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Abstract

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Title: Increased popularity of urban bicycle transportation in america: the perfect storm for an injury epidemic

Introduction: Economic forces, congested urban centers, and environmental consciousness has increased enthusiasm for bicycle transportation, with many metropolitan areas reporting plans for bicycle kiosks and expanded riding routes. Concurrently, trauma injury prevention programs have targeted helmet use as an intervention to reduce head injuries. We hypothesized that injury prevention programs emphasizing helmet use and safety has reduced injuries in this group

Methods: A review of our prospective academic level 1 trauma registry was performed for the most recent 11 year period. Logistic regression analysis was applied to evaluate changes in injury patterns and severity, hospital length of stay and helmet use, with adjustment for confounders (gender and age distribution over time.)

Results: 329 bicycle injuries were admitted. Median ISS and length of stay increased significantly ($p= 0.09$ and 0.08 respectively), as did chest injuries (15%) ($p=0.0032$). Abdominal injuries (<10%), increased by 3 fold over the most recent 5 years. Although documentation of helmet use improved significantly ($p<0.001$), in 118 patients (36%) with head injuries, helmet use did not change significantly. ($p=0.5689$)

Conclusion: Bicycle riders are presenting with increasingly severe injuries. Despite programs emphasizing increased awareness, helmet use has not changed and over 1/3 of patients presented with significant head injuries. Current enthusiasm for urban bicycle transportation requires renewed emphasis on safety and injury prevention.

Table Attached

PS2009-5554 - RESULTS

Year		1996		1998		2000		2002		2004		2006		Total	
		n	%	n	%	n	%	n	%	n	%	n	%	n	%
Helmet Use	No	12	29	20	43	32	54	23	47	31	67	47	80	165	55
	Unknown	28	68	19	41	19	32	20	41	9	20	6	10	101	34
	Yes	1	2	7	15	8	14	6	12	6	13	6	10	34	11
Head Injury	No	27	66	33	72	43	72.9	29	59	32	70	35	59	199	66
	Yes	14	34	13	28	16	27.1	20	41	14	30	24	41	101	34