

Medicine

—Bruce D. Perry

continued from page 17

anxiety, arousal/concentration, impulse control, sleep, startle, autonomic nervous system regulation, memory, and cognition. Clearly the physical signs and symptoms seen in traumatized children include dysfunction and dysregulation in these domains. Indeed, the core symptoms seen in severely traumatized children may be traced back to dysregulation of these root neurophysiological regulatory functions.

Clinical implications

The human brain and all of the functions that this amazing organ mediate develop as a reflection of developmental experiences. This mirroring quality of the developing human brain has evolved as an extension of the primary mandate of the brain to perceive, process, and act on information from the environment in order to maximize survival potential. If the child is raised in an unpredictable, chaotic, violent environment, it is highly adaptive to have a hypervigilant, hyper-reactive arousal system; if primary relationships are characterized by violence, neglect and unreliability, intimacy becomes maladaptive; if a young child is frequently assaulted, it becomes adaptive to overinterpret non-verbal cues, to quickly act on impulses, and to strike out before being struck. The symptoms of hypervigilance, cognitive distortion, physiological and behavioral hyper-reactivity, intimacy avoidance and dissociation commonly seen in traumatized children were all, at some time in the lives of these children, necessary, adaptive and appropriate responses to traumatic stress.

The same remarkable qualities of the developing brain which allow the growing child to internal-

ize and rapidly learn about the world ultimately betray the traumatized child. Their brains develop as if the entire world is chaotic, unpredictable, violent, frightening and devoid of nurturance—and unfortunately, the systems that our society has developed to help these children (the juvenile justice, foster care and mental health systems) often continue to fill their lives with neglect, unpredictability, fear, chaos and, most disturbing, more violence. Neurodevelopmental principles and the basic neurophysiology of the stress response would predict that the primary, baseline neurophysiological state of the traumatized child is a persisting state of alarm, most similar to a state of fear. Much more research in the basic neurobiology of development and the neurophysiology of traumatized children is required. Only then can the relationships between neurodevelopment and trauma-related neuropsychiatric problems be understood well enough to guide innovative therapeutic approaches and initiate social policy changes to bring an end to the war on children.

Due to space limitations, complete references for this series will be published with the second article in the next issue of The Advisor, V.6, n. 2, 1993. To receive a copy of references for this article immediately, write or call APSAC, 332 S. Michigan Ave., Suite 1600, Chicago, IL 60604. Phone: 312-554-0166.

Bruce Perry, MD, PhD, is Associate Professor in the Laboratory of Developmental Neurosciences in the Departments of Psychiatry, Pediatrics, and Pharmacology at Baylor College of Medicine in Houston, Texas.

NEW RESOURCE Development of a Database for Child Protection Teams

—by Marcia Herman-Giddens

The Child Protection Team (CPT) at Duke University Medical Center is a multidisciplinary group that evaluates children from Durham and surrounding areas of North Carolina referred for concerns of abuse or neglect. Since its establishment in 1978, the Team has evaluated almost 5,000 children. The Team is also responsible for teaching physicians, nurses, pediatric residents, physician assistants, and medical students about child abuse and neglect as well as conducting training sessions around the state for other professionals. Research has always been a component of the Team's work.

As our program grew, we began to seek a database that would suit our needs for reporting and research. After talking with colleagues we were not able to identify an existing database that met our purposes. Since we did not have the funds to have the software written by a firm, we submitted our proposal to a software development competition and were fortunate to be chosen.

The system that was developed met our requirements. It is a user-friendly database that records patient demographics, including the protection of confidentiality, the ability to link children with their mothers when the last names were different, and a safeguard against entering duplicate history numbers. It tracks the referral source, with easy access to numbers and sources of referrals along with their addresses. The outcome of each evaluation is recorded, including the diagnosis, final determination

of the case, hospital admissions and mortality. We also record necessary follow-ups, and referrals to social service or police agencies. A record of whether or not physical findings were present is also important to us given our ultimate goal of developing a more detailed database of physical and sexual abuse for research and epidemiological purposes. Finally, we are able to transfer data to other databases or to ASCII in order to generate graphics for our reports.

We now use this flexible program for generating the data requirements detailed above as well as for creating weekly listings for meetings and review.

We think other child protection teams might benefit from this database. Droege Computing Services, Inc., has made the database available as Shareware, which gives users a chance to try software before buying it. Systems requirements are as follow:

- IBM compatible (AT, 80286, or later CPU recommended)
- Hard disk
- MS-DOS 3.1 or later
- 640K or more RAM
- LAN compatibility

Readers who are interested in more information may write Droege Computing Services, 1816 Front Street, Suite 130, Durham, NC 27705. For \$5.00, Droege will send a floppy diskette and a description of the program for trial.

Marcia Herman-Giddens, PA, MPh, is an Assistant Clinical Professor in the Department of Pediatrics at Duke University Medical Center.