

2016-2017 ANNUAL REPORT

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UNDERSTANDING AND PREVENTING LED OUTDOOR ACCIDENTS DATA SYSTEM

UPLOADS 2016-2017 ANNUAL REPORT

THE UPLOADS RESEARCH TEAM

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South Australia's peak body for Outdoor Adventure activities



Christian Venues Association







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Australian Research Council

CONTENTS

- INTRODUCTION
- **IN THIS REPORT...** 2
- **INJURY INCIDENTS** 5
- SYSTEMS ANALYSIS OF INJURIES 11
- **ILLNESS INCIDENTS** 21
- SYSTEMS ANALYSIS OF ILLNESSES 26
- **NEAR MISS INCIDENTS** 34
- SYSTEMS ANALYSIS OF NEAR MISS INCIDENTS 38
- LEARNING WITH UPLOADS 48
- **AFTERWORD** 50

Introduction

evolving since inception 8 years ago, when industry stakeholders recognised a need to tackle issues around incident reporting and injury causation in the led outdoor activity (LOA) sector in Australia.

The UPLOADS incident reporting system that was developed allows LOA providers to collect essential incident details which go beyond standard reports. Using a systemstheory model of accident causation (Rasmussen, 1997), the UPLOADS method provides a contributing factor classification scheme and a mapping framework. This method provides the tools necessary to identify the factors contributing to incidents in LOAs, as well as the systemic relationships between them.

Through the analysis of this aggregate data, the UPLOADS National Incident Dataset can be used to identify sector-wide patterns and trends in the incidence rates and contributory factors of activities. Prior to the UPLOADS Project, this information was not available in the LOA sector in Australia. It is important to note that although the reports are analysed by the research team,

The UPLOADS Project has been growing and all the contributing factors and relationships that are identified come directly from the deidentified incident reports provided by Australian LOA organisations. Therefore, the analyses of contributing factors presented in this report represent the issues that are considered important by those who reported the incidents.

> The aim of this report is to present a detailed overview of the data collected during the third year of data collection for the National Incident Dataset (1st June 2016 – 31st May 2017).

Copies of the first and second annual reports can be found on our website at

www.uploadsproject.org

Together, the annual reports generated by the UPLOADS National Incident Dataset contribute to an improved understanding of the incidents that occur during LOAs in Australia. These findings can be used to support the development of data-driven, targetted incident prevention strategies.

In this report...

The following report is presented in three separate sections for illnesses, injuries, and near miss incidents.

OUTCOME	DEFINITION WITHIN UPLOADS
Incident	Any event that results in an adverse outcome or a near miss.
Adverse outcome	Any event resulting in a negative impact, including: missing/overdue people; equipment or environmental damage; injury; illness; fatality; or social or psychological impacts.
Near miss	Any serious mishap that has the potential to cause an adverse event 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.

INCIDENT STATISTICS Each section of SYSTEMS ANALYSIS Also included in

this report starts with an overview of the data collected for each outcome and a summary of contributing factors involved in each incident. the characteristics of the incidents. Incident The UPLOADS accident analysis method was rates for LOAs are calculated per 1000 participants ((number of incidents/number of participants) x 1000)) for each activity. As there are over 80 different types of activities captured in the UPLOADS data, activities are clustered into 20 broad categories which group activities with similar characteristics. For example, the category "walking/running outdoors" includes bush walking, orienteering and adventure races. The category 'river activities' includes canoing, rafting and kayaking. Other incident statistics presented in this report include incident severity ratings and demographic information.

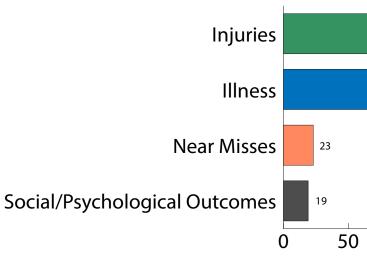
each section of this report is the analysis of the used to classify the contributing factors and relationships that reporting practitioners identify in the incident report. These factors are then represented as AcciMaps, which show the network of contributing factors that were identified in the incident reports, and the relationships between them.

METHOD For a full description of the method used by the UPLOADS project for the collection of data for the National Incident Dataset, please refer to our website. Details regarding the design, recruitment, and data inclusion and analysis can also be found in our earlier annual reports.

ORGANISATIONS FROM ACROSS AUSTRALIA CONTRIBUTED DATA DURING THE 2016-2017 REPORTING PERIOD 6 CAMPS 4 COMMERCIAL ENTERPRISES 2 SCHOOLS

