Preventing Abusive Head Injury in Infants

Abusive head injuries in infants younger than 36 months has been reduced by 47 percent in an eight-county region of western New York State. The study, conducted through a community-based, public health intervention between 1996 and 2002, is the first prevention program to assess the impact of a regional, hospital-based, parent education program on the incidence of abusive infant head injury, also known as “shaken baby syndrome.” It targets new parents prior to discharge from the hospital, informing them of the dangers of shaken baby syndrome.

Shaken baby syndrome is one of the most severe forms of child abuse. Credited with a 13-30 percent mortality rate and significant neurologic impairments in at least one half of survivors, studies indicate that 25-50 percent of parents had not previously received information on the prevalence or dangers of “shaken baby syndrome.” In some cases of abuse, perpetrators have admitted to violently shaking an infant but confessed that they were unaware of the dangers to the child.

Sixteen regional hospitals participated in the prevention study, which combined the following components:

**Parent Education**  Nurses administered a parent education program in maternity and neonatal intensive care units at participating hospitals prior to an infant’s discharge. Nurses were asked to provide parents with a one-page leaflet, “Prevent Shaken Baby Syndrome,” to show an 11-minute video, “Portrait of Promise: Preventing Shaken Baby Syndrome,” and to ask parents to sign a statement. In addition, educational posters were displayed throughout the maternity and intensive care units in both English and Spanish.

**Commitment Statement**  Nurses offering the program asked parents to sign a commitment statement, indicating that they not only received the information, but understood it. Because studies show fathers, stepfathers, or boyfriends responsible for 58 percent of abusive head trauma incidents, nurses were encouraged to seek the signatures of fathers or father figures. Parents also were asked to provide home phone numbers and agree to a seven-month follow-up survey.
Follow-up Survey  Parents were asked to participate in a follow-up survey in an attempt to determine if the information could be recalled. The survey was conducted seven months after the child’s discharge from the unit because seven months is in the middle of the average age of abusive head trauma victims.

EVIDENCE-BASED RESULTS
Qualitative data shows that the program was highly effective in reducing the rate of abusive infant head traumas. Before the start of the program, 49 cases of abusive head injury were reported in the region—nearly 8.2 cases per year. During the study, 21 cases, representing 3.8 cases per year were reported, demonstrating a 47 percent reduction. Ninety-two percent of participating parents asserted that the information was helpful and 95 percent recommended that it be provided to all new parents.

The study was deemed effective because it reached parents during the most critical time, when interaction between parents, infants and the medical community is particularly high. The program reached 69 percent of parents of newborns in the region and is the only study with success in reaching fathers or father figures. Sixty-nine percent of parents who gave birth during the study period signed a commitment statement. Ninety-six percent of the commitment statements were signed by mothers and 76 percent were signed by fathers.

APPLYING THE PUBLIC HEALTH APPROACH TO REDUCE VIOLENCE
Community-based public health intervention programs can not only save lives, but they can save money too. This program was relatively low cost at $177,268 per year, which included salaries for nurses administering the program. This averages out to approximately $10 per infant. The economic costs of abusive head injuries are significantly more with initial inpatient hospitalization costs averaging anywhere from $18,000 to $70,000 per child, and average ongoing medical costs exceeding $300,000 per child. Moreover, many children require long-term medical services, such as physical, occupational, speech and educational therapies, and lifelong custodial care. Additional costs to society can include the prosecution and incarceration of the perpetrator.

To prevent child maltreatment globally, adequate funding from both public and private sources is critical. With funding, a body of evidence-based research will identify practical interventions and achieve meaningful progress in reducing violence.

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