UPLOADS App
Description Document

December, 2018

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Introduction

This document describes the core components of the UPLOADS App, including the:

- purpose and scope;
- types of data that are collected;
- reports that can be produced by organisations;
- application user's roles and responsibilities; and
- collection of data for the National Incident Dataset (NID), including restrictions of reporting data from the NID to ensure privacy and confidentiality for individuals involved in incidents and organisations contributing data.

Purpose

The purpose of UPLOADS is to support led outdoor activity (LOA) providers, and the sector, to understand the:

- relative frequency of incidents associated with different types of LOA;
- characteristics of the incidents that occur during LOA; and
- network of contributory factors involved in incident causation.

The long-term goal is to support the development of appropriate prevention strategies to reduce incidents and injuries during LOA, and ensure a safer outdoor sector for all.

Scope

The UPLOADS App is designed to collect incident and participation data on facilitated or instructed activities within outdoor education and recreation settings (Salmon, Williamson, Lenne, Mitsopoulos-Rubens, & Rudin-Brown, 2010). This definition includes outdoor activities that are organised by an LOA provider but not directly supervised or instructed (e.g. solo

bushwalking and camping trips facilitated by an organization). Outdoor recreational activities organized by independent participants are typically not included within the scope of UPLOADS, unless they undertaken under the auspice of a registered club or entity.

The UPLOADS App collects data about *incidents that occur during LOAs*, involving adverse outcomes or a near miss.

- An **incident** is defined as an event that results in an adverse outcome or a near miss during an LOA.
- An **adverse outcome** is defined as an event resulting in a negative impact. For LOA's negative impacts on people involved in activities include injuries, illnesses, fatality, and psychosocial impacts. UPLOADS is also intended to collect information about equipment and environmental damage occurring during the activity, and missing or overdue people returning from the activity.
- A **near miss** is defined as an incident that has the potential to cause an adverse outcome but fails to do so. For example, during a rock climbing activity an instructor notices that a participant's carabineer was not locked. If the student had fallen, this may have led to a serious injury.

To further distinguish between near misses and adverse outcomes, we developed a LOA-specific incident severity scale, shown in Table 1. Each incident is rated in terms of actual and potential severity. Actual severity is based on the response to the event and the outcome, while potential severity is based on the reporter's subjective perception of the most likely or probable outcome should a similar event occur in the future, under similar circumstances. To be classified as a near

miss, incidents must have an actual severity rating of "0" (No impact). Any incident with an actual severity rating of 1-6 is classified as an adverse outcome.

Table 1 *Severity scale for rating incidents*

Severity Rating	Consequences	Treatment	Evacuation	Examples
0 NO IMPACT	Negligible	Not required	Not required	Falls, equipment failures, rock falls, or dangerous weather that did not result in an adverse outcome.
1 MINOR	Short term impact	Localised care (e.g., first aid)	Not required	Superficial cut, blisters, splinters, hayfever, travel sickness
2 MODERATE	Short to medium term effects	Ongoing localised or external care (e.g., formal medical assessment)	Temporary cessation of activity, localised or external assessment and treatment, return to activity	Minor burns/cuts, food intolerances, fainting, diarrhea/vomiting
3 SERIOUS	Medium to long term effects	Timely external medical care	Full evacuation (i.e., no return to activity)	Simple fractures, deep cuts/burns, hypothermia, infections
4 SEVERE	Serious long term effects or permanent disablement	Urgent emergency medical assistance with ongoing care	Emergency evacuation	Multiple or compound fractures (e.g. spinal), anaphylaxis, crushing injuries, severe fever
5 CRITICAL	Certain death or fatality	Urgent emergency medical assistance	Urgent emergency evacuation	Amputation, head trauma, disembowelment, prolonged severe abdominal pain.

The criteria for reporting incidents to UPLOADS is based on incident severity, in line with the WHO guidelines (Leape & Abookire, 2005). LOA providers are instructed to report any:

- Adverse outcome with an actual severity of 1 or greater; and
- Near misses with a potential severity of 3 or greater, or where the reporter feels that the incident may have important implications for preventing future incidents.

This ensures that the data contained in the National Incident Dataset is representative of most incidents that occur during LOAs, and not biased towards more serious incidents.

Types of data collected

The UPLOADS app allows organisations to collect:

- Incident reports;
- Participation data; and
- Action plans.

In addition, the research team collect information through the UPLOADS app on:

- Organisational demographics;
- User demographics; and
- Usage statistics.

Incident reports

The incident report form is divided into six sections. UPLOADS users can also customize the form to meet their organisational needs (e.g. include a field to collect job code information). Section 1 and 2 of the form capture information about the activity and the circumstances at the time of the incident. The fields used to capture this information are outlined in Table 2.

Table 2 *Types of information captured about the activity and the circumstances at the time of the incident.*

Report Step	**Field**	**Response options**
Section 1 (When / Where / What)	Incident ID	Auto generated, unique to each organisation
	Date of incident	Options: calendar
	Time of incident	Options: am/pm
	Location of incident	Free text
	State/Territory	Options
	Type of incident (select all that apply)	• Near miss • Adverse outcome (select all that apply: Injury; Illness, Psychosocial (e.g. emotion, psychological); Equipment damage; Environmental damage; Missing people (Overdue/missing)
	Actual Severity	Rate the actual severity in terms of the consequences, treatment and evacuation required. Consider the most likely consequence if it is unknown at the time of reporting. Severity scale is automatically 0 if near miss is selected
	Potential Severity	Rate the potential severity in terms of the most likely or probably outcome should a similar event, under similar circumstances, occur in the future.
Section 2 (The Activity)	Program type	Select one: Journey; Residential; Single day Definitions: • Journey: Most activities and accommodation occur at multiple locations, across two of more days • Residential: Most activities and accommodation occur at a single location, across two or more days • Single day: Activities occurring during a single day without accommodation, regardless of location(s)
	Activity associated with incident	1. Classification via activity code 2. Open response field to record specific activity

Report Step	Field	Response options
	Number of people involved in activity associated with the incident	Record numbers for: • Activity participants • Activity leaders • Supervisors • Other

Section 3 captures information about the *Adverse Outcomes* of the incident (i.e. information about the outcome of the incident and the response to the incident). This section is repeated for each person impacted by the incident. These fields are not completed for near misses. An important feature of this section is that the information collected is sufficient to validate the actual severity ratings provided by the reporter. The fields used to capture this information are outlined in table 3.

