TITLE: Automated External Defibrillation in Pediatrics: Clinical-Effectiveness and Guidelines

DATE: 22 June 2009

RESEARCH QUESTIONS:

1. What are the benefits and harms associated with pediatric defibrillation using an automated external defibrillator?

2. What are the guidelines associated with pediatric defibrillation?

METHODS:

A limited literature search was conducted on key health technology assessment resources, including PubMed, the Cochrane Library (Issue 2, 2009), University of York Centre for Reviews and Dissemination (CRD) databases, ECRI, EuroScan, international health technology agencies, and a focused Internet search. The search was limited to English language articles published between 2004 and June 2009. Filters were applied to limit the retrieval health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, controlled clinical trials, and guidelines. Internet links were provided, where available.

RESULTS:

HTIS reports are organized so that the higher quality evidence is presented first. Therefore, health technology assessment reports, systematic reviews, and meta-analyses are presented first. These are followed by randomized controlled trials, controlled clinical trials, and evidence-based guidelines.

Four evidence-based guidelines were identified pertaining to the use of automated external defibrillation in pediatric patients. No relevant health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, or controlled clinical trials were identified. Additional information that may be of interest, including consensus statements and observational studies, has been included in the appendix.

Disclaimer: The Health Technology Inquiry Service (HTIS) is an information service for those involved in planning and providing health care in Canada. HTIS responses are based on a limited literature search and are not comprehensive, systematic reviews. The intent is to provide a list of sources of the best evidence on the topic that CADTH could identify using all reasonable efforts within the time allowed. HTIS responses should be considered along with other types of information and health care considerations. The information included in this response is not intended to replace professional medical advice, nor should it be construed as a recommendation for or against the use of a particular health technology. Readers are also cautioned that a lack of good quality evidence does not necessarily mean a lack of effectiveness particularly in the case of new and emerging health technologies, for which little information can be found, but which may in future prove to be effective. While CADTH has taken care in the preparation of the report to ensure that its contents are accurate, complete and up to date, CADTH does not make any guarantee to that effect. CADTH is not liable for any loss or damages resulting from use of the information in the report.

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Health technology assessments
No literature identified.

Systematic reviews and meta-analyses
No literature identified.

Randomized controlled trials
No literature identified.

Controlled clinical trials
No literature identified.

Guidelines and recommendations

   takeholderwebsite/guidelines/child_advanced_life_support_als_2006.pdf (accessed 2009 June 17)
   See pg 2: Shockable (VF/Pulseless V) and pg 4: Key Points

   See pg 157: Activate the EMS System and Get the AED

   See pg 172: Pulseless Arrest

   See pg 25: Children

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APPENDIX – FURTHER INFORMATION:

Consensus statements and position papers


Observational studies


Reviews