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### Title

Re: Bjurlin et al.: Bicycle-related Genitourinary Injuries (Urology. 2011;78(5):1187-1190)

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patients with bicycle-related GU injuries presenting to US EDs were ultimately admitted for the treatment of their injuries.

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## Re: Bjurlin et al.: Bicycle-related Genitourinary Injuries (Urology. 2011; 78(5):1187-1190)

TO THE EDITOR:

The epidemiology of genitourinary (GU) trauma is an understudied subject and the authors should be commended for their insightful and important manuscript. The authors note that GU injury is an infrequent occurrence, with bicycle-related trauma being involved in only approximately 2% of all bicycle-related injuries documented in the National Trauma Database (NTDB). They note GU injuries in only 358 of more than 16,000 patients with bicycle injuries within this database.

To complement and contrast their analysis, we examined GU-related bicycle trauma using the National Electronic Injury Surveillance System (NEISS). The NEISS is a validated dataset operated by the United States Consumer Product Safety Commission that provides a national probability estimate of all injury-related US emergency department (ED) presentations.<sup>1</sup>

From 2002 to 2010, 394,550 patients presented to US EDs with traumatic GU injuries. Bicycle-related GU injuries represented approximately 43,542 (95% CI 36,447-50,363), or 9%, of GU injuries. The authors note that most bicycle-related GU injuries involved the kidney, with the least common organ involved being the scrotum. In contrast, our analysis found that 12,707 (95% CI 9585-15,830), or 31%, of bicycle-related GU injuries involved the testicles or scrotum. Furthermore, kidney injuries only represented 2158 (95% CI 1360-2956), or 5%, of such injuries.

The discrepancy between these 2 analyses likely reflects that the NTDB includes only patients with injuries severe enough to require hospitalization. The NEISS database, in contrast, includes all injury-related ED presentations and better represents the national population. This allows data capture of patients presenting with minor injuries who were deemed treatable in an ambulatory setting. Indeed, in our dataset, we found that only 8% of

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## Reply by the Authors

TO THE EDITOR:

The authors of the letter provide insightful data from the National Electronic Injury Surveillance System (NEISS), which provides national estimates regarding the number of injuries and contains data regarding patients who are evaluated and discharged. We used the National Trauma Data Bank (NTDB) in our analysis. Although the NTDB is not a population-based sample of hospitalized patients, it provides data that is missing from the NEISS, such as emergency department admission disposition and hospital discharge disposition, surgical intervention, and length of stay. Furthermore, the NTDB allows for grading of organ injury, such as renal trauma, by converting abbreviated injury scale codes to the American Association for the Surgery of Trauma organ injury scale system. Limitations of the NEISS include the inability to determine outcomes of injuries, such as nephrectomy, scrotal repair, or in-hospital mortality. Because the NTDB is a voluntary data repository containing hospitals that are invested in the care of trauma patients, it includes a disproportionate number of larger hospitals with younger and more severely injured patients. Perhaps neither the NTDB nor the NEISS alone best represents the national population because each dataset contains inherent limitations.

Taken together (the NEISS and the NTDB), one may reasonably conclude that most bicycle-related genitourinary (GU) injuries seen in the emergency department involve the scrotum (31% in the NEISS). Most of the scrotal injuries, however, do not require admission given the small number of scrotal injuries in the NTDB. Bicycle-related GU injuries requiring hospital admission are rare (8% in the NEISS), and among patients admitted with bicycle-related trauma in the NTDB, GU injury was also rare—only 2%. Patients requiring hospital admission sustained significant rates of renal injury (75% in the NTDB). Patients with bicycle-related trauma and GU