



**Title** **Portable Ultrasonography in Small Emergency Departments: A Systematic Review of the Guidelines and Clinical-Effectiveness**

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## **Aim**

To assess the clinical effectiveness of portable ultrasound (US) used in smaller emergency departments (EDs) and to determine guidelines for the use of portable US (including training requirements) in smaller EDs.

the data were extracted to a standardized form for all primary studies identified.

## **Conclusions and results**

US is an effective tool for guiding procedures (eg, central venous catheterization) in small EDs. Indirect evidence from research conducted in large urban hospital EDs shows that US performed by emergency physicians (EPs) to answer focused questions that guide the clinical management of ED patients is a valuable tool for diagnosing trauma, deep vein thrombosis (DVT), ectopic pregnancy, and abdominal pain. Diagnostic estimates obtained when EPs perform the US are comparable to those obtained by a radiologist. The general consensus is that US should be performed by EPs who are adequately trained. Training consists of courses followed by supervised, hands-on experience, and many groups offer US training programs for non-radiologists. In small community EDs, where the prevalence or clinical probability of disease is low, continuing education, training, and re-training with US is critical.

## **Recommendations**

Not applicable.

## **Methods**

Search strategies were developed, and a comprehensive literature search was conducted using the OVID search system. Parallel searches were developed for the Cochrane Library and MEDLINE In-Process and Other Non-Indexed Citations. Results include articles published between 2004 and November 2008, and were limited to English language publications. In addition, websites of regulatory bodies and HTA and related agencies were searched, as were specialized databases at the University of York Centre for Reviews and Dissemination. Two reviewers independently screened articles for relevancy based on predefined criteria, and