

# UPLOADS Progress Report February 2013

## **Project Title:**

Understanding and preventing injury in the led outdoor activity domain: A theory driven approach to injury surveillance and prevention

## **Aims:**

The aim of this project is to develop a novel injury and accident surveillance system, underpinned by the systems approach to accident causation and analysis, for the led outdoor activity industry in Australia. This involves translation of the latest thinking on accident causation in the led outdoor activity industry.

## **Statement of Progress:**

The research agreement for the project was signed by all partner organisations late November 2011. The project officially got underway on 1st December 2011.

Year 1 of the project has progressed as planned and has seen completion of the following studies, all of which have produced new insights into accident causation in the led outdoor activity domain.

### 1. Review and comparison of accident analysis methods

A review and comparison of contemporary accident analysis frameworks was undertaken in order to select the most suitable method for use in led outdoor activity accident analyses. This led to the following publication:

Salmon, P. M., Cornelissen, M., Trotter, M. (2012). Systems-based accident analysis methods: a comparison of Accimap, HFACS, and STAMP. *Safety Science*, 50:4, pp.1158-1170

### 2. Development of led outdoor accident analysis framework

Based on the study above and exhaustive reviews of the literature on accident and incident database development and the accident analysis literature, a prototype led outdoor accident analysis methodology has been developed. This methodology will form part of the UPLOADS database.

### 3. Analysis of existing led outdoor activity incident data

Existing accident and incident data was obtained from Australian led outdoor activity providers, as well as from the New Zealand National Incident database. This data was then analysed in a first of its kind application using a systems analysis framework in order to identify the contributory factors involved in the led outdoor activity incidents occurring in Australia and New Zealand. This analysis has led to the following paper which is currently under review:

Salmon, P. M., Goode, N., Lenne, M. G., Finch, C. (Under review). Injury causation in the great outdoors: a systems analysis of led outdoor activity injury incidents. *Accident Analysis and Prevention*.

### 4. Conduct of Delphi study to identify desired database characteristics

A Delphi study was conducted in order to identify the led outdoor activity industries requirements for the UPLOADS database. This led to the following paper which is currently in preparation:

Goode, N., Salmon, P. M., Finch, C., Cassel, E., Lenne, M. G. (in preparation). Required characteristics of an incident reporting system for the Australian led outdoor activity industry. *Australian Journal of Outdoor Education*.

#### 5. Development of prototype UPLOADS database

A prototype UPLOADS incident reporting, data storage, and data analysis system has been developed based on the activities above. The system is currently being tested in-house and will be tested through the conduct of a 6 month trial involving over 30 led outdoor activity providers (due to commence early 2013).

#### Peer reviewed publications

Salmon, P. M., Cornelissen, M., Trotter, M. (2012). Systems-based accident analysis methods: a comparison of Accimap, HFACS, and STAMP. *Safety Science*, 50:4, pp.1158-1170

Salmon, P., Goode, N., Lenné, M., Finch, C., & Cassell, E. (2012). Understanding accident causation in led outdoor activities: development of an accident analysis framework. *Injury Prevention*, 18 (Supplement 1), A240. doi: 10.1136/injuryprev-2012-040590w.53

#### Other publications

Salmon, P. M., Cornelissen, M. (2012). Understanding accidents in the great outdoors: the human factors approach. *Active Education Magazine*, 5<sup>th</sup> September 2012.

#### Presentations

\*keynote presentation

Salmon, P. M., Goode, N., Lenné, M. G., Finch, C., & Cassell, E. (2012). Understanding and preventing accidents in led outdoor activities: theory, methods, and UPLOADS. Presentation at the Wilderness Risk Management Conference, Portland, Oregon, USA, October 25<sup>th</sup> 2012

Salmon, P. M., Goode, N., Lenné, M. G., Finch, C., & Cassell, E. (2012). An update on UPLOADS: New Insights, New Methods and a New Dawn for the Led Outdoor Activity Domain, Australia Camps Association Annual Conference, Healesville, Australia, October 1<sup>st</sup> 2012.

Salmon, P. M., Goode, N., Lenné, M. G., Finch, C., & Cassell, E. (2012). Understanding accident causation in led outdoor activities: Development of an accident analysis framework. Poster presentation at the Safety 2012 World Conference, 1-4 October 2012. Wellington, New Zealand.

\*Finch, C. (2012). Update on project: Injury prevention in the Australian led outdoor activity domain 17th National Outdoor Education Conference 16-18 January, 2012

Salmon, P. M. Understanding and preventing accidents during led outdoor activities in Australia: Where have we been, where are we now, and where are we going? Presentation at the International Camping Congress, Hong Kong, November 7th 2011.