

CHANGING MORTALITY RATES IN INFANTS LESS THAN 1000 GRAMS AT BIRTH

Sharon Kirkby¹, Michael N Musci Jr.¹ and Alan R Spitzer^{2, 1}, Paidos Health Management Services, Paoli, PA; and ²Department of Pediatrics, The State University of New York at Stony Brook, Stony Brook, NY.

Objective: To describe the mortality rates for premature infants with birthweight < 1000 grams over a four year period.

Design/Methods: Data was collected on 1076 infants managed by Paidos from 1997 to September 2000. Included were all infants <1000 gms at birth at 60 NICUs in 19 states in the United States. Analysis included: gestational age (GA), birthweight (BW), days prior to death (dLOS) and average length of stay (LOS).

Results: There were 1076 infants < 1000 gms. The % of patients < 1000 gms did not change over the four-year period. However within this population, the % of patients < 750 gms increased each year, for an increase of 15% over the four years. Mortality rates for infants < 1000 gms did not differ but mortality rates for infants < 750 gms significantly decreased. Differences (p=0.03) between infants in BW between surviving group (mean 640 gms) vs. expired group (mean 598 gms) existed in infants < 750 grams. GA differed (p<0.01) in this subgroup for surviving infants(25.3 weeks) vs. expired infants (24.1 weeks). No differences were found in GA and BW analysis in both groups.

	1997	1998	1999	2000	p value
% pts <1000*	6.36	6.55	6.44	5.99	NS
LOS <1000	76.5	79.5	83.4	89.4	p<0.05
dLOS <1000	26.5	18.5	36.3	34.9	p<0.01
Mortality Rate <1000	15.83	20.59	19.54	16.01	NS
% pts <750#	33.09	43.05	46.91	48.05	p<0.05
Mortality rate < 750	30.43	33.54	33.33	24.39	p<0.05

*:% of total NICU population #: % of total population < 1000 grams at birth

Conclusions: Although the admission rate for infants < 1000 gms remained constant over the past four years, the number of patients born within this group < 750 gms at birth has increased. In addition, more smaller infants are surviving, or living longer prior to death. Use of new technologies, improvement in medications, nutrition and overall care are likely factors. Higher order multiple births as a result of infertility treatment and advancing primiparous age are a contributing factor to the increase. Professionals involved in the care of extremely high risk infants must be aware of prevalence and mortality trends and be vigilant in conducting long term outcome studies.