Table 3 *Types of data collected about the adverse outcomes of the incident.*

Report Step	Field	Response options
Section 3 (Who)	Name	Free text
	Age	Free Text
	Gender	Options (Female; male; other)
	Role	Activity Participant; Activity leader; Activity Supervisor; Other
	Pre-existing condition/s	No / Yes / Unsure

Report Step	Field	Response options
	Injury type	Check boxes: • Not applicable • Superficial (Minor scrape, blister, graze, bruise) • Bite/Sting (Bite from insect, snake, dog, jellyfish) • Burns (Effects of fire, steam, electric, chemical) • Heat-related (Sunburn, blisters) • Cold-related (Frostbite, chilblains) • Muscular (Torn, sprained muscle, fascia, tendon, or ligament) • Dislocation/Strain (Dislocation, strain, or overuse of joints) • Fracture (Broken or fractured bone/s) • Crushing (Compression, pinning/pinching) • Internal (Injuries to internal organs) • Spinal/Nervous system (Spinal dislocation, paralysis, nerve damage) • Wound - open (Open cut, gash, laceration, stabbing, impaling) • Head trauma (Suspected concussion) • Amputation (Severance of limb or body part) • Other or unknown ICD-10 codes adapted for simplified language
	Injury location	Not applicable Specific categories for body diagram: Head or neck, Face, Chest, Stomach, Lower back / spine / Buttocks, Hip, Pelvis or groin, Shoulder or upper back, Upper arm, Elbow, Forearm or wrist, Hands or fingers, Thigh, Knee, Lower leg, Ankle, Feet or toes, Unspecified Rae, K., & Orchard, J. (2007). The Orchard sports injury classification system (OSICS) version 10. Clinical Journal of Sport Medicine, 17(3), 201-204.

Report Step	Field	Response options
	Illness type	Check boxes: • Not applicable • Headache/Migraine (Head pain, pounding, light sensitivity) • Infection (Irritation, inflammation, weeping/swelling) • Cardiac (Chest pain, arrhythmia) • Respiratory (Asthma, breathing disturbance/difficulty) • Abdominal (Cramping, pain, bloating) • Gastric / Urinary (Diarrhoea, constipation, UTI) • Nausea / Vomiting (Vomiting, dizziness) • Allergic reaction (Rash, swelling, anaphylaxis) • Food-related (Food poisoning, over eating, under-eating) • Cold/flu (Congestion, coughing, flu symptoms) • Non-specific fever (Temperature, sweating) • Heat-related (Dehydration, heat exhaustion, heatstroke) • Cold-related (Hypothermia, altitude, frostnip) • Fatigue (Exhaustion, listlessness) • Poisoning (Toxic effects of medication, drugs, alcohol) • Psychological (Anxiety, social stress, depression) • Other or unknown
	First aid	Single response: No, Yes (Free response box), Unsure
	Evacuation	Single response: No, Yes (Select: Boat, Helicopter, Ski patrol-stretches, Sled, Stretcher, Snowmobile, Vehicle, Walked out, or Other, specify), Temporary (Select: Boat, Helicopter, Ski patrol-stretches, Sled, Stretcher, Snowmobile, Vehicle, Walked out, or Other, specify).
	Emergency services	Single response: No; Yes (Select: SES Rescue, Ambulance, Fire & Rescue, Police, or Other - specify); Unsure
	External medical treatment (GP, hospital)	Single response: Not required; Yes (Select: Doctor/GP, Emergency Room, Hospitalisation, Other - specify); Unsure

Sections 4 to 6 capture qualitative information about the incident and the complex system of factors involved in accident causation. The fields used to capture this information are outlined in Table 4. A list of possible contributory factors is presented to the user for consideration. A list of the contributory factors is provided in figure 1. Help text is provided for sections four, five and six, to help users provide the desired information. The help text is provided in table 5.

Table 4 *Description and analysis of the incident*

Report Step	***Field***	***Response options***
Section 4 (Description)	Describe what happened, including any relevant events prior to, or after, the incident. Do **not** include identifying information (e.g. participant or camp names)	Free text
Section 5 (Contributory factors)	In your opinion, why did the incident happen? Identify and describe the contributory factors that may have contributed to this incident. The goal is not to assign blame, but to identify how factors across the led outdoor activity system combine to create incidents.	Checklist of possible contributory factors (as described in figure 1) plus free text to describe any selected.
Section 6 (Interactions between factors)	Identify and describe any interactions between the contributory factors that may have contributed to this incident.	Users link contributory factors, and describe the relationship between the factors.

