# McKesson Clinical Evidence Classification

References cited in the clinical content are classified according to the type of evidence presented. Classification ratings of I through V are used. Ratings are applied as clinical content is updated; therefore, a rating may not appear after each reference. Classification ratings appear in parentheses at the end of a reference.

<table>
<thead>
<tr>
<th>Classification</th>
<th>Type of Evidence</th>
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<tbody>
<tr>
<td>Class I</td>
<td>Meta-analysis or systematic review</td>
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<tr>
<td>Class II</td>
<td>Well-designed controlled clinical trial or experimental study</td>
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<tr>
<td>Class III</td>
<td>Well-designed observational or epidemiologic study</td>
</tr>
<tr>
<td>Class IV</td>
<td>Evidence-based guideline</td>
</tr>
<tr>
<td>Class V</td>
<td>Expert opinion, panel consensus, literature review, text or reference book, descriptive study, case report, or case series</td>
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**Class I**

A meta-analysis is an analysis of data pooled from multiple trials. A systematic review is a qualitative means of summarizing multiple trials on the same intervention. Class I studies can show a statistically significant difference in support of an intervention when smaller studies could not. A meta-analysis or systematic review that finds insufficient evidence to support or refute an intervention (due to a lack of properly designed trials) is inconclusive. A potential weakness of Class I studies is that they may only assess published studies. Since studies demonstrating significant differences are more likely to be published than those that do not, publication bias is of concern.

**Class II**

A randomized controlled trial (RCT) is an experimental study design in which subjects are randomly assigned to an intervention or a control group. A RCT is the gold standard for testing cause and effect relationships. Intention-to-treat analysis should be performed to account for missing data points.

**Class III**

Observational or epidemiologic studies can suggest an association between events or findings. These associations cannot be used to establish causality. Cross-sectional, cohort, and case-control studies are all used to identify possible risk factors. Cross-sectional studies are also used to determine the prevalence of a condition. Cohort studies are used to study incidence, the natural history of a condition, prognosis after a specific exposure, and associated harms.

**Class IV**

Evidence-based guidelines are systematically developed recommendations for clinical practice. Evidence-based guidelines identify the methodology used to gather the evidence on which the recommendations are based. Usually, a grading system for both the quality of the evidence and the strength of the recommendations is provided. Guidelines that are evidence-based may also contain consensus recommendations in areas where evidence is lacking, but these recommendations are clearly identified and appropriately graded.

**Class V**

Class V references may be the best information in the absence of other evidence. Expert opinion, panel consensus, literature reviews, and descriptive studies (case reports or case series) are subject to significant bias. A case series with comparison to historical controls can be plagued with missing data, and data extraction inconsistencies are common. The use of historical controls does not address how the diagnosis of disease or its treatment has evolved over time with newer technologies or medication. Text book information may be out of date by the time the book is published.


American Academy of Pediatrics (AAP), Subcommittee on Diagnosis and Management of Bronchiolitis. Diagnosis and management of bronchiolitis. Pediatrics 2006. 118(4):1774-1793. (IV)


Carroll P., Mobile chest drainage: coming soon to a home near you. Home Healthc Nurse 2002; 20(7):434-441. (V)


Commission on Accreditation of Rehabilitation Facilities. 2006 Standards Manual and Interpretive Guidelines for Medical Rehabilitation, Tucson, Arizona, c2006. (V)


Deal et al. Arrhythmic complications associated with the treatment of patients with congenital cardiac disease: consensus definitions from the Multi-Societal Database Committee for Pediatric and Congenital Heart Disease. Cardiol Young 2008. 18 Suppl 2:202-205. (V)


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Doughty. Dorothy. Management of Recalcitrant Wounds. Advance for Nurses 2003; 3(9);18-20. (V)


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<tr>
<th>Author(s)</th>
<th>Title</th>
<th>Journal/Book Details</th>
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<tbody>
<tr>
<td>Greenwald and Jack</td>
<td>Preventing the preventable: reducing rehospitalizations through coordinated, patient-centered discharge processes</td>
<td>Prof Case Manag 2009. 14(3):135-140; quiz 141-132. (III)</td>
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<tr>
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<td>Ambulatory obstetrics</td>
<td>Philadelphia: Lippincott Williams &amp; Wilkins; 2002. (V)</td>
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<td>Nurs Stand 2004. 19(5):43-51; quiz 53. (V)</td>
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<td>Infantile apnea and home monitoring</td>
<td>Natl Inst Health Consens Dev Conf Consens Statement 1986.</td>
<td>6(6):1-10. (V)</td>
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<tr>
<td>Ingenix</td>
<td>Complete guide to medicare coverage issues</td>
<td>Reston, VA: Ingenix; 2005. (V)</td>
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<tr>
<td>Ismailov et al.</td>
<td>Trauma associated with cardiac dysrhythmias: results from a large matched case-control study</td>
<td>J Trauma 2007. 62(5):1186-1191. (III)</td>
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Kane, Molly L., MD, MPH. "Pediatric Failure to Thrive." Clinics in Family Practice, 2003, 5(2).


MacIntyre et al. Evidence-based guidelines for weaning and discontinuing ventilatory support: a collective task force facilitated by the American College of Chest Physicians; the American Association for Respiratory Care; and the American College of Critical Care Medicine. Chest 2001. 120(6 Suppl):375S-395S. (IV)


Mukherjee. Improving adherence to medications—can we make this horse drink? Am Heart J 2008. 155(4):589-590. (V)


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United States Nuclear Regulatory Commission. Release of individuals containing unsealed byproduct material or implants containing byproduct material. NRC Regulations Title 10, Code of Federal Regulations, section 35.75. Rockville: Goverment Printing Office; 2005. (V)
