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TO THE EDITOR: Although physicians are often present, they do not always respond to in-flight medical emergencies. When I was returning home from London shortly after New Year's Day more than 10 years ago, the flight crew requested assistance from a physician. I assumed that there were other physicians on our post-holiday flight who were better able than a pediatrician to assist the crew, but goaded by my teenage daughter, I went to help. A pediatric endocrinologist also came to assist a child with a peanut allergy who was in respiratory distress. The patient improved with an epinephrine autoinjector and an albuterol inhaler provided by other passengers. Later, in line at U.S. Customs, three passengers identified themselves as physicians and offered excuses for not getting involved.

I have responded to in-flight medical emergencies twice since then, each time when an adult had possible cardiac symptoms. As physicians, we are more qualified than other passengers to respond, and society expects us to respond to the best of our ability. Sick passengers, their family members, and the flight crew are always grateful for the effort.

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THE AUTHORS REPLY: Sharma identifies the challenge of having adequate supplies in managing in-flight medical emergencies. We agree that it is important for air carriers to have sufficient oxygen aboard to treat ill passengers. The Federal Aviation Administration has published standards for the minimum medical equipment for U.S. commercial aircraft,[1] but it does not define the amount of oxygen for medical use that must be available. Air carriers balance expected needs with the costs and safety of carrying large amounts of oxygen on long flights. We support further efforts to improve requirements for medical equipment to facilitate the best outcome for passengers within the inherent limitations of this unique environment.

Although most in-flight medical emergencies can be managed appropriately with simple interventions, we agree with Komatireddy et al. that emerging forms of technology could improve the management of certain in-flight medical emergencies. Many of these methods are nascent and unproved; we look forward to data on the effectiveness of these tools beyond the information that is currently available.

We applaud Sharma and Tanz for volunteering to provide medical assistance for ill fellow passengers. Others may be reluctant to help in these uncontrolled situations for many reasons, but they should be reassured that the majority of in-flight emergencies can be managed appropriately. Even nonmedical volunteers, with the assistance of medical experts on the ground, can assist in providing a positive outcome for an ill passenger.

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Since publication of their article, the authors report no further potential conflict of interest.

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HCV Infection and Miravirsen

TO THE EDITOR: Janssen et al. (May 2 issue)[1] report on a study of the anti–microRNA-122 agent miravirsen to treat hepatitis C virus (HCV) infection. Four groups (three that received miravirsen and one that received placebo) of nine patients were treated for 29 days. Inclusion criteria includ-

ed a normal value for serum creatinine and an age of 65 years or less. Despite the low number of patients, short follow-up, and selection criteria that minimized the risk of nephrotoxicity, "clinically insignificant" increases in serum creatinine were noted in most patients receiving miravirsen. It is possible that larger studies with looser inclusion criteria and a longer follow-up interval than occurred in this study may uncover nephrotoxicity. We would like to know the actual values for serum creatinine, the estimated glomerular filtration rate (GFR), and any other variable related to renal function. Small changes in serum creatinine may represent large changes in the estimated GFR. In other clinical trials in which changes in kidney-related safety variables were deemed to be "not clinically important" or "not clinically significant,"[2,3] such changes were followed by clinically significant side effects when the drug became widely used in routine clinical practice,[4,5] as was the case for spironolactone-related hyperkalemia[4] and tenofovir-related nephrotoxicity.[5]

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THE AUTHORS REPLY: Several antisense oligonucleotides that were based on either the first-generation chemical compounds (phosphorothioates) or second-generation compounds (2′-*O*-methyl or 2′-*O*-methoxyethyl) have been extensively evaluated in clinical trials.[1] Because of the previous experience with antisense oligonucleotides, potential oligonucleotide class effects — in particular, renal effects — have been consistently investigated in all trials conducted with miravirsen, in patients with HCV infection as well as in healthy volunteers. In all these studies, no clinically significant renal toxicity was found. Perhaps this is because locked nucleic acid–modified oligonucleotides (including miravirsen) are biostable and have high target affinity, permitting administration at lower doses and with less frequency than earlier compounds.[2] In our study, the mean serum creatinine values for all patients treated with miravirsen were 79.2 μmol per liter (0.90 mg per deciliter) at baseline, 80.1 μmol per liter (0.91 mg per deciliter) at the end of therapy, and 79.7 μmol per liter (0.90 mg per deciliter) at the end of follow-up. Initial studies of newly developed compounds typically involve testing in highly selected populations of patients without coexisting conditions. We agree that continued monitoring of renal function is an important feature of all studies with miravirsen; such monitoring is incorporated into current and planned clinical-trial designs.

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