

# Survival Hits 71% for Extremely Preterm Infants

BY SHERRY BOSCHERT

SAN FRANCISCO — Survival rates for extremely preterm infants held steady from 2000 to 2002, compared with the 1990s, and neurologic outcomes may have improved in some places, preliminary data suggest.

These trends are illustrated in data on 1,478 infants with birth weights of 500-999 g born in the Case Western Reserve University system, Dr. Thomas K. Shimotake said at a conference on antepartum and intrapartum management sponsored by the University of California, San Francisco.

The likelihood of surviving to a corrected age of 20 months increased from 49% in 1982-1989 to 68% in 1990-1999, then stayed relatively flat with a non-significant increase in survival to 71% in 2000-2002 (*Pediatrics* 2005;115:997-1003).

Long-term follow-up of infants in the Case Western study suggest improved neurodevelopmental outcomes in the

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most recent years, added Dr. Shimotake, codirector of the neurointensive care nursery at the UCSF Children's Hospital.

The proportion of infants with "intact survival" (no impairments at 18- to 24-months of follow-up) increased from 12% in the 1980s to 21% in the 1990s, then dropped to 15% in 2000-2002. Rates for any neurosensory abnormality increased from 18% to 23% between the 1980s and 1990s, then decreased to 9% in 2000-2002. The proportion of infants with cerebral palsy increased from 8% in the 1980s to 13% in the 1990s, then fell to 5% in 2000-2002 (*Pediatrics* 2007;119:37-45).

"That's a pretty dramatic fall without any improvement in survival rates, which is good news for that population, but it may not be applicable to everybody. Other people have reported higher rates" of cerebral palsy, he said. The incidence of cerebral palsy in preterm infants still is much higher than the rate of 2-3/1,000 live births seen in the general population, and preterm infants are 20-30 times more likely than term infants to have cerebral palsy, he added.

Unpublished data released by the Vermont Oxford Network in 2006 showed severe disabilities in 29%-32% of extremely low-birth-weight infants at 18- to 24-month follow-up exams between 1999 and 2004, with severe disability seen in 25% of those whose follow-up exams occurred in 2005. "That's pretty close to the most recent information we have," Dr. Shimotake said. "It will be interesting to see how this plays out over the next couple of years, to see if this is consistent with findings reported at Case Western and see if there are improvements in

neurologic outcomes. Generally, people feel that there are."

At UCSF, which sees a high-risk population, "our follow-up outcomes have not been as robust," he noted. Although 60%-75% of infants born at 24-26 weeks' gestation survive, neurologic impairments affect 79% born at 24 weeks, 62% born at 25 weeks, and 60% born at 26 weeks.

Practice changes in the past 2 decades undoubtedly improved survival, Dr. Shi-

motake said. Prenatal steroid use increased from no use in the 1980s to 41% of extremely preterm infants in the 1990s to 78% in 2000-2002, and "it's probably higher than that now," he said. Use of surfactants has increased to 80%-90% of these cases. The use of assisted ventilation increased initially between the 1980s and 1990s, then decreased because of awareness of the injurious effects of aggressive resuscitation and mechanical

ventilation, he noted.

It's important to give the most up-to-date data on survival and outcomes when counseling parents of extremely preterm infants, Dr. Shimotake said. "It's nice that we can have babies survive at extremely low birth weights, but what's important is how these babies ultimately live," he said.

Dr. Shimotake said he has no conflicts of interest related to these topics. ■

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