INVESTIGATING RISK COMPENSATION THEORY IN CYCLISTS: RESULTS FROM INTELLIGENT VIDEO ANALYSIS SYSTEM

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Background The efficacy of lawful mandatory helmet use is in dispute, because of possible negative side-effects that have not been adequately documented so far (eg, risk compensation). Our team launched a randomised comparative study that measured for the first time risky behaviours of cyclists during their daily journeys and determine whether or not they are affected by use of helmets or others safety devices.

Method Participants are recruited in a borrow-a-bike municipal program. They complete a questionnaire on their attitudes toward road safety and helmet use. They are assigned to one of the four arms of randomisation: In the control arm, they receive a bike on loan following the same procedures as those provided at a regular bike loan; in experimental arm #1 they receive a standardised information on the benefits of bicycle helmets; in arm#2, they receive a helmet for free, and in arm#3, they receive both information and helmet. Risk behaviours of cyclists are directly documented with an intelligent video camera system, designed to unobtrusively and objectively capture behaviours in urban areas. Behavioural data are matched with randomisation arm and questionnaires through a coloured code on the rear mudguard in participants. Behaviours are investigated as a function of helmet use and randomisation groups to meet study objectives.

Results Results of the 3-month inclusion period indicate that we can expect to include 2000 participants and record 5000 events (2.5 events/participant). Definitive results will be available for the Safety 2010 World Conference.