Table 5 *Help Text*

Section	***Help Text***
Section 4 (Description)	Here you are required to describe (in your own words) what happened prior to, during, and immediately after the incident. It is important to provide as much detail as possible, as this will help you identify contributory factors and interactions between factors. Remember to describe any decisions, actions, events, omissions, or conditions, that could have contributed to the incident occurring. For example, consider: During • Decisions or actions of people involved in the incident. • The activity environment. • Environmental conditions (e.g. weather or temperature) • Resources (equipment/staff) used to support the activity. • Information used to support the activity (e.g. Weather reports, maps, information on participant allergies, illnesses). • Factors that shaped how the activity proceeded (e.g. Lack of equipment, unruly participants, or staff shortages). • Communications between activity centre staff and participants etc. Prior to: • Preparation or planning activities. • Program design or scheduling. • Similar incidents prior to the one being reported. • Training programs, procedures, risk management systems etc. Immediately after: • Did treatment/evacuation run smoothly? • Were adequate resources available for treatment/evacuation?
Section 5 (Contributory factors)	Contributory factors include any decisions, actions, events, omissions, or conditions, that could have contributed to the incident occurring. Safety and behaviour is the shared responsibility of everyone working in the LOA Sector. Therefore, Contributory factors can be associated with anyone within the LOA Actor map (for example, leaders participants, managers, schools, parents, peak bodies, or government) and can occur immediately before the incident, or in the hours, days, weeks, and even years before the incident. It is important to note that identifying contributory factors associated

	with actors and organisations does not mean you are assigning any blame. Rather, the contributory factors provide an opportunity for learning. To identify contributory factors, move through the list of factors provided and select and describe the ones that contributed to the incident.
Section 6 (Interactions between factors)	An interaction between two contributory factors is present when one contributory factor influences the other by either creating, enabling, facilitating, strengthening, or weakening it. To identify interactions, move through the list of contributory factors that you have identified, and ask yourself: did this factor interact with, influence, or was influenced another factor you have identified? During this process, if you identify a contributory factor that was not identified initially in the 'Identifying Contributory Factors' section, please return and add the factor. Interactions example: The organisation does not have a procedure for collecting medical forms for supervisors/helpers coming onto programs. In this scenario you would connect MANAGEMENT factor I7 to CLIENTS/SCHOOLS factor K1  **Description:** No procedure for collecting medical forms off supervisors/helpers coming onto programs.

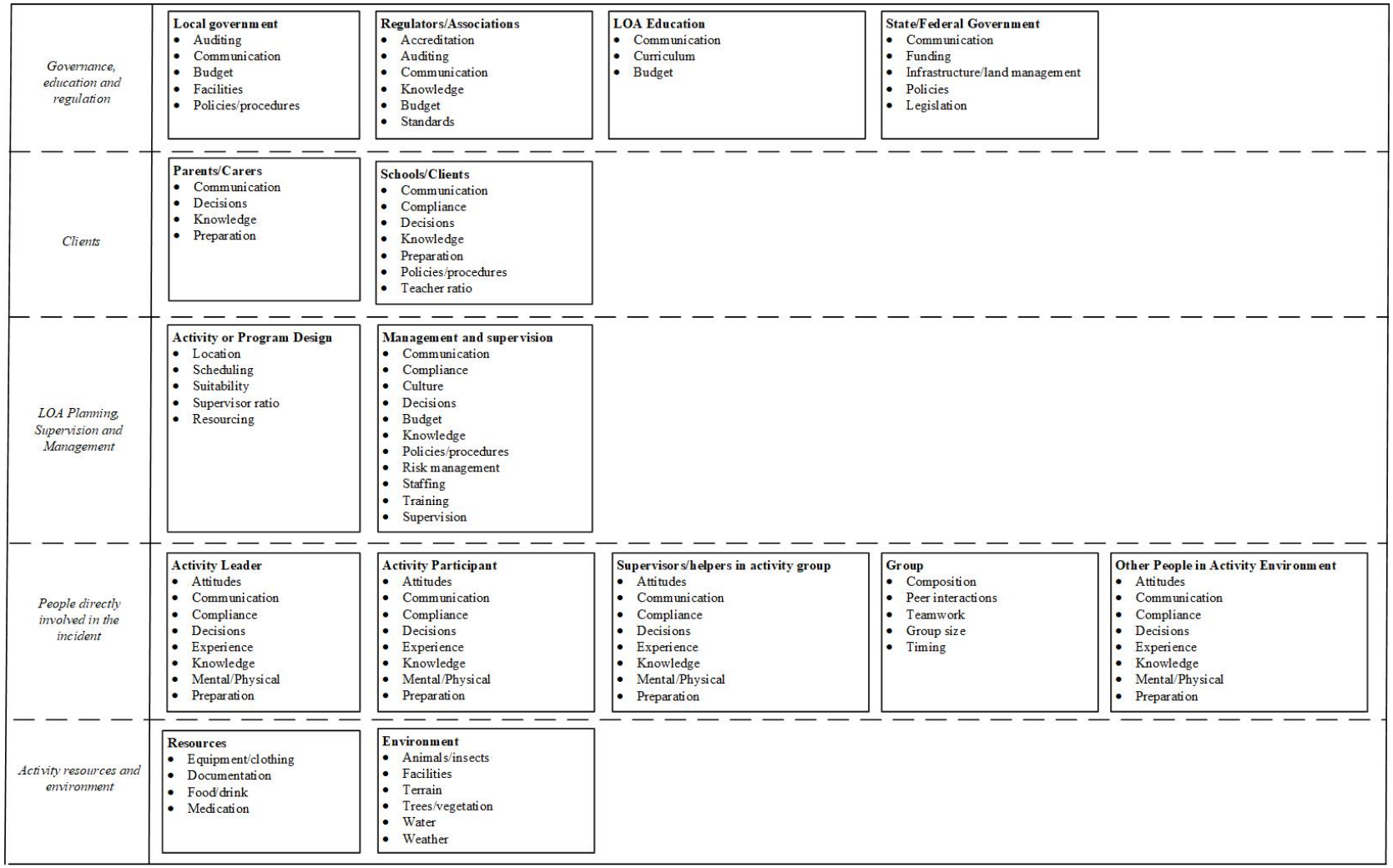

Figure 1 The UPLOADS accident analysis method, which consists of a contributing factor classification scheme and a framework for representing aggregate analyses of incident reports (revised January 2018).

