Diagnosis and management of severe sepsis in the paediatric patient

Catherine A. Farrell

Canadian Paediatric Society, Acute Care Committee, Ottawa, Ontario

Correspondence: Canadian Paediatric Society, 100–2305 St Laurent Blvd, Ottawa, Ontario K1G 4J8. E-mail info@cps.ca, website www.cps.ca

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Sepsis is a systemic inflammatory response to suspected or proven infection. Given its importance in terms of morbidity and mortality, a number of initiatives by several professional societies in recent years have led to the development of guidelines for the recognition and timely management of sepsis. The principal elements of the most recent guidelines are summarized in this practice point. These elements include recognition of changes in clinical condition and vital signs, such as fever, tachycardia, and changes in peripheral perfusion, which should raise concern for sepsis; initial stabilization of airway, breathing, and circulation; timely administration of empiric antimicrobial therapy; use of fluid boluses and vasoactive medications; and specific considerations in patients with underlying medical conditions, such as the use of corticosteroids for possible adrenal insufficiency due to hypothalamic-adrenal suppression. Two changes from previous guidelines are the concern for fluid overload, implying the need for clinical re-assessment after administration of each fluid bolus, and the removal of dopamine as the initial vasoactive agent for use in hypotensive paediatric patients, with recommendations for the use of epinephrine or norepinephrine as dictated by the clinical context. This practice point focuses primarily on sepsis management in older infants, children, and youth.

Keywords: Guidelines; Paediatrics; Sepsis; Vasoactive medications; Volume resuscitation

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