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Number of Bicycle Injuries Unrealistic

As a bicyclist and data analyst, I was interested to see the article by Thompson et al., "Incidence of Bicycle-Related Injuries in a Defined Population," in the November 1990 issue of the *American Journal of Public Health* (pp. 1388-1390). I write because I think Table 2 is either wrong or misleading.

What attracted my attention is the final column in Table 2 labeled "Injuries per 100 Miles Ridden Per Year." For adults, you show estimates of roughly 1 injury (requiring medical attention) per 100 miles ridden. On the basis of two pieces of personal evidence, however, this estimate seems incredibly high: (1) In the last several years I have bicycled a total of about 20 000 miles—Table 2 would predict some 200 injuries for me, but I have not experienced even one significant injury; (2) sometimes I participate in organized rides where perhaps 1000 riders each ride 50 to 100 miles on the day of the ride—Table 2 would predict 500 to 1000 injuries on such a day, but in reality even one significant injury is rare. Thus Table 2 seems off.

Your second paragraph promises "calculation of population-based rates", (p. 1388) and it would have been useful if Table 2 had presented injury rates per 100 miles ridden for your defined population—i.e., for the 223 298 members of the central and east regions of the Group Health Cooperative of Puget Sound. However, it is not clear to me how Table 2 was derived. Perhaps Table 2 is based only on the relatively few cyclists who experienced injuries. If so, this would result in a biased estimate of the population-based injury rate. Beyond this, however, the Table 2 numbers still remain problematic because it seems that you have not considered miles ridden since the previous injury (if any). Do you really believe—as Table 2 suggests—that a 5- to 9-year-old child who has had one injury should expect additional injuries approximately every 3.3 miles? It would be unfortunate if anyone were to use your Table 2 to estimate the incidence of bicycle-related injuries; however, the title of your article and the title of the table may tempt some to do so. □

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Thompson and Colleagues Respond

Our thanks to Dr. Andrews for his comments on our article "Incidence of bicycle-related injuries in a defined population" (*Am J Public Health*. 1990;80:1388-1390). We agree that the information as presented in Table 2 is open to misinterpretation and that the last column should not have been included. The data in Table 2 are not population based; they were de-

rived from questionnaires completed only by those who were injured. They are useful in comparison across age groups, taken in conjunction with Table 1. As shown in Table 1, the incidence of injuries is highest for the 5- to 9- and 10- to 14-year age groups. Table 2 shows that this is not due to greater exposure in these age groups; in fact, children who are injured have the lowest cycling exposure across all ages.

The last column in Table 2 was derived on the basis of simply dividing the number of individuals with injuries in each age group by the average yearly mileage reported among those injured. As you correctly point out, however, this is a misleading number, and the column should have been eliminated. To accurately portray the risk of injury per 100 miles ridden for each age group on a population basis would have required that we sample cyclists from the entire Group Health population and include those riders who did not experience a fall or emergency treated injury. Our data did not permit us to do this. The information on injury incidence contained in Table 1 should be used by individuals to estimate the incidence of bicycle-related injuries in other regions of the country. □

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