1 TRAINING ORGANISATION (E.G., TAFE, UNIVERSITY) **QLD** WA 1 **NSW** АСТ

509 INCIDENTS WERE UPLOADED INTO THE NATIONAL INCIDENT DATASET



						340
		145				
C	100	150	200	250	300	350



Injury incidents

340 INJURY INCIDENTS REPORTED IN THE UPLOADS NATIONAL INCIDENT DATASET

2.2 INJURY INCIDENTS WERE REPORTED PER 1000 PARTICIPANTS

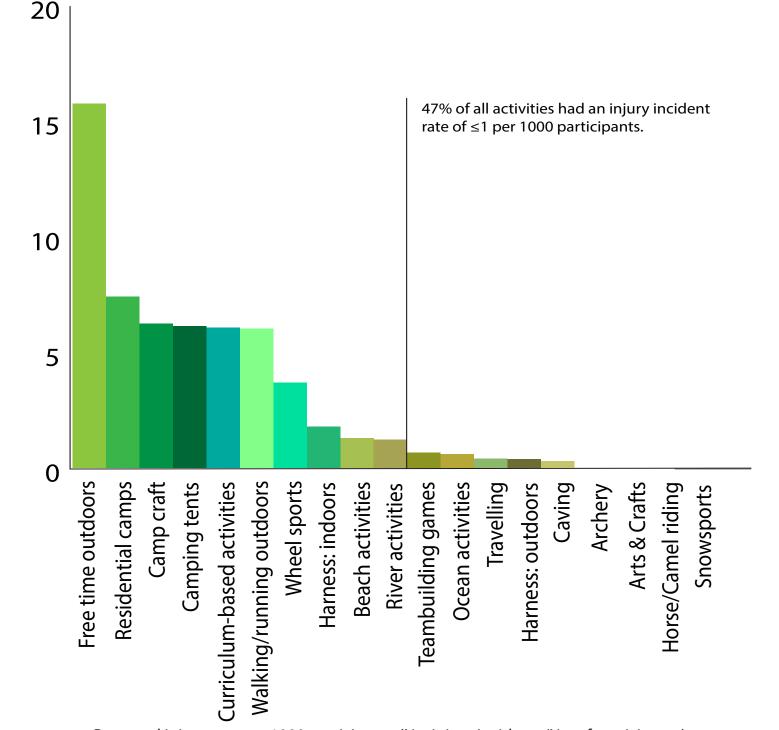
INJURIES IN THE WILD

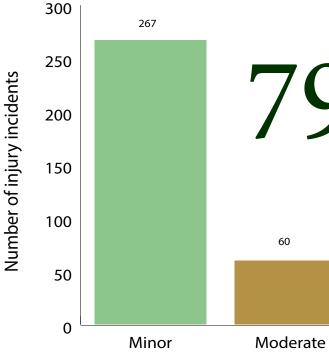
In Australia, the rates of injury per 1000 participants in LOAs are substantially lower than some organised sports, such as cricket (242/1000), horse-riding (122/1000), and soccer (107/1000)¹.

Accident Research Centre.

INJURY RATES BY ACTIVITY

Free-time in the outdoors had the highest recorded number of injuries in the data set with 15.7 incidents per 1000 participants. Residential camps and campcraft (i.e., cooking, camp fires) were also amongst the activities with the highest incidence rates (7.4 and 6.2 incidents per 1000 participants, respectively).

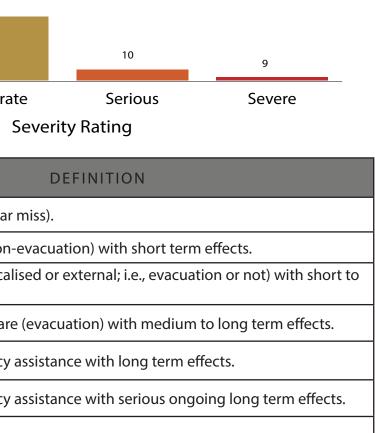




RATING	
No impact	Requires no treatment (near
Minor	Requires localised care (non
Moderate	Requires ongoing care (loca medium term effects.
Serious	Requires timely external care
Severe	Requires urgent emergency
Critical	Requires urgent emergency
Fatality	Fatality.

The injury incidence rate and the severity of the injuries that occur during Australian LOAs has remained relatively stable since the UPLOADS Project began collecting data in 2014.

OF INJURY INCIDENTS WERE RATED AS MINOR



INJURIES IN THE WILD



TYPES AND BODY LOCATIONS OF REPORTED INJURIES

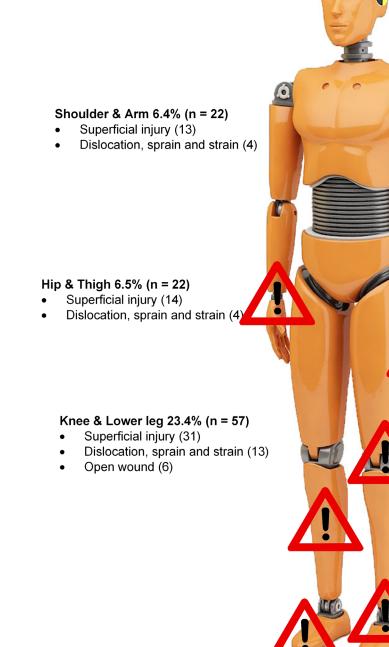
are indicated by red triangles.

2.4% of injury incidents required EMERGENCY SERVICES

4. OF INJURED PEOPLE REQUIRED HOSPITALISATION

9.7% OF INJURED PEOPLE REQUIRED EVACUATION

The majority of the evacuations that were required for injuries were undertaken by vehicle 75.7%. In 15.2% of evacuations the injured persons were walked out, and in 9.1% of cases a stretcher was required.



Multiple body regions 2.4% (n = 8)

Unspecified part of trunk, limb or body region 2.9% (n = 10)

The figure below presents the three most frequently reported injury types for each body region. The body regions that were injured most frequently

Head & Neck 11% (n = 38)

- Superficial injury (15)
- Unspecified injury (10)
- Effects of foreign body entering through natural orifice (4)

Chest & Abdomen 3.2% (n = 12)

- Superficial injury (4)
- Injury to muscle, fascia or tendon (3)

Wrist & Hand 25.3% (n = 86)

- Superficial injury (30)
- Open wound (22)
- Burns and corrosions (16)

Ankle & Foot 23.2% (n = 79)

- Superficial injury (38)
- Dislocation, sprain and strain (33)
- Open wound (4)

DEMOGRAPHICS

The majority of the people injured The average number of participants were activity participants (84.4%), with an average age of 15 years.