Version 14 - 17/12/2018

Participation data

Participation and demographic information for all persons involved in the program is collected to: calculate the relative frequency of incidents associated with specific LOAs; and provide a point of comparison for incident report data collected. The participation and demographic data collected for each LOA program is shown in Table 6.

Two types of 'participation data' are used to calculate the relative frequency of incidents: Program Participation days and Activity Participation Days.

Program Participation Days are used to calculate overall incident rates. This calculation is based on the program length and total number of participants (e.g. a program is five days with 12 participants).

Activity Participation Days are used to calculate the incident rate per activity. This calculation is based on the number of days participants are exposed to an activity and number of participants on each day (e.g. canoeing is conducted on two days of a five-day program, with 11 and 12 participants respectively).

Table 6 *Participation and demographic data collected for each LOA program*

Participation Data Section	**Field**	**Response options**
Section 1 (Program Details)	Job ID / Program Name	Free Text Field
	Program Type	Journey / Residential / Single Day
	State / Territory	ACT / NSW / NT / QLD / SA / WA / TAS / VIC / Non-Australia
	Program Start Date	Options: calendar
	Program End Date	Options: calendar
	Total Days	Automatically Calculated
	The total number of people involved in the program	Activity Participants – Number Activity Leaders – Number Supervisors – Number Other – Number
Section 2 (Activities)	List of activities that will be run during the program	For example: Archery Campcraft Camping Wheel Sports
	The number of participants involved in each activity per day	Activity / Date / Number of participants
Section 3 (Participant Breakdown)	Of the participants undertaking the activity, how many were male, female, or other (prefer not to say)?	Male: ___ Female: ___ Other: ___
	How many of the participants undertaking the activity fell into each of the following age ranges?	0-5 years: ___ 6-12 years: ____ 13-17 years: ____ 18-29 years: ____ 30-49 years: ____ 50+:____

An activity type classification scheme is provided to standardise the collection of participation data across multiple organisations, as shown in Table 7.

Table 7 *Activity type classification scheme*

Activity category	Examples	
Archery	Archery	
Arts & crafts	Arts & crafts Bush art	
Beach activities	Beach sports/activities Fishing Sandboarding	
Campcraft (e.g. cooking, campfires)	Cooking, campfires, pioneering	
Camping (Residential)	Hard top accommodation (i.e. cabins/dorms)	
Camping (Tents)	Soft top tent type accommodation Expedition Preparation	
Caving	Caving Caving (artificial)	
Curriculum-based activities	Curriculum-based activities (e.g. environmental, conservation, science studies) Earth Education Environmental Rehabilitation Rolls	
Free time	Unstructured / free time activities Trampoline	
Harness: Indoors	Harness: Climbing artificial surfaces	
Harness: Outdoors	Abseiling Aerial Runway Bouldering Canyoning Combo abseil and climb Crate climb Dangle Duo Harness: Flying fox/zip line Giant Swing Harness: Giant swing	High/low ropes courses Leap of faith Multi-pitch abseil Outdoor rock climbing Pamper Pole Prussiking
Horse/Camel Riding	Camel riding Horse riding	
Salt water activities	Sailing Sea kayaking Snorkelling Standup Paddle Boarding Surf Education	Surfing Swimming

Activity category	Examples	
Fresh water activities	Canoeing Dragon Boating Kayaking (flatwater) Rafting (flatwater)	Rafting (whitewater) Raft Making Rock Pooling / Creek Dipping
Snowsports	Skiing (Cross-country/Nordic) Skiing (Downhill) Snowboarding	
Teambuilding games	Animal Games Initiatives/Team games Night Time Activities	
Travelling / Logistics	Travelling Loading/Unloading Equipment	
Urban program	Service work Scavenger hunts Amazing race	
Walking/running	Adventure Course Adventure Racing Bird watching Bushwalking Farm Days Geocaching	Guided Tour Kite-flying Laser Skirmish Orienteering/Rogaining Running activities Solo Day/Environmental Interpretation
Wheel sports	Billy Carts Cycling (bmx) Mountain biking Quad biking Skating - inline and skateboarding	
Other		

Action plan

Action plans are used to record the actions identified to prevent future incidents. The template collects the following data: relevant incident report numbers; incident prevention strategies; accountabilities and implementation timelines; and whether the actions have been completed. The Action plan data collected is outlined in Table 8.

