

Title	Notice Regarding Field Trauma Criteria
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Aim

A number of studies have demonstrated the effectiveness of Québec's Trauma Care Continuum (TCC) in reducing mortality. The most severely injured individuals are identified by means of two indicators: the prehospital index (PHI) and high-velocity impact (HVI). This notice compares the effectiveness of the PHI and HVI with that of the other proposed indicators and with the CDC-ACSCOT protocol suggested by the Center for Disease Control (CDC) and the American College of Surgeons' Committee on Trauma (ACSCOT).

Methods

A literature review identified 45 articles that deal with measuring the sensitivity and specificity of 14 severity indicators used by ambulance technicians. These articles provide 94 opportunities for measuring indicators effectiveness, since a number of the articles evaluate more than one indicator. Each indicator was evaluated in terms of the attainment of four targets: a positive likelihood ratio greater than 5, a negative likelihood ratio less than 0.2, an undertriage rate less than 5%, and a maximum overtriage rate of 25%.

Conclusions and results

After the studies were compiled, it was seen that only 2 of the 94 evaluation opportunities meet the four targets and that four others meet three of them. On the whole, the PHI emerges as one of the most effective indicators. Physiological indicators, such as the PHI, are generally specific but are not very sensitive, which explains why they are used in conjunction with an indicator for the mechanism of injury, such as HVI. The approach involving the CDC-ACSCOT protocol incorporates several components of the different indicators that were evaluated, and despite its complexity, this protocol is currently the one most widely used and is endorsed by the professional organizations most active in the treatment of the injured. Based on the studies that have evaluated the effectiveness of this protocol, it seems to be superior to the combined use of the PHI and HVI. Overall, undertriage and overtriage data are generally very disappointing, and the proposed targets seem unattainable. Lastly, INESSS makes 16 recommendations in this notice ranging from replacing the PHI and HVI in the CDC-ACSCOT

protocol to instituting a process of adapting this protocol to the Québec context and regional differences, to monitoring access to care and protocol compliance.

Written by

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