300

250

GROUP PROFILE

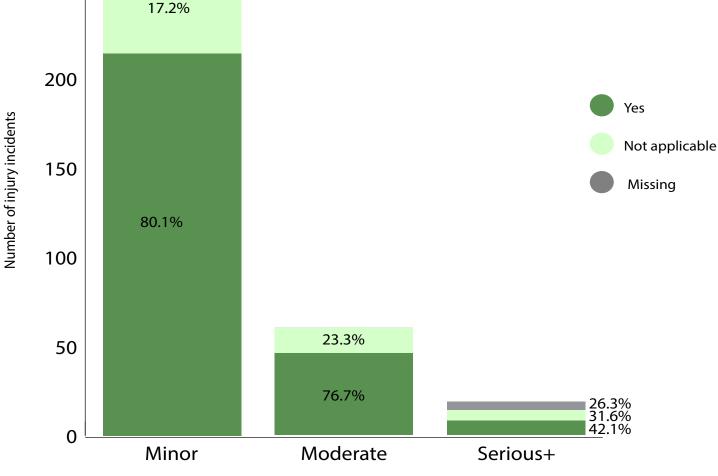
involved in activities associated with injury incidents was 15. There was a ratio of 2 activity leaders for every 15 participants in these activities.

OUALIFICATIONS

In 79% of incidents, the activity leader was reported to have relevant qualifications. In 21% of incidents qualifications were reported to be "not applicable" and predominantly involved:

- free time activities (42%)
- campcraft (15%)
- walking/running outdoors (10%)

This graph shows the proportion of injury incidents by severity ratings, partitioned according to leader qualifications.



Proportions of incidents in severity rating categories partitioned by whether the leader was reported to have relevant qualifications

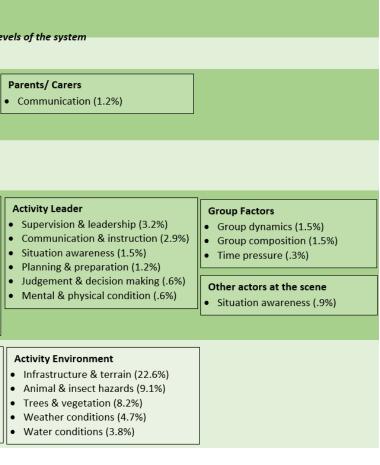
SYSTEMS ANALYSIS OF INJURIES IN THE LED OUTDOORS

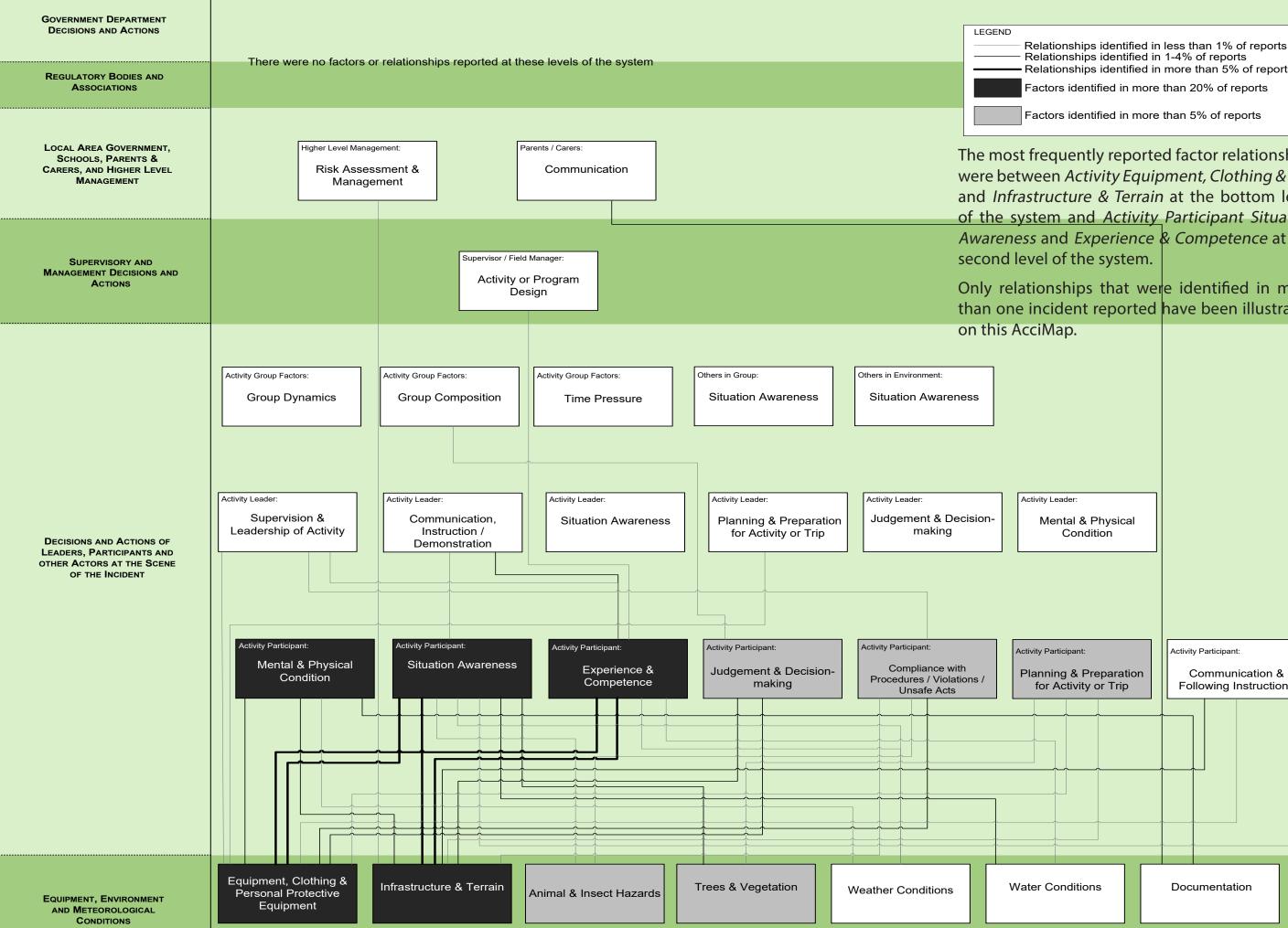
The contributing factors that were identified by reporters were in the lower four levels of the UPLOADS Accident Analysis Scheme (see table below). The relationships between these factors, and the frequencies with which they were reported, are presented in the AcciMap on the following page.

