisposing factors to hypothermia in Malaysian newborns<sup>9</sup>. The sick newborns are prone to hypothermia because of exposure during resuscitation when there is inadequate warming facilities or inadequate precaution taken against hypothermia. The routine practice of cleaning healthy babies with oil to get rid of the vernix after birth while they are still in the labour room predisposes many initially well infants to hypothermia. Furthermore, the removal of vernix from the surface of the newborn skin deprives the infants of a protective coat against skin infection during the first few days of life. Hypothermia and infection aggravates respiratory distress syndrome of many sick preterm newborns and increases their need for ventilatory support and surfactant therapy<sup>10</sup>. Ventilatory care, surfactant therapy, and antibiotic treatment against multi-resistant nosocomial infection are all very expensive modes of treatment. The cost of newborn care can be reduced and the duration of treatment in the many overcrowded and understaffed Malaysian neonatal intensive care units shortened, when increased effort is made to provide optimal basic facilities mentioned above.

Most neonatal units in the developed countries project their needs based on the annual livebirths they serve and the level of neonatal care they offer<sup>11-14</sup>. There is at present no guidelines on the basic types and number of neonatal facilities and manpower needed in the labour rooms and neonatal care units of Malaysian hospitals and maternity homes. This leads to a wide range of standard of care provided. Inadequate neonatal care increases not only neonatal mortality but also morbidity, such as infection, intraventricular haemorrhage with neurological deficits and chronic lung disease. Neurological deficits and chronic lung disease in the surviving infants place long-term physical, emotional and financial burden on the family, community and our country. In order to provide a more cost-effective neonatal service for the Malaysian population, there is, therefore, an urgent need for the Ministry of Health to lay down guidelines on the optimal types and number of neonatal facilities and staffing needed in all Malaysian hospitals and maternity homes. Many routine practice, such as bathing the infants in labour rooms, also needs to be reviewed to determine whether they are beneficial to the newborn infants. There is also a need to organise a more satisfactory service for transport of sick neonates to referral centres. Factors which hamper provision of adequate maternal and child health services postnatally in big cities need to be identified and resolved urgently.

With better understanding of the importance of good team work in perinatal care, the perinatal community in Malaysian should work closer together during the planning of new perinatal units. In common working areas such as the labour rooms, input should be obtained from all personnel involved to enable the building of better working environment and facilities for the care of the mother-in-labour, the newborn infants and the accompanying fathers. The present widespread availability of

computerisation should be utilised to develop a more reliable national system of perinatal data collection to help improve the perinatal and neonatal services in this country. The people are the most important asset of our nation. The provision of optimal perinatal and neonatal care will help ensure that the majority of the future Malaysian citizens are healthy and intelligent right from the early period of life.

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