

## Faxnotes

Feb. 27, 2006

### MEDICAL UPDATE

#### *Automated External Defibrillators (AEDs) in a pediatric emergency*

Although most sudden cardiac events in children are secondary to respiratory failure, 19%-24% are caused by ventricular fibrillation (VF). VF is the arrest arrhythmia most commonly associated with improved survival rate in studies of children. Recent data supports children presenting with VF have better survival rates and good neurological outcome versus those who present with asystole/pulseless electrical activity. Studies have shown that the earlier defibrillation occurs in a person with a sudden cardiac arrest, the better the survival outcome. For every one minute delay in defibrillation, the survival rate may decrease by 7% to 10%. Early intervention with an AED may increase the survival rate for sudden cardiac arrest from 5% up to 40%.

An AED is a small, portable device that can analyze a rhythm and deliver an electric shock to the heart restoring it to a normal rhythm. This device has safeguards and is designed to deliver a shock only if the AED detects that one is necessary. Once turned on, the AED guides the user through the steps of defibrillation by providing voice and/or visual prompts. AEDs are commonly placed in public places and are used most commonly by flight attendants, policemen, firefighters, EMTs, lifeguards, health club employees, teachers and coaches.

#### Cardiology

In 2001, the FDA officially approved the first AED to be used on pediatric patients younger than 8 years of age as well as adults. Currently, the FDA has not approved use of AEDs in children younger than 1 year of age. Pediatric pads are clearly marked, smaller than adult pads, and deliver reduced energy via an "attenuator." Because there is insufficient evidence to determine the best placement of AED pads, an international consensus on preferred pad placement has not been reached. The AED manufacturers provide illustrations for recommended placement of the pads. AEDs should be placed only on patients who are unconscious, pulseless, and who have no spontaneous breathing. Once the pads are applied, the computer algorithm determines whether the rhythm is shockable or non-shockable. If the patient does not meet the criteria for electrical therapy, the unit will not discharge.

Defibrillation is the only definitive treatment for sudden cardiac arrest. The AED eliminates the need to recognize rhythms, may reduce time from collapse to defibrillation and provide access to more treatable rhythms. Since the availability of the AED has become more prominent in the pre-hospital setting, early defibrillation is more practical and achievable.

For more information, contact Juan Juarez, M.D., at 214-456-6586 or [juan.juarez@childrens.com](mailto:juan.juarez@childrens.com).

### CONTINUING EDUCATION

#### *2006 Haltalin Conference*

The 38th annual Kenneth C. Haltalin Pediatric Seminar, "Pediatrics for the Practitioner," will be held March 31-April 1 at the Hilton Dallas Lincoln Centre. CME credits are offered, and topics include an update on new antibiotics, Type II diabetes, pediatric eye problems, fever of unknown origin, MRSA infections, failure to thrive, what's new in allergy treatment, congenital and acquired defects, uncomplicated UTIs and an ethics lecture. The course director is Thomas M. Zellers, M.D., Chief Medical Officer, Children's; Professor, Department of Pediatrics, UT Southwestern. To register or for more information, contact the UT Southwestern Office of Continuing Education at 214-648-3138 or email [cmeregistrations@utsouthwestern.edu](mailto:cmeregistrations@utsouthwestern.edu).

### PEDIATRIC GRAND ROUNDS

Wednesdays at 8 a.m. in the Children's auditorium. For CME information, contact the UT Southwestern office of continuing medical education at 214-648-3705.

- **March 1** - *"Advocating for Children: Making It Happen On a National Level,"* Carol Berkowitz, M.D., Executive Vice-Chair, Department of Pediatrics; Acting Chief, General and Emergency Pediatrics, Los Angeles County Harbor - UCLA Medical Center.
- **March 8** - *"CPC: An Infant with Decreasing Movement After Birth,"* Susan T. Iannaccone, M.D., Jimmy Elizabeth Westcott Distinguished Chair in Pediatric Neurology; Professor of

*Neurology and Pediatrics, UT Southwestern; Director of Child Neurology, Children's;  
Director of Neuromuscular Disease and Neurorehabilitation, Scottish Rite; Sarah Johnson-  
Welch, M.D., Assistant Professor of Pathology, Children's.*

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