

# AARC Clinical Practice Guidelines: From “Reference-Based” to “Evidence-Based”

*Clinical guidelines are only as good as the evidence  
and judgments they are based on.<sup>1</sup>*

The American Association for Respiratory Care (AARC) Clinical Practice Guidelines (CPGs) have been a resource widely utilized around the world to help determine the best standards in respiratory care. After all, over 50 CPGs have been published in *RESPIRATORY CARE* since 1991. While a considerable amount of effort has been given in the past by members of the CPG steering committee to assure that these guidelines reflect the best practices by updating appropriate content and references, most AARC CPGs are “reference-based,” not “evidence-based.”<sup>2</sup>

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SEE THE AARC CPGs ON PAGES 758 AND 765

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During the last 2 decades, “evidence-based” has become the driving force behind most published CPGs. The process of screening, selection, and validation of the literature that provides the best quality of evidence to support respiratory care is difficult and time-consuming. Many of our practices have been based on the body of knowledge gained from uncontrolled clinical observations or “expert panels,” and considerably less from consistent randomized controlled trials. Currently on our Web site (<http://www.rcjournal.com>) are 48 CPGs that are considered expert panel guidelines, 5 CPGs have been combined or retired, and 14 are CPGs from other organizations, such as the American Heart Association, the American College of Chest Physicians, the Society of Critical Care Medicine, the American Thoracic Society, and the European Respiratory Society. The only 2 AARC evidence-based CPGs were published 7 years ago.

The AARC CPGs steering committee has initiated a new process by which the “reference-based” guidelines will be revised and updated by adopting a modification of the Grading of Recommendations Assessment, Development, and Evaluation (GRADE)<sup>1,3-5</sup> scoring system (Table 1). The 2 guidelines published in this issue of *RESPIRATORY CARE* are the product of this process.<sup>3,4</sup> Although it is clear that most treatments and interventions in respiratory care are rarely graded A, it is our responsi-

Table 1. Strength of the Recommendation and Grade of Quality of the Evidence

Strength of the Recommendation		
Level	Strength	Description
1	Stronger	Benefits clearly outweigh the risks and burdens (or vice versa) for nearly all patients.
2	Weaker	Risks and benefits are more closely balanced or are more uncertain
Quality of the Evidence		
Grade	Quality	Description
A	High	Well-performed randomized controlled trials or overwhelming evidence of some other sort. Further research is very unlikely to change our confidence in the estimate of the effect.
B	Moderate	Randomized controlled trials that are less consistent, have flaws, or are indirect in some way to the issue being graded, or very strong evidence of some other sort. Further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate.
C	Low	Observational evidence (from observational studies, case series, or clinical experience), or evidence from controlled trials with serious flaws. Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate.
D	Very Low	Any estimate of effect is very uncertain.

(Adapted from Reference 5.)

bility to make recommendations based on the best evidence available at the time the CPG is updated. The words “recommended” and “suggested” are used to reflect the strength of the recommendation, as level 1 and level 2, respectively. Although grading evidence is complex, the committee has set the goal of recommending what you, the clinician, should do. While the format for most traditional sections of the CPGs remains unchanged, each newly revised CPG includes recommendations with graded evidence. This is the latest in our efforts to improve the value of the AARC CPGs.

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**CORRECTIONS**

In the paper “Performance comparison of 4 portable oxygen concentrators” by Chatburn RL and Williams TJ (Respir Care 2010;55[4]:433–442), the authors incorrectly state on page 440: “Figure 5 shows that the EverGo and the FreeStyle are constant-oxygen-minute-volume POCs, and the Inogen One and XPO<sub>2</sub> are constant-pulse-volume POCs.” The statement should read: “Figure 5 shows that the EverGo and the FreeStyle are **constant-pulse-volume POCs**, and the Inogen One and the XPO<sub>2</sub> are **constant-oxygen-minute-volume POCs**.”

Also, on page 437, in the bottom right panel of Figure 5, the y-axis (ordinate) label for Figure 5 is incorrect. The label should be: “Minute Volume (mL/min)” instead of “Pulse Volume (mL).”

In the paper “Competencies needed by graduate respiratory therapists in 2015 and beyond” by Barnes TA, Gale DD, Kacmarek RM, and Kageler WV (Respir Care 2010;55[5]:601–616), the Association of Asthma Educators was incorrectly listed (page 612, Table 14) as the certification board for Asthma Educator (Certified) (AE-C). The certification board for AE-C is the National Asthma Educator Certification Board (NAECB).

We regret these errors.

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