Title: THE ASA PHYSICAL STATUS CLASSIFICATION: A REVISION

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Introduction. In 1940 the American Society of Anesthetists, later to become the American Society of Anesthesiologists, formed a committee to standardize and define a classification of "operative risk" which would aid in the "collection and tabulation of statistical data in anesthesia." With wisdom and foresight this committee discarded its attempt to classify patients by risk, and proposed a system of taxonomy based on preoperative physical state only. This classification system was to be a common language among all anesthesiologists. Essential to such a grading system was consistency. Six physical state (PS) classes, later changed to 7, were proposed. In 1961, independent of the ASA and published in a journal of surgery, Dripps modified this 7 category PS system into 5 categories. Thus, the current ASA PS classification system (PS CS) is virtually the same system of taxonomy described more than 40 years ago. In 1978, Owens studied the standardization and consistency of this ASA PS CS. He mailed 10 hypothetical case histories to more than 300 Board Certified Anesthesiologists. The respondents' PS gradings of these patients revealed a certain consistency: most anesthesiologists agreed on the ASA PS CS for the majority of case histories. There are, however, areas of controversy and disagreement and, therefore, variations of ratings, usually involving classical class 3 or 4 patients. This present study is an investigation of a proposal that class 3 be divided into subsets a and b.

Methods. Fifty residents in anesthesia were given a questionnaire containing the definitions of the present ASA PS CS and our modified classification with the exact case histories of the 10 Owens hypothetical patients. The current ASA PS CS class 3 referred to the patient as incapacitating. Our suggested modified class 3a refers to a patient with well compensated severe disease which is not incapacitating. Class 3b differs from 3a in that this similar patient has decompensated severe disease with greatly limited activity. In order to measure consistency, the most popular PS CS among the respondents for each patient description was determined using first the present ASA PS CS and then the modified system. Each resident was scored for both classification systems according to his (her) agreement with the most popular (majority) choice for each patient's case history. Example: a resident who rated 8 of 10 case histories identical with the majority was scored 8. All responses were tabulated and submitted to statistical evaluation utilizing CLINFO, a management computer program developed by NIH and a POP 11/44 computer. Statistical significance corresponded to p < 0.05.

Results. With the exception of patient #2, an asymptomatic man who suffered a myocardial infarction 8 months before surgery, our respondents' distribution of ratings, using the present ASA PS CS was almost identical to that of Owens. Results of our study revealed that using the present system the mean number of case histories in agreement was 7.3 ± 1.4; using our modified system the mean score was 7.8 ± 1.4 (p < 0.05).

Five of the 10 patient descriptions were considered class 3 or 4 by our respondents. In all 5 of these cases consistency was improved using the modified system (p < 0.05). See figure. In 2 cases the improvement was statistically significant (p < 0.05). With the modified system, there tended to be a shift from class 4 to 3b. In none of the 10 patient descriptions was the consistency of PS ratings worsened with the modified system.

Discussion. The longevity of the ASA PS CS is in part due to its generalization and it would seem that it has gained durability in this vagueness. We believe, however, that its consistency may be improved with a relatively small change that will maintain the spirit of the ASA PS CS. Dividing class 3 into 2 subsets with the introduction of the concept of compensated or uncompensated disease has clarified a somewhat nebulous class 3. Since the accuracy of PS CS can be no better than our understanding of patient pathophysiology, the scientific precision of PS CS cannot be improved by a change of definition. This investigation indicates, however, that a slight modification improved the consistency and agreement of PS CS involving the severely ill patient, a persistent source of disagreement.

Conclusion. To improve consistency, it is suggested that on the basis of this investigation class 3 of the ASA physical status classification system be divided into 2 subsets, a and b.

References.

![Comparison of respondents' classification](image-url)