GOVERNMENT DEPARTMENT DECISIONS & ACTIONS	There were no factors reported at these le
REGULATORY BODIES & ASSOCIATIONS	There were no juctors reported at these re
LOCAL AREA GOV'T, SCHOOLS, PARENTS/CARERS, & HIGHER-LEVEL MANAGEMENT	Higher Level Management Activity / program design (.9%)
SUPERVISORY & MANAGEMENT DECISIONS & ACTIONS	Supervisor / Field Manager Activity / program design (2.6%)
DECISIONS & ACTIONS OF ACTIVITY LEADERS, PARTICIPANTS, & OTHER ACTORS AT THE SCENE	Activity Participant Mental & physical condition (22.1%) Situation awareness (21.5%) Experience & competence (20.3%) Judgement & decision making (9.7%) Compliance with procedure (5.6%) Planning & preparation (5.0%) Communication & following instructions (3.8%)
EQUIPMENT, ENVIRONMENT, & METEOROLOGICAL CONDITIONS	Activity Equipment & Resources Equipment, clothing, & personal protective equipment (28.8%) Documentation (1.5%) Food & drink (.9%)

FACTORS CONTRIBUTING TO INJURY INCIDENTS WERE IDENTIFIED BY REPORTERS

CONTRIBUTING FACTORS IDENTIFIED ON AVERAGE PER INJURY REPORT

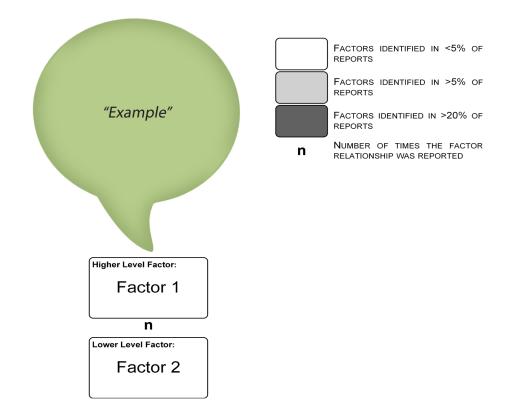




ips identified in	1-4% of reports		
-	more than 5% of reports		
entified in more	than 20% of reports		
entified in more	than 5% of reports		
	·		
ntly reporte	d factor relationsh	ips	
	oment, Clothing & F		
	at the bottom le		
	Participant Situat		
	& Competence at 1	ne	
ne system.			
os that we	e identified in mo	ore	
	have been illustrat		
reported			
& Physical dition			
t:	Activity Participant:	7	
Preparation ty or Trip	Communication & Following Instructions		
	\\		
ons	Documentation	Food & Drin	k

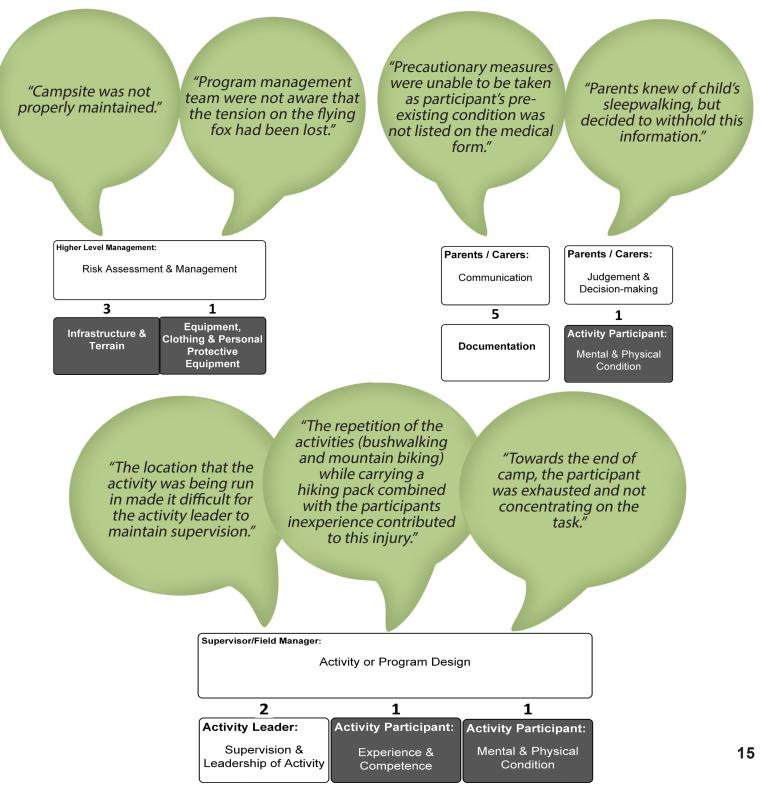
300 RELATIONSHIPS WERE IDENTIFIED BETWEEN INJURY CONTRIBUTING FACTORS

Relationships refer to the interactions between contributory factors. In the following figures, the most frequently identified factor relationships are presented. Relationships that were most frequently identified by reporters are highlighted in red text.



LOCAL AREA GOVERNMENT, SCHOOLS, PARENTS & CARERS, AND HIGHER LEVEL MANAGEMENT

There were 17 factors reported at *Local Area Government, Schools, Parents & Carers, and Higher Level Management* levels of the LOA system framework. Fourteen (14) relationships were identified between these factors and lower level factors.

