LETTER TO THE EDITOR

Dear Editor:

Wissow and Wilson (1988) demonstrate that physicians who have been provided with data from the Consumer Product Safety Commission's National Electronic Injury Surveillance System (CPSC/NEISS) become less confident in histories of injury when the injury appears more severe than the history can easily explain. They stop short of concluding that the CPSC/NEISS database should be used as a reference for diagnosing inflicted injury, pointing out that "Some injuries reported by the CPSC may have been undetected intentional injuries. . . ."

Unfortunately, the CPSC/NEISS data are even more misleading than Wissow and Wilson suggest. Combined with data from energy absorption tests, they have led Sweeney (1979) to conclude that ". . .even at heights as low as 1 ft. a fall directly onto the head can prove fatal."

It is very risky to base conclusions about the injurability of infants and children on reports from emergency departments for which no detailed histories and no scene studies have been reviewed. Data relating injury events to organ and tissue damage should be based minimally on very careful and complete reviews of medical records and, ideally, on thorough scene studies such as those conducted by Snyder (1970). Studies of falls in hospitals such as those of Helfer (1977) and Nimityongskul (1987) are very useful, but provide no information about long falls. Fortunately, some information about long falls can be obtained from the work of Smith et al. (1975) and Barlow et al. (1983).

Snyder's work (1970) really sets the standard for how a database on children's injurability can be developed. His methods should be emulated until the base contains about a thousand well-studied cases spanning infancy to school-aged children.

David L. Chadwick, M.D. San Diego, CA

REFERENCES

Barlow, B., Niemirska, M., Gandhi, R. P., & Leblanc, W. (1983). Ten years of experience with falls from a height in children. *Journal of Pediatric Surgery*, 18, 509-511.

Helfer, R. E., Slovis, T. L., & Black, M. (1977). Injuries resulting when small children fall out of bed. *Pediatrics*, **60**, 533-535.

Nimityongskul, P., & Anderson, L. D. (1987). The likelihood of injuries when children fall out of bed. *Journal of Pediatric Orthopedics*, 7, 184-186.

Smith, M. D., Burrington, J. D., & Woolf, A. D. (1975). Injuries in children sustained in free falls: An analysis of 66 cases. The Journal of Trauma, 15, 987-991.

Snyder, R. (1970). Impact injury tolerances of infants and children in free fall. *Proceedings of the American Association of Automotive Medicine*. Minneapolis: University of Minnesota.

Sweeney, T. B. (1979). X-rated playgrounds? (Commentary). Pediatrics, 64, 961.

Wissow, L. S., & Wilson, M. H. (1988). The use of consumer injury registry data to evaluate physical abuse. Child Abuse & Neglect, 12, 25-31.

Response to Dr. Chadwick:

We could not agree more with Dr. Chadwick's concern for the overinterpretation of emergency department reports of trauma mechanisms and injury patterns. These reports are undoubtedly contaminated with undisclosed cases of intentional injury, as suggested by the observation that many children who are found to have been abused have frequently been seen previously for other injuries. Even if this

were not the case, one could also question the accuracy with which details of the trauma mechanism or injury are recorded. For example, in the series of in-hospital falls reported by Nimityongskul and Anderson (1987), one could have a greater-than-appropriate degree of confidence in the incidence of skull fracture (1 of 76 children) from looking only at the outcome data. Only 7 of the 76 children had skull films taken, and thus some small number of simple fractures may have gone undetected (Leonidas et al., 1982).

We still believe, however, that these admittedly imperfect data sets have some clinical utility, so long as their limitations are recognized. If an injury matches what would be expected from the data set, no useful information is gained. If the injury does not match, however, one has information that may reasonably contribute to a suspicion that the trauma causing the injury has not been accurately reported. As with other health technologies, of course, there is a risk that the data will be misused. Preliminary results from further work with case vignettes and NEISS data (Wissow & Wilson, 1989) suggest that physicians with differing backgrounds use the data in different ways. The data appear to have their greatest impact with physicians who work in non-acute settings and who are normally not highly suspicious of maltreatment. When evaluating a potentially suspicious case, these physicians appear to give the data equal or greater weight than psychosocial findings that may be indicators of abuse risk. In contrast, the data had little impact on physicians who work in acute care settings, apparently because these physicians already had a high degree of suspicion. Using a different case history involving a trauma mechanism that would seem plausible given NEISS data, neither group of physicians used the data to inappropriately reduce their concern. These findings support Dr. Chadwick's call for study of the biomechanics of childhood injuries; they add the concern that as new knowledge is developed that considerable attention be given to training clinicians in its interpretation and use.

> L. S. Wissow, MD, MPH M.H. Wilson, MD, MPH Baltimore, MD

REFERENCES

Leonidas, J. C., Ting, W., Binkiewicz, A., Vaz, R., Scott, M. R., & Pauker, S. G. (1982). Mild head trauma in children: When is a roentgenogram necessary. *Pediatrics*, **69**, 139-143.

Nimityongskul, P., & Anderson, L. D. (1987). The likelihood of injuries when children fall out of bed. *Journal of Pediatric Orthopedics*, 7, 184-186.

Wissow, L. S., & Wilson, M. H. (1989). *Injury pattern data to help discriminate between intentional and non-intentional injury*. Paper accepted for the First World Conference on Accident and Injury Prevention, Stockholm, September 1989.

ERRATUM

CORRECTION NOTICE for Gale, J., Thompson, R. J., Moran, T., & Sack, W. H. (1988). Sexual abuse in young children: Its clinical presentation and characteristic patterns. *Child Abuse & Neglect*, 12, 163–170. In Table 2 the superscript "a" should apply to the noncompliance item rather than the withdrawal item. The statistical parameters noted in the text pertaining to this point are incorrect and those noted in the table are correct. The authors regret confusion this error may have caused.