Table 8 *Types of data collected in the action plans with examples*

Field	**Help text**	**Response options**	**Examples**
Action plan created on		Date	08.03.2018
Incident data		Link to analysis or incident report number	
Goal	What do you want to achieve?	Free text	Improve safety of campcraft activities
Justification	Why is this action plan required (e.g. what contributory factors are you trying to address)?		Campcraft is the activity most associated with injuries, and especially high severity injuries.
Action name	Give the action a name.		Increase supervision on all campcraft activities.
Describe specific activities required	What specific activities are required to achieve the goal?	Free text – should be able to enter multiple actions then linked to fields below	Introduce supervision requirements for campcraft activities on all programs (2 supervisors to 10 participants)
Responsibilities	Who will implement and monitor the action?	Assign responsibilities to users of UPLOADS	

Field	Help text	Response options	Examples
Evaluation of success	What criteria will you use to judge whether the action is successful?	Free text	100% of program plans to include supervision requirements Reduced severity of campcraft injuries
Evaluation strat egy	What data will you use to measure whether the action is successful?	Free text	Program plans Incident data on campcraft activities
Evaluation time frame	How frequently will you measure whether the action is successful?	Weekly, Monthly, Quarterly, Yearly	Quarterly
Final date for review	Date to decide whether the action was successful.	Date	08.03.2019
Action status	Rate the success of the action	• In-progress • Action successful - met criteria • Action partially successful – met criteria to a certain degree • Action unsuccessful – did not meet criteria • Action not implemented	On-going

Organisation demographics

UPLOADS App supports the benchmarking of data against other similar organisations. To achieve this, the data shown in Table 9 is collected about each organisation.

Table 9 *Organisation demographics*

Organisation	**Free response**
Organisation Name	Open text field
Where do you conduct Led Outdoor Activities	Select all that apply: ACT; NT; NSW; QLD; SA; TAS; VIC; WA; Non-Australia
Organisation type	Government/Public sector; Not-for-profit; Commercial enterprise; Other.
What is the size of your organisation?	• Micro (less than 5 employees or volunteers involved on a regular basis; including sole proprietorships and partnerships without employees); • Small (more than 5 and less than 20 employees or volunteers involved on a regular basis). • Medium (20 or more employees or volunteers involved on a regular basis, but less than 200 people); • Large (200 or more employees or volunteers involved on a regular basis) *Based on ABS definitions of business size, extended to accommodate organisations with volunteers.*
Is your organisation one of the following?	Primary school; Secondary school; University; TAFE; Registered Training Organisation; No
How many locations/operating sites does your organisation have?	Open text field
Will all locations/operating sites use UPLOADS to report incidents?	Yes/No
Does your organisation also provide services other than LOA programs?	Yes/No

User demographics

To register to use the UPLOADS app, users must enter their name and email address. The UPLOADS app automatically sends users reminder emails at the beginning of each month to complete tasks. The Administrators email address will be utilised by the research team to keep them updated on the project. All other users will not be emailed directly by the research team. UPLOADS App collects the demographic information about each of the user types, shown in Table 10. The completion of demographic information also provides a mechanism for obtaining consent for the use of the data for research purposes.

Table 10 *User demographic information*

Field	**Response options**
User ID	Free response
What is your gender? (Optional)	Female, Male, Other,
What is your age? (Optional)	Under 18; 18 to 24; 25 to 34; 35 to 44; 45 to 54; 55 to 64; 65 to 74; 75 or older.
What is your role in your organisation? (Optional)	Free response
Do you lead outdoor activities as part of your current role? (Optional)	Yes/No
Do you have outdoor education or recreation qualifications? (Optional)	Yes/No

Usage statistics

The app records de-identified statistical information about the frequency and type of app features (i.e. incident reports, participation data, data analysis sections) used by organisations. A list of statistical information collected is shown in Table 11.

Table 11 *Usage statistics collected by the UPLOADS app*

Field	**Statistical Data Collected**
Frequency of Incident Reports entered	Per organisation; per user; per specified time period
Frequency of Participation data entered	Per organisation; per user; per specified time period
Types and location of Custom fields	Field Labels; Field Types; Form Section
UPLOADS App usage statistics, using Google Analytics.	View the amount of times pages within the app have been accessed etc.

Data analysis reports

To help organisations make sense of their data, the UPLOADS App produces the following reports:

- Summary statistics of participation and incident data;
- Injury summary reports;
- Illness summary reports;
- Near miss summary reports; and
- Accimaps of the contributory factors involved in incidents.

The App provides a function to filter these reports based on any field in the database to produce more specific analyses (e.g. for a specific LOA). The specific types of reports produced are described in the following sections.

Summary statistics

The UPLOADS App produces four types of summary reports based on the type of incidents: overall, injury, illness and near miss. Users will be able to compare their organisation's summary statistics to the National Incident Dataset. The reports are described in detail below.

Section 1: Overall summary report

Table 12 provides the data and methodology used to calculate the organisation's overall incident rates and incident rates per activity type.

Table 12 *Data and methodology used to calculate the incident rates.*

Label	**Incident data**	**Relevant participation data**	**Calculations**
Overall incident rate	Total number of incident reports	Program participation days	Overall incident rate per 1000 program participation days (number of incident reports/number of program participation days x 1000)
Incident rates by activity types	Activity code frequencies	Activity participation days	Incident rates for each activity (number of incident reports/number of activity participation days x 1000)

Section 2: Incident characteristics

Table 13 describes the data used to report the characteristics of incidents reported by the organisation.

Table 13 *Data and methodology used to report incident characteristics.*

Incident rates	**Incident data**	**Relevant participation data**
Type of incidents	*Type of incident*: frequencies	
Actual severity	*Actual severity*: means, standard deviations and frequencies	
Days of the week	*Date of incident*: frequencies per days of week	Program dates: frequencies of program participation days
Time	Time of incident: frequencies for: 12:00 - 2:59AM; 3:00 - 5:59AM; 6:00 - 8:59AM; 9:00 - 11:59AM; 12:00 - 2:59PM; 3:00 - 5:59PM; 6:00 - 8:59PM; 9:00 - 11:59PM	
State/Territory	*State/Territory*: frequencies of incidents	State/Territory: frequencies of program participation days in each state
Program type	*Program type:* frequencies of incidents	Program type: frequencies of program participation days by program types
Profile of activity group	Means and standard deviations for *people involved in activity associated with the incident:* • *Activity participants* • *Activity leaders* • *Supervisors* • *Other*	Means and standard deviations for *people involved in programs:* • *Activity participants* • *Activity leaders* • *Supervisors* • *Other*
	Ratio of activity leaders to activity participants **by activity** across all incidents.	Ratio of activity leaders to activity participants **by activity**
	Frequencies of gender for activity participants involved in incidents	Frequencies of gender for activity participants

Injury summary report

Table 14, describes the data and methodology used to calculate the frequency of injury incident types reported by the organisation.