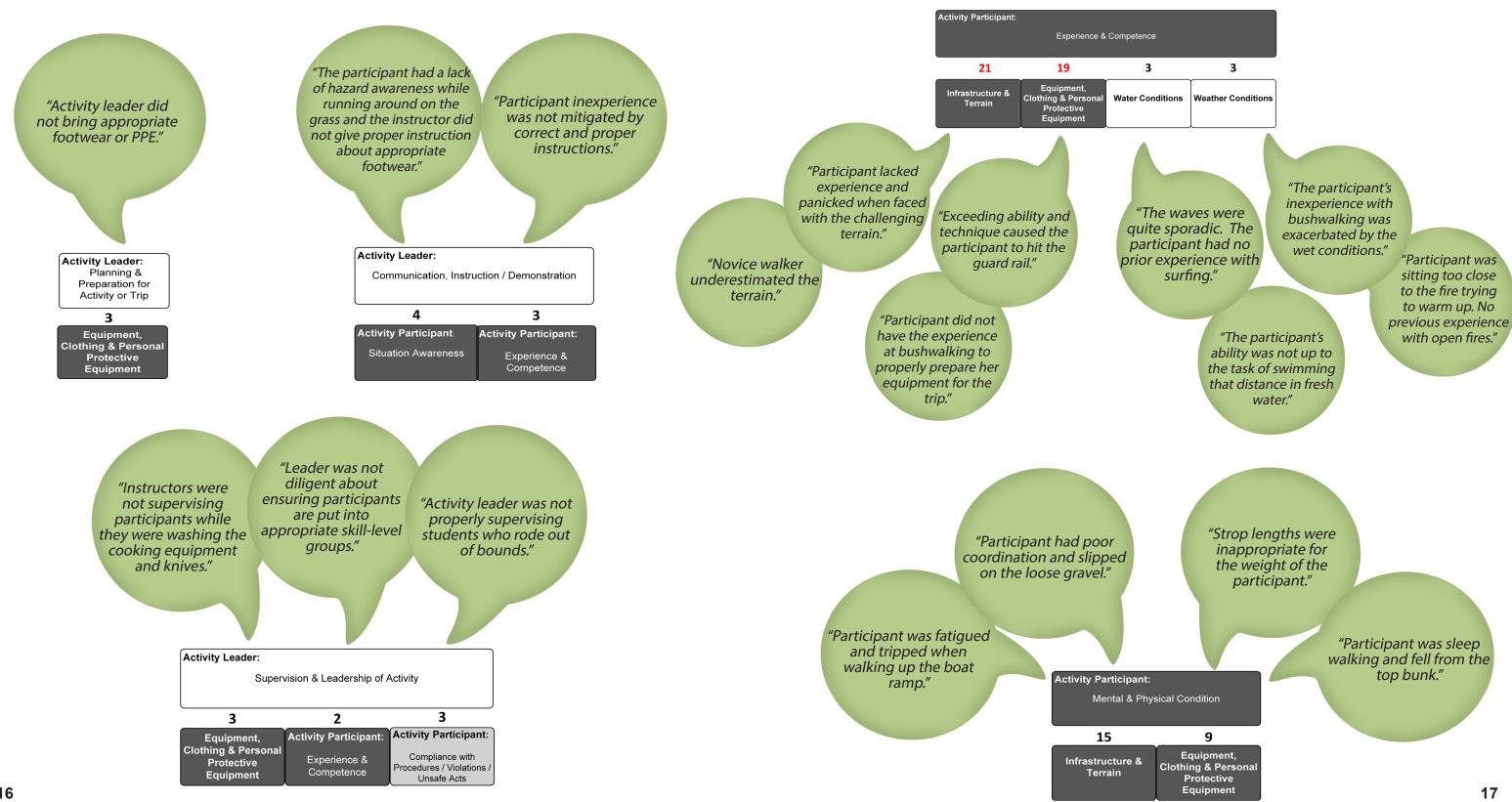


ACTIVITY LEADERS

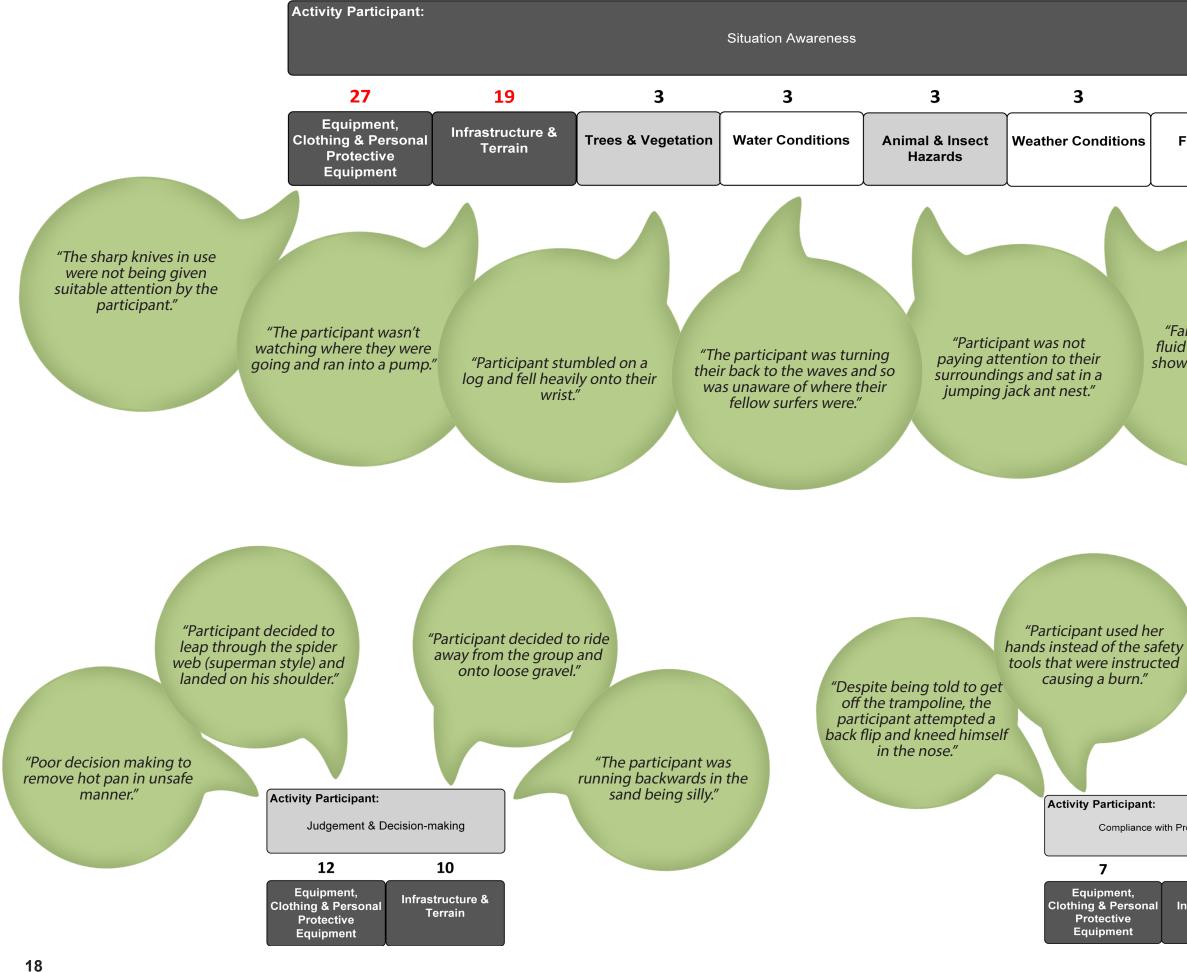
In 34 incident reports, contributing factors related to the decsions and actions of Activity Leaders were identified by reporters. Thirty-two (32) relationships were identified between these factors and lower level factors.

ACTIVITY PARTICIPANTS

Contributing factors related to the decsions and actions of Activity Participants were identified in 299 incident reports. Between these factors and lower level factors, there were 236 factor relationships identified.



INJURY INCIDENTS





Food & Drink

"Fainting caused by low fluid intake in hot weather showed a lack of awareness by participant."

"The participant cut" themselves when opening a tin can of sweet corn for lunch."

"Participant disregarded instructions to stick to paths and not go through gardens or roped off areas."

