

## Measuring Overcrowding in Emergency Departments: A Call for Standardization

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### Issues and Methods

Although there is a growing concern about ED overcrowding, there is currently no consistent standard for measuring this phenomenon. It is also unclear what measures are important to Canadian administrators, ED providers, and researchers. A systematic review of published literature and a modified Delphi study (a consensus method) with 38 Canadian ED experts were conducted to examine these areas.

### Implications for Decision Making

- **The percentage of the ED occupied by in-patients is perceived to be the most important measure of ED overcrowding.** This refers to the percentage of patients in the ED who have been admitted, but have not been transferred to a hospital ward because of a lack of bed availability. The use of consistent measures such as this may help with intra- and inter-institutional benchmarking, as well as in designing and implementing interventions to reduce overcrowding in Canadian EDs.
- **Other important measures are perceived to be total ED patients, total time in the ED, percentage of time that ED is at or above capacity, and overall bed occupancy.** The factors that are most important in academic, urban EDs may not be identical to those in suburban EDs.

The importance of some measures may vary according to local criteria, and even change over time. For instance, the extent of ambulance diversion may be a useful measure in a large, inner-city institution, but of no value to a regional hospital that is the only choice for ambulance personnel.

- **The least important measure is perceived to relate to staffing.** The number of ED nurses, attending emergency physicians, and staffed acute-care beds were not considered to be important measures of ED overcrowding.
- **The consensus opinion regarding the most important measures for reporting ED overcrowding did not always corroborate with the results of the systematic review.** From 169 studies examined in the systematic review, few of the measures for reporting ED overcrowding identified by the experts were found.
- **Consideration should be given to identifying the most meaningful and consistent measures.** This would ensure that data collected could be used to support decision-making about the seriousness of overcrowding and the development of standardized approaches to addressing the problem.

This summary is based on a comprehensive health technology assessment available from CADTH's web site ([www.cadth.ca](http://www.cadth.ca)): Ospina MB, Bond K, Schull M, Innes G, Blitz S, Friesen C, Rowe BH. *Measuring overcrowding in emergency departments: A call for standardization.*