Table 14 *Data and methodology used to calculate injury incidence rates*

Label	**Incident data**	**Relevant participation data**	**Calculations**
Injury incidence rates	Total number of injury-related incident reports	Program participation days	Overall injury incidence rate per 1000 program participation days (number of injury related incident reports/number of program participation days x 1000)
Injury incidence rates by activity types	Activity code frequencies	Activity participation days	Injury incidence rates for each activity (number of injury related incident reports/number of activity participation days x 1000)

Section 2: Injury incident characteristics

Table 15 describes data used to report the characteristics of injury incident types reported by the organisation.

Table 15 *Data used to report the injury incident characteristics*.

Label	Incident data	Relevant participation data
Injury incident severity ratings	*Actual severity*: means, standard deviations and frequencies for injury related incident reports	
Days of the week	*Date of incident*: frequencies per days of week for injury related incident reports	Program dates: frequencies of program participation days
Time	*Time of incident:* frequencies for 6am – 6pm, 6pm – 6am for injury related incident reports	
State/Territory	*State/Territory*: frequencies of incidents for injury related incident reports	State/Territory: frequencies of program participation days in each state
Program type	*Program type:* frequencies of incidents for injury related incident reports	Program type: frequencies of program participation days by program types
Profile of activity group	For injury related incident reports Range, means and standard deviations for *people involved in activity associated with the incident:* • *Activity participants* • *Activity leaders* • *Supervisors/helpers* • *Other* Range, means and standard deviations for ratio of activity leaders to activity participants **by activity** for injury related incident reports	Range, means and standard deviations for *people involved in programs:* • *Activity participants* • *Activity leaders* • *Supervisors/helpers* • *Other* Range, means and standard deviations for ratio of activity leaders to activity participants **by activity**

Section 3: Injury profile

Table 16 describes the data used to report the profile of injury incident types.

Table 16 *Data used to report the profile of injury incident types*

Label	**Incident data**	**Relevant participation data**
Injury type and location	Type and frequency of injuries sustained according to body location.	
Injury location by severity	Frequency of injury location by actual severity ratings	
Evacuation of injured people	Frequencies of *evacuation*	
Emergency services	Frequencies of *emergency services*	
External medical treatment	Frequencies for *external medication treatment*	
Pre-existing conditions	Pre-existing conditions – frequencies for injured people	
Injured people	*Role*: frequencies of injured person by role	Frequencies of *people involved in programs:* • *Activity participants* • *Activity leaders* • *Supervisors/helpers* • *Other*
	Role by gender: frequencies of injured person by role and gender	Frequencies of gender for activity participants
	Role by age: frequencies of age groups of injured person by role	Frequencies of age group for activity participants

Illness summary report

Section 1: Illness incidence rates

Table 17, describes the data and methodology used to calculate the frequency of illness incident types reported by the organisation.

Table 17 *Data and methodology used to calculate illness incidence rates*

Label	**Incident data**	**Relevant participation data**	**Calculations**
Illness incidence rates	Total number of illness-related incident reports	Program participation days	Overall illness incidence rate per 1000 program participation days (number of illness related incident reports/number of program participation days x 1000)
Illness incidence rates by activity types	Activity code frequencies	Activity participation days	Illness incidence rates for each activity (number of illness related incident reports/number of activity participation days x 1000)

Section 2: Illness incident characteristics

Table 18 describes data used to report the characteristics of illness incident types reported by the organisation.

Table 18 *Data used to report the illness incident characteristics*

Label	**Incident data**	**Relevant participation data**
Illness incident severity ratings	*Actual severity*: means, standard deviations and frequencies for illness related incident reports	
Days of the week	*Date of incident*: frequencies per days of week for illness related incident reports	Program dates: frequencies of program participation days
Time	*Time of incident:* frequencies for 6am – 6pm, 6pm – 6am for illness related incident reports	
State/Territory	*State/Territory*: frequencies of incidents for illness related incident reports	State/Territory: frequencies of program participation days in each state
Program type	*Program type:* frequencies of incidents for illness related incident reports	Program type: frequencies of program participation days by program types
Profile of activity group	For illness related incident reports Range, means and standard deviations for *people involved in activity associated with the incident:* • *Activity participants* • *Activity leaders* • *Supervisors/helpers* • *Other* Range, means and standard deviations for ratio of activity leaders to activity participants **by activity** for illness related incident reports	Range, means and standard deviations for *people involved in programs:* • *Activity participants* • *Activity leaders* • *Supervisors/helpers* • *Other* Range, means and standard deviations for ratio of activity leaders to activity participants **by activity**

Section 3: Illness profile

Table 19 describes the profile of the illness injury types.

