

6A – Child – School/Road, March 25, 2021

6A.001 AN EVALUATION OF THE SCHOOL-BASED HELMET PROGRAM IN MYANMAR

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Context The road safety situation in Myanmar is deteriorating. It has experienced a dramatic increase in the number of road fatalities and injuries. The majority of fatalities occurs among 2–3 wheel motorcyclists, which accounted for 58% of total road deaths. Motorcyclist safety is a major issue for Mandalay Region, with robust efforts being reported by the police to improve helmet wearing.

Process The Myanmar Road Safety Action Plan 2014–2020 intends to achieve a 90% helmet-wearing rate across the country. Recognizing the danger to safety, the AIP Foundation implemented the Helmet Education and Distribution (HED) program in Mandalay in 2017.

Objectives - Increase helmet use among students who are often motorcycle passengers.

- Improve the road safety knowledge of teachers and students.

During 2018–2020 the program donated 5,027 helmets and educated 7,392 students at six program schools.

Analysis To assess the effectiveness of intervention activities, monitoring and evaluation methodologies were applied. One method was filmed helmet observation, and the other was a questionnaire for base-line knowledge across two periods: pre- and post- intervention.

Outcomes Overall, helmet-wearing rates increased from 1.9% pre-intervention to 53.3% post-intervention. The knowledge about helmet safety of students of all grades improved, with the percentage of students receiving good and excellent scores increasing from 45% to 62%.

Learning Outcomes The success of HED in Mandalay provides critical evidence to support the expansion of this school program. Furthermore, improving enforcement and community awareness is crucial to increasing helmet use and contributing to sustainably reduce road traffic fatalities in Myanmar.

6A.002 TRAFFIC CALMING IMPLEMENTATION AROUND ELEMENTARY SCHOOLS: STEPPED WEDGE RCT

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Background Motor-vehicle collisions are a leading cause of child bicyclist and pedestrian injuries in Canada. Injury occurrence and severity are associated with vehicle speeds but may be moderated through traffic calming. As a third of child bicyclist and pedestrian injuries occur within 300 meters of schools, it is important to focus interventions at these

locations. This study will compare the effect of two traffic calming measures (i.e., in-street signs and traffic-calming-curbs) around elementary (K-Gr8) schools in Calgary.

Methods Using a stepped-wedge cluster randomized controlled trial, 70 eligible elementary schools will be randomly assigned one traffic calming intervention, installed between April and August 2020. Traffic speed and volume (pneumatic tubes), and active transportation prevalence (observational counts), will be collected one week before and one week after intervention installation. Change in outcomes between pre- and post-intervention will be compared within schools for each intervention type. Post-intervention data will also be compared with pre-intervention data from schools yet to receive the intervention. Analyses will include generalized linear mixed effects models.

Results Reductions in vehicle speeds are expected for both traffic calming features. Smaller changes in traffic volume and active transportation are expected across all traffic calming features. Greater effects are expected from traffic-calming-curbs.

Discussion Scientific evidence on traffic calming intervention effectiveness may improve municipal decision-making, standards for new construction, prioritization of interventions in other jurisdictions, and inform further study in non-school environments. This study is a partnership between the City of Calgary and the University of Calgary.

6A.003 SCHOOL ZONE MODIFICATION FOR SAFETY FROM ENVIRONMENT TO MANAGEMENT AND PROMOTION

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Background Traffic crashes is the No. 2 death cause among children in China. Child pedestrians are the major victims. Most of children walk to schools. Therefore school zone safety improvement is the key for child pedestrian safety. Since 2012, Safe Kids China started the community-based programs on school zone modification for safety from a pilot project of one school to more schools in two cities.

Objective Modify the school zone for safety with environment and management improvement; and promote the pilot project to more schools.

Method 1) Questionnaire survey among students and parents on pedestrian issues and observation on school zone; 2) Modification of the school zone on the environment, school and community safety management; 3) Promoting the project and engaging more communities to join in.

Results The pilot project is well used as lobbying materials to the local decision makers for school zone modification for safety. Five communities (three in Shanghai and two in Guangzhou) worked with us on the projects for five schools with 1) environment improvement such as setting speed bumps and crosswalks; 2) school safety management improvement; 3) community safety management improvement. More communities are working with us on school zone safety. The whole projects benefited 5 schools in two cities.

Conclusion The pilot project needs to be well packaged for engaging more communities working on school zone safety. Environment medication needs working together with safety management improvement of the school and the community as well.