"Ants got into the tent causing several insect bites. Participants did not zip up the tent as instructed."

Compliance with Procedures / Violations / Unsafe Acts

2 Infrastructure &

Terrain

Animal & Insect Hazards

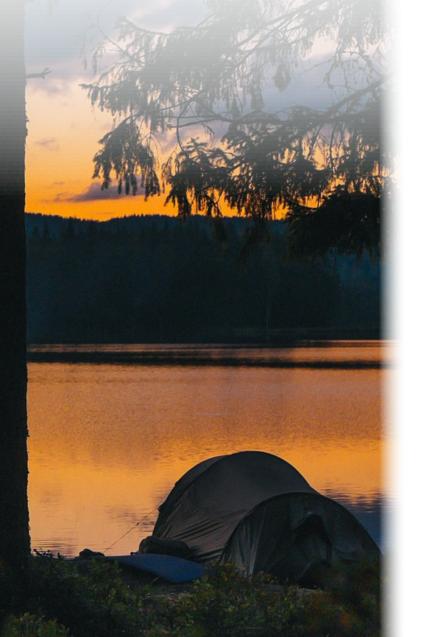
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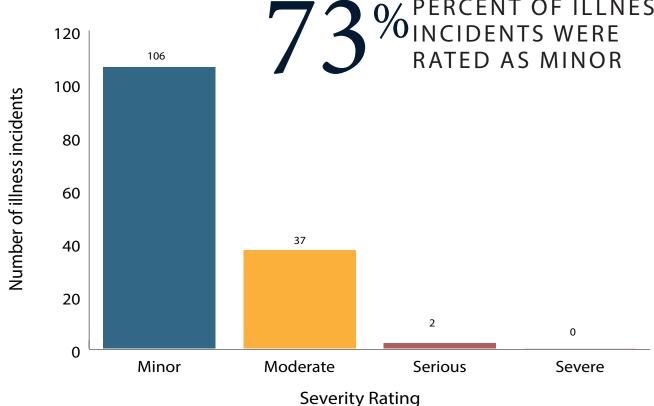
Illness incidents





ILLNESS INCIDENT WAS REPORTED PER 1000 PARTICIPANTS





The majority of ill people were evacuated by vehicle (16.6%, average severity = 2, range: 1-3) or walked out (4.8%, all with a severity rating of 2). Only 1.4% of ill people required emergency services, all for asthma-related conditions (severity ratings of 1 and 2) and 2.1% of ill people required hospitalisation following evacuation (average severity = 3).

