05 ON ROAD RIDING PRACTICES AMONG ELECTRIC BIKERS IN SUZHOU

doi:10.1136/injuryprev-2012-040580c.5

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Background There are 120 million electric bikes (E-bike) registered in China by 2011, however, E-bikers' riding practices are poorly characterised and few direct observational studies have been performed.

Objectives This study aims to describe on road riding practices among E-bikers and to investigate factors influencing these practices.

Methods A cross-sectional observational study was conducted at 14 randomly selected intersections in Suzhou during a 7-day period in March 2012. A pro-forma observation checklist was used to collect data related to on road riding practice. Adjusted OR and 95% CI to assess the likelihood of specific riding practices among some E-bikers compared with the others were evaluated using multilevel logistic regression.

Results Among 18 048 E-bikers observed, 35.9% rode E-bikes with cycling pedals and 85.7% E-bikes were registered. The overall prevalence of carrying passengers, riding on motor vehicle lanes, running red lights, riding in opposite ways, mobile phone use, and helmet use were 13.0% (95% CI 11.9 to 14.1%), 1.8% (95% CI 1.4 to 2.2%), 10.2% (95% CI 9.2 to 11.1%), 6.2% (95% CI 5.5 to 7.0%), 0.4% (95% CI 0.2 to 10.5%), 10.1% (95% CI 9.1 to 11.0%) respectively. Male gender was associated with increased helmet use (OR=1.6, 95% CI 1.2 to 2.0) and riding on motor vehicle lanes (OR=3.5, 95% CI 1.7 to 7.1); whereas riding a registered E-bikes reduced the likelihood of carrying passengers (OR=0.3, 95% CI 0.2 to 0.4).

Significance This study demonstrates poor on road safety practices among E-bikers in China and relates these to driver restraint use. These findings support the need for sustainable safety programmes integrating road design and behaviour interventions to make roads safer for E-bikers in China.