

**PREDICTING EXCESS EDUCATIONAL COSTS FROM BIOMEDICAL AND SOCIODEMOGRAPHIC RISK FACTORS KNOWN AT BIRTH**

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**Background.** With greater numbers of very premature and sick infants surviving and exhibiting sensory and cognitive impairments, concern has mounted about the financial impact special needs children will have when they reach public school.

**Methods.** All children born in Florida between September 1, 1990 and August 31, 1991 who normally would enter kindergarten in the 1996-97 academic year were included in the study. Of 197,659 infants in the 1990-91 birth cohort, 125,430 (63.5%) were successfully matched to Department of Education school records. Outcome was first-year state education costs. Cost was derived from primary exceptionality code in students' record times its FTE weight times base allocation. An ordered probit model estimated regression of costs on 11 predictor variables.

**Results.** 3,792 (3.2%) infants in the 1990-91 birth cohort were located in kindergarten special education classes. An additional 28,005 children (23.2%) were found to have academic problems (repeated a grade, were classified as speech or language impaired, or were assigned to Chapter 1 remediation). Extremely low birth weight was associated with 71% higher costs. Males had 34% higher costs than females. Children with congenital anomalies had 29% higher costs. Mother a Medicaid recipient during pregnancy or child a participant in school's free/reduced lunch program was each associated with 16% higher costs. Children of school dropouts had 13% higher costs than children of high school graduates. No prenatal care was associated with 13% higher costs. Asian and Hispanic children cost 36% less than White children.

**Conclusions.** Eleven risk factors proved to be useful markers for predicting which infants subsequently required placement in special education classes or experienced academic problems.

**Public Health Implications.** Information about these risk factors is readily available on the birth certificate. Physicians, educators, social workers, allied health professionals, and policymakers should coordinate efforts in allocating resources to these vulnerable families.