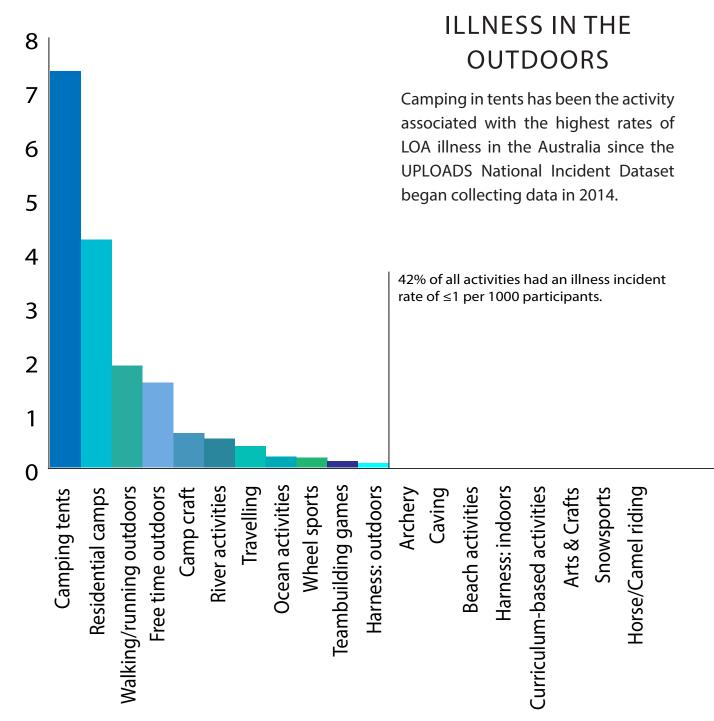
3% PERCENT OF ILLNESS INCIDENTS WERE RATED AS MINOR

22% OF ILL PEOPLE REQUIRED EVACUATION

ILLNESS INCIDENTS REQUIRED EMERGENCY SERVICES

ILLNESS RATES BY ACTIVITY

Camping in tents had the highest illness incidence rate (**7.4 incidents per 1000 participants**), followed by residential camps (4.2 incidents per 1000 participants) and walking/running in the outdoors (1.9 incidents per 1000 participants).





ILLNESS TYPE

17.2% ABDOMINAL PROBLEMS 13.1% HEAT-RELATED ILLNESS 7.6% NON-SPECIFIC FEVER 6.9% ALLERGIC REACTION 6.9% DIARRHEA 6.2% ASTHMA 6.2% MENSTRUAL

DEMOGRAPHICS

15 years.

146.2% 42.4%

GROUP PROFILE

The majority (91%) of ill people The average number of In 65.5% of incidents, the activity were identified as activity participants involved in activities leader was reported to have participants. The average age associated with illnesses was 12. relevant gualifications and in of ill activity participants was The average number of activity 8.6% of incidents qualifications leaders was 1. There was an were reported to be "not average ratio of 1 activity leader applicable". for every 12 participants in these

activities.

QUALIFICATIONS

The graph below shows proportion of illness the incidents by severity ratings, partitioned according to leader qualifications.

SYSTEMS ANALYSIS OF ILLNESS IN THE LED OUTDOORS

CONTRIBUTING FACTOR PER ILLNESS REPORT

The contributing factors that were identified by reporters were at three of the lower four levels of the UPLOADS Accident Analysis Scheme (see table below). The relationships between these factors, and the frequencies with which they were reported, are presented in the AcciMap on the following page.

120			Yes
100	20.20/		Not applicable
80	29.2% 5.7%		Missing
60			
40	65.1%		
20		32.4%	
0		67.6%	50% 50%
Ū	Minor	Moderate	Serious+

Proportions of incidents in severity rating categories partitioned by whether the leader was reported to have relevant gualifications

DECISIONS & ACTIONS There were no factors reported at these levels of the syst REGULATORY BODIES & Associations LOCAL AREA GOV'T, SCHOOLS. Parents/ Carers PARENTS/CARERS. • Communication (3.4%) & HIGHER-LEVEL MANAGEMENT SUPERVISORY & MANAGEMENT There were no factors reported at this level of the system DECISIONS & ACTIONS **DECISIONS &** Activity Participant ACTIONS OF • Mental & physical condition (62.8%) ACTIVITY LEADERS. Situation awareness (6.9%) PARTICIPANTS, & • Experience & competence (6.2%) **OTHER ACTORS AT** Judgement & decision making (3.4%) THE SCENE **Activity Equipment & Resources** EQUIPMENT, • Food & drink (13.8%) ENVIRONMENT, • Equipment, clothing, & personal protective equipment (3.4%) METEOROLOGICAL Documentation (3.4%) CONDITIONS

