# Guidelines on Extremely Premature Infants

Survival of extremely premature infants of 23 to 24 weeks gestation in recognized neonatal intensive care units (NICUs) in developed countries is currently approximately 50%, similar to the survival of infants 30-31 weeks gestation in the 1960s. However, survival, although easy to measure, is only one important outcome measure. Quality of survival and the extent of neurological and physical handicap are other important outcome measures, but are more difficult to define precisely and on which to reach consensus.

The outcome of extremely premature infants in units with significant experience in providing perinatal and neonatal care in industrialized is broadly consistent. Those <23 completed weeks of gestation or <500g birth weight have such poor outcome that intensive care is seldom offered. These limits represent the biological maturity of organ systems and the fact that currently NICU technology cannot support extremely premature infants below these limits. For those ≥25 weeks gestation and with birth weight ≥600g intensive care is generally initiated. The “grey zone” exists for those born with gestation 23 to <25 completed weeks and those with birth weight 500 to 599g. Different countries have somewhat differing approaches to such infants. Given that these countries generally have adequate resources to offer full NICU care to such infants and, importantly, have the resources to provide medical and social support to those children (and often later adults) with neurological and/or physical handicaps, these approaches are reasonable.

For countries with fewer resources, the current limits of viability, determined by biological maturity and the best available perinatal and neonatal resources in industrialized countries, the above limits will not apply. Middle and low income countries have vastly differing resources and the limits of viability will thus differ significantly from country to country. Even within countries available resources may differ greatly depending on factors such as income and geographical area (e.g. urban vs rural).

Thus it is not possible to define the limits of viability on a global basis and each country needs to address the issue independently. In most cases this means that parental autonomy and individual beneficence will need to be balanced against social justice with the result that the more advanced forms of neonatal care will need to be rationed. In doing so the following principles should be kept in mind:

1. Societies need to examine their available resources for perinatal and neonatal care as well as those for ongoing medical and social support for individuals with neurological and physical handicaps.
2. Active research should be carried out to determine existing short and long term outcomes of extremely premature infants in various settings to form the basis of rational decision making.
3. Any form of rationing of care should be based on broad based discussions with input from civil society.

4. The criteria for rationing of care should be known to all stakeholders, applied consistently and attempts should be made to minimize differences in the quality of care provided to neonates on the basis of economic status.
5. Perinatal and neonatal care often receives low priority in the minds of politicians and administrators responsible for allocation of resources in the health sector. Pediatricians thus need to advocate strongly for sufficient resources to be allocated to these services.

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