Correspondence

We will try to publish authors' responses in the same edition with readers' comments. Time constraints may prevent this in some cases. The problem is compounded in the case of a bimonthly journal where continuity of comment and redress is difficult to achieve. When the redress appears 2 months after the comment, 4 months will have passed since the original article was published. Therefore, we would suggest to our readers that their correspondence about published papers be submitted as soon as possible after the article appears.

Drug Treatment of Hypercholesterolemia

To the Editor: In a recent issue of the *Journal*, Grumbach[1] and Neighbor[2] provide valuable discussions of the uses of various measures of effect in clinical trials. A statement in Neighbor's editorial regarding the interpretation of a confidence interval, however, needs to be clarified. Neighbor writes, ". . . while the number needed to be treated is 16, we are 95 percent confident that the true value could be as low as 10 or as high as 36 to prevent one death over 15 years." The problematic word in this statement is "true." The ability of a study to detect the true value is affected both by random error and systematic error (bias).[3] The confidence interval provides information only about random error. The confidence interval does not assist with the management of systematic error, nor does it provide any information about the presence or absence of various types of systematic error.[3] Thus, a confidence interval provides information about a "true" measure of effect only when all sources of bias have been avoided or at least minimized. The determination of whether bias has been avoided or minimized depends on a critical analysis of the study design and methods. Few point estimates of associations of interventions with outcomes are free of bias.

Robert L. Blake, Jr., M.D.
University of Missouri, Columbia

References

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2. Neighbor WE. Measures of clinical effectiveness: the numbers needed to treat. J Am Board Fam Pract 1991; 4:469-72.
3. Kleinbaum DG, Kupper LL, Morgenstern H. Epidemiologic research: principles and quantitative methods. London: Lifetime Learning Publications, 1982:185-6.

Advanced Directives for Homebound Patients

To the Editor: I read with interest the article "Advance Directives among Patients in a House Call Program" by Daly, et al.[1] It was encouraging that they were able to persuade such a large percentage of homebound patients to establish advance directives for medical care.

I would like to bring up a problem with advance directives in homebound patients that we have experienced in our own home care program and to ask the authors and other readers of the *Journal* whether they have experienced a similar problem. This pertains to the response of emergency medical services (EMS) to advance directives. I will use a recent case to illustrate the issue.

A 3rd-year resident in family medicine had a close working relationship with a 90-year-old woman patient during a period of 2 years. Initially she would come to the office to see him, but as she became more frail, he arranged to visit her at home. Her main medical problems were chronic renal failure and congestive heart failure. She had a large extended family, who were very involved with her care and were devoted to her. The resident discussed advance directives with the patient and her family, and they decided that they did not want cardiopulmonary resuscitation (CPR) or artificial ventilation to be provided in the event of an acute exacerbation of her illness. She was admitted to the hospital some time after this discussion, and at that time this determination was noted in her medical record. It was also noted in her discharge orders.

Two days after discharge the resident received a call from the visiting nurse who was seeing the patient at home. She indicated that the patient was in some respiratory distress, had a lot of secretions in her upper airway, and might benefit from suctioning. No equipment was available to be used in the home, so it was arranged for her to be transferred to the emergency department for this purpose. An ambulance service was called to transfer the patient, and the attending emergency department physician at the destination hospital was notified by the resident of the care desired and the do not resuscitate (DNR) status.

Shortly after this call was placed, the patient died. There were 7 adult family members present, and they began to mourn the loss of their loved one. The EMS crew then arrived. On being told that the patient had died, they said they were obliged to attempt to resuscitate her. They were informed that the family had decided previously on a DNR status. Despite this, CPR was begun, and a team of paramedics was called to assist. On their arrival the family was becoming increasingly agitated, and one of them began to physically prevent further resuscitation efforts. He was restrained by the EMS personnel, and the body was removed from the house so that the attempt at

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