Table 19 *Data used to report the profile of illness injury types.*

Label	**Incident data**	**Relevant participation data**
Illness type	Type and frequency of illnesses	
Illness type by severity	Frequency of illness type by actual severity ratings	
Evacuation of ill people	Frequencies of *evacuation*	
Emergency services	Frequencies of *emergency services*	
External medical treatment	Frequencies for *external medication treatment*	
Pre-existing conditions	Pre-existing conditions – frequencies for ill people	
Ill people	*Role*: frequencies of ill person by role	Frequencies of *people involved in programs:* • *Activity participants* • *Activity leaders* • *Supervisors* • *Other*
	Role by gender: frequencies of ill person by role and gender	Frequencies of gender for activity participants
	Role by age: frequencies of age groups of ill person by role	Frequencies of age group for activity participants

Near miss summary report

Section 1: Near miss incidence rates

Table 20, describes the data and methodology used to calculate the frequency of near miss incident types reported by the organisation.

Table 20 *Data and methodology used to calculate near miss incidence rates*

Label	**Incident data**	**Relevant participation data**	**Calculations**
Near miss incidence rates	Total number of near miss-related incident reports	Program participation days	Overall near miss incidence rate per 1000 program participation days (number of near miss related incident reports/number of program participation days x 1000)
Near miss incidence rates by activity types	Activity code frequencies	Activity participation days	Near miss incidence rates for each activity (number of near miss related incident reports/number of activity participation days x 1000)

Section 2: Near miss incident characteristics

Table 21 describes data used to report the characteristics of near miss incident types reported by the organisation.

Table 21 *Data used to report the near miss incident characteristics.*

Label	**Incident data**	**Relevant participation data**
Near miss incident severity ratings	*Potential severity*: means, standard deviations and frequencies for near miss related incident reports	
Days of the week	*Date of incident*: frequencies per days of week for near miss related incident reports	Program dates: frequencies of program participation days
Time	*Time of incident:* frequencies for 6am – 6pm, 6pm – 6am for near miss related incident reports	
State/Territory	*State/Territory*: frequencies of incidents for near miss related incident reports	State/Territory: frequencies of program participation days in each state
Program type	*Program type:* frequencies of incidents for near miss related incident reports	Program type: frequencies of program participation days by program types
Profile of activity group	For near miss related incident reports Range, means and standard deviations for *people involved in activity associated with the incident:* • *Activity participants* • *Activity leaders* • *Supervisors* • *Other* Range, means and standard deviations for ratio of activity leaders to activity participants **by activity** for near miss related incident reports	Range, means and standard deviations for *people involved in programs:* • *Activity participants* • *Activity leaders* • *Supervisors* • *Other* Range, means and standard deviations for ratio of activity leaders to activity participants **by activity**

Section 3: Near miss profile

Table 22 describes the data used to report the demographics of people involved in near miss incidents.

Table 22 *Data used to report the demographics of people involved in near miss incidents.*

Label	**Incident data**	**Relevant participation data**
People involved in near misses	*Role*: frequencies of near miss person by role	Frequencies of *people involved in programs:* • *Activity participants* • *Activity leaders* • *Supervisors/helpers* • *Other*
	Role by gender: frequencies of near miss person by role and gender	Frequencies of gender for activity participants
	Role by age: frequencies of age groups of near miss person by role	Frequencies of age group for activity participants

Accimap analyses of contributory factors

Accimaps are a graphical representation of the data collected on the contributory factors and relationships between them involved in incidents. They can be based on a single incident, or multiple incidents based on any variable within the database (e.g. by injury type, activity, month, season, year, evaluation type, or by age of injured person and activity).

The Accimaps present the following information:

1. **Frequency** and **percent** of identified contributory factors;
2. **Frequency** of identified relationships between contributory factors.

Frequency = number of incidents where that factor was identified as playing a role.

Percent = number of incidents where that factor was identified as playing a role/total number of incident reports x 100.

To interpret the Accimaps, **a summary of the descriptions provided for the contributory factors and relationships** identified from the incident reports is provided.

Application user's roles and responsibilities

There are three levels of users within the UPLOADS App: Reporters, Supervisors, and Administrators. The responsibilities and time requirements to complete each activity are provided in Table 23.

It is important to note that incident reports are completed, firstly, by the person supervising the activity at the time of the incident (i.e. Activity Leader) and then by the person supervising or providing oversight for the entire activity program (i.e. typically a Supervisor, Field Manager or Manager). This is required to collect detailed information about the network of contributory factors involved in the incident. This two stage data collection approach is also intended to have the added safety benefit of ensuring that those providing oversight for the activity program would be informed of all incidents.

Table 23 *Roles, responsibilities, and estimated times to complete each responsibility*

Application user	**Responsibilities and estimated time requirements**
Administrator	Initial registration and set up (1 to 2 hours) • Provide consent for the organisation to participate in the study. • Register and administrate the organisation's UPLOADS App account • Agree to the UPLOAD App's Organisational Terms & Conditions and Privacy Policy • Invite staff members to use the UPLOADS app. • Determine UPLOAD App customisable fields • Determine Access Levels and Permissions Ongoing administrative responsibilities (.5 day per month) • Submit de-identified reports and participation data to the National Incident Dataset. • Registering and training new application users. Enter LOA participation data (5 minutes per program) • Provide LOA program details including: program dates; LOA activities undertaken during the program; number of program participants; and program participant demographics including gender and age. Data analysis (5 minutes to produce report, and additional time to explore the data) • Produce reports on the data
Reporter	Registration and acceptance of end user terms and conditions (10 minutes) Enter incident reports (10 – 20 minutes per report) • Initiate and complete reports and, when possible, identify contributing factors and relationships between factors. • Submit reports to their supervisor to review for accuracy and to identify additional contributing factors and relationships between factors.
Supervisor	Registration and acceptance of end user terms and conditions (10 minutes) Enter and check incident reports (10 – 20 minutes per report) • Initiate and complete new incident reports and identifies contributing factors and relationships between factors. • Confirm incidents, and the contributory factors involved, have been recorded accurately by reporters and identify additional contributing factors or relationships between factors.

