**COGNITIVE REQUIREMENTS FOR AUTOMATIC EXTERNAL DEFIBRILLATOR USE: ARE WE STARTING TOO YOUNG?**

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*Background*: Patient survival after experiencing out of hospital arrest is influenced by time to CPR/defibrillation. States ARE mandating CPR /automatic external defibrillators (AED) training. The purpose is to assess pediatric patients’ cognitive ability to appropriately perform CPR and utilize an AED on a human during cardiac arrest.

*Methods*: A search for data regarding pediatric use (<18 years) of AED’s and cognitive ability to perform similar emergent tasks was performed. Data were assimilated and discussed by pediatric electrophysiologist and psychologist. Comparisons were made between emergent duties (exit row seating on plane) and AED use with regard to cognitive and societal beliefs as to when children are prepared to perform these tasks.

*Results*: The psychological impact of performing CPR and appropriate use of an AED requires high levels of cognitive processing. The three cognitive decisions that a child must have to perform these tasks on a human being are: recognizing cardiac arrest, training in CPR and AED and appropriately performing CPR and utilize the AED. Studies of executive function of the developing brain reveal that younger cohorts (7-12) have single factor modeling (1 task) while older cohorts(13-15 years) have fully developed three factor model (3 tasks) consistent with higher level of executive function development. *Conclusion*: The cognitive requirements necessary to appropriately perform CPR and utilize an AED on a human being includes the executive function of the brain to perform well in a three factor model, (recognize cardiac arrest, be trained in and appropriately use both CPR and AED). The group recommends that prior to teaching this necessary skill that one must be cognizant of the child’s cognitive developmental status and should wait until the child is approximately 13 years of age.