Access permissions to identifiable and de-identifiable data

The UPLOADS App's default roles and access levels are listed in Table 24. The Administrator can create additional roles and assign access permissions to suit their organisation's needs.

Table 24 *Default access permissions to identifiable and de-identifiable data*

Role	**Access Permissions**	**Description**
Administrator	Settings tab	Enter customisable fields. Enter new users and assigning access levels and permissions. Assign user's roles and access permissions. Enter activities provided by the organisation and aligning them to the Activity Classification Schedule.
	Explore tab	Access to data analysis reports
	Participation Data Tab	Access to the organisation's participation data
	Incident Tab	Access to the organisation's **identifiable** Incident reports
Reporter	Incident Tab	Access to reports entered by the reporter
Reporter's direct Supervisor or Manager	Incident Tab	Access to reports entered by the Supervisor and reports assigned to them for review.
	Participation Data Tab	Access participation data enter by the supervisor/manager and data assigned to them for review
Research Team	Explore tab	Access to **de-identified** incident data analyses
	Participation Data Tab	Access to **de-identified** participation data
	Incident Tab	Access **to de-identified** incident data
	Administrator's contact details	To manage their participation and training throughout the project.

Role	Access Permissions	Description
Chief Investigator Prof Paul Salmon Partner Investigator Dr Natassia Goode	Identifiable and de-identifiable data stored on the VPS	Password secured access to StudioCoast Account to administer the VPS. Will only access identifiable information if requested by the organisation or if there is a technical issue with the data stored on the server.
	Access to the organisation's name; demographic information; and Administrator's contact details through the interface.	This information will be downloaded, and used by the research team to manage contact with organisations.
StudioCoast Pty Ltd (Hosting Provider)	All identifiable and de-identifiable data stored on the VPS.	Regular maintenance of the Server may result in authorised staff members accessing this information/data for administrative purposes.
Morgan & Hoppitt (UPLOADS App Developer)	All identifiable and de-identifiable data stored on the VPS.	Regular maintenance of the App may result in Morgan & Hoppitt staff accessing this information/data for administrative purposes.

National Incident Dataset

The National Incident Dataset (NID) consists of the de-identified incident and participation data that has been submitted from LOA providers. The de-identified data does not contain the names of the people involved in incidents or specific geographic locations in which they occur. In addition, LOA providers cannot be identified once the data is merged into the NID.

Restrictions on reporting data

To protect the confidentiality and privacy of LOA providers and individuals, restrictions on reporting the aggregate data were specified.

AcciMaps

- The details of individual incidents are not reported in isolation;
- There must be at least 20 incident reports of a particular type to form the basis for an aggregate analysis (e.g. we would not present a detailed analysis of three incidents involving a social/psychological outcome);
- The activity must be conducted by three or more LOA providers to report on incidents associated with a specific LOA (e.g. we would not present a detailed analysis of archery incidents if the activity was only conducted by one LOA provider). LOA Providers must have entered participation data to be counted.

Summary Reports and Detailed Analyses

- The activity must be conducted by three or more LOA providers to report on incidents associated with a specific LOA (e.g. we would not present a detailed analysis of archery incidents if the activity was only conducted by one LOA provider). LOA Providers must

have entered participation data to be counted.

Glossary of terms

Term	Definition
UPLOADS	Understanding and Preventing Led Outdoor Accidents Data System
National Incident Dataset (NID)	The NID consists of the de-identified incident and participation data that has been submitted by LOA providers through the UPLOADS program. The de-identified data does not contain the names of the people or organisation's involved in incidents or geographic locations in which the incident occurs.
Led Outdoor Activities	Activities that are facilitated or instructed activities in outdoor education and recreation settings
Incident	An event that results in an adverse outcome or a near miss during an LOA
Adverse Outcome	An event resulting in a negative impact. For LOA's negative impacts on people involved in activities include injuries, illnesses, fatality, and psychosocial impacts. UPLOADS is also intended to collect information about equipment and environmental damage occurring during the activity, and missing or overdue people returning from the activity.
Near Miss	An incident that has the potential to cause an adverse outcome but fails to do so. For example, during a rock climbing activity an instructor notices that a participant's carabineer was not locked. If the student had fallen, this may have led to a serious injury.
Participation Data	The number of participants undertaking activities in your organisation each month. This information is important because incident frequencies only give a partial picture of the level of risk associated with activities. Collecting participation data allows us to accurately compare the level of risk associated with different activities.
Actual Severity	Actual severity is based on the response to the event and the outcome
Potential Severity	Potential severity is based on reporter's subjective perception of the most likely or probable outcome should a similar event occur in the future, under similar circumstances. Refer to rating scale for more information.
Role: Activity Participant	People actively participating in the activity (e.g. students or clients)
Role: Activity Leader	People instructing the activity (e.g. Leaders, guides, or instructors).

Term	Definition
Role: Activity Supervisor	People who contribute to the planning/supervision of the activity and supervision of activity leaders. These people are typically outside the immediate context of the activity. (e.g. field managers, supervisors or administrative staff).
Role: Other	Other people involved in the incident (e.g. Drivers, support staff, or caterers)
Program Participation Days	Based on the program length and total number of participants (e.g. a program is five days with 12 participants)
Activity Participation Days	Based on the number of days participants are exposed to the particular activity and number of participants on each day (e.g. canoeing is conducted on two days of a five day program, with 11 and 12 participants)
Contributory Factors	Sharing in or being partly responsible (for the cause of something)
Relationships / Interactions between contributory factors	TBA

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