GOVERNMENT

DEPARTMENT

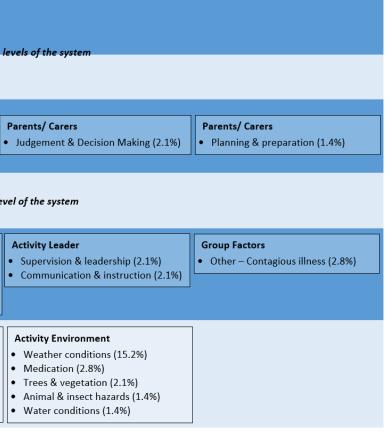
&

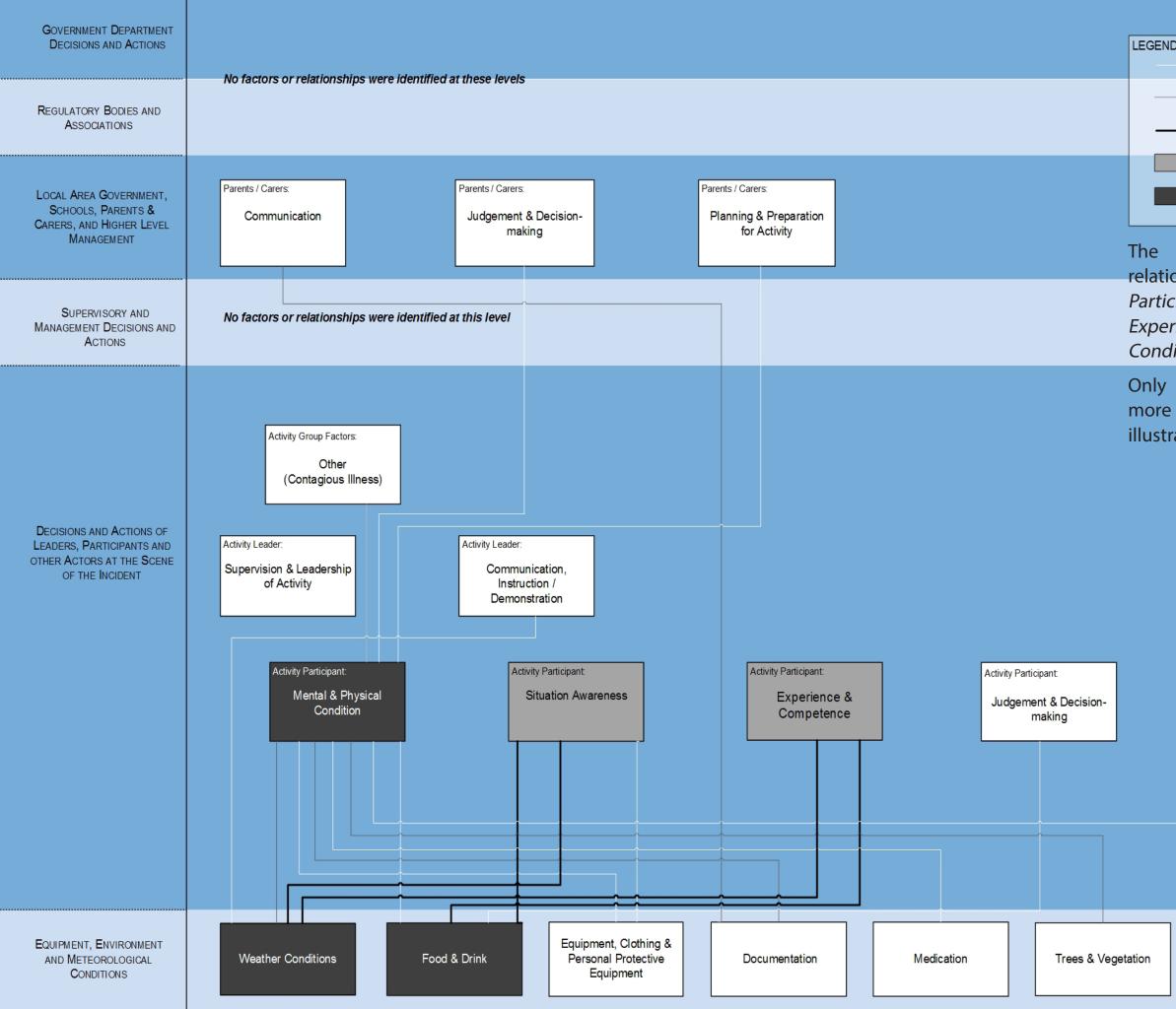
Number of illness incidents

. . .

CONTRIBUTING FACTORS TO ILLNESS INCIDENTS WERE IDENTIFIED BY REPORTERS

WAS IDENTIFIED ON AVERAGE





ID		
	Relationships identified in less than 3% of reports	
	Relationships identified in 3.1-3.9% of reports	
	Relationships identified in 4+% of reports	
	Factors identified in 5-9% of reports	
	Factors identified in 10+% of reports	

The most frequently reported factor relationships were between *Activity Participant Situation Awareness* and *Experience & Competence* and *Weather Conditions* and *Food & Drink.*

Only relationships that were identified in more than one incident reported have been illustrated on this AcciMap.

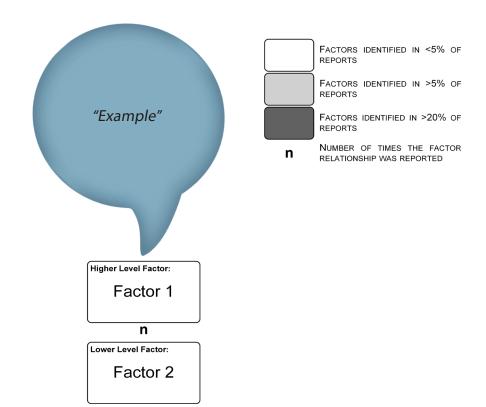
Animal & Insect Hazards

Water Conditions



88 RELATIONSHIPS WERE IDENTIFIED BETWEEN ILLNESS CONTRIBUTING FACTORS

In the following figures, the most frequently identified relationships are presented. Relationships that were most frequently identified by reporters are highlighted in red text.



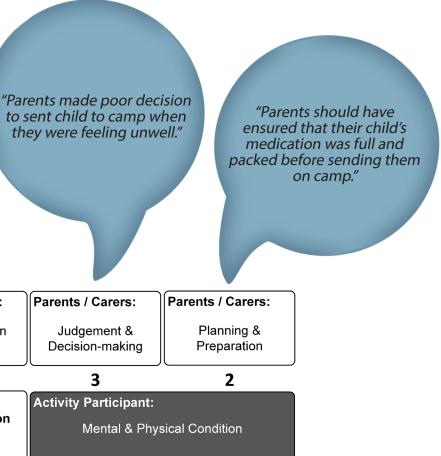
LOCAL AREA GOVERNMENT, SCHOOLS, PARENTS & CARERS, AND HIGHER LEVEL MANAGEMENT

Contributing factors at the Local Area Government, Schools, Parents & Carers, and Higher Level Management levels of the LOA system framework were identified in 10 incident reports. The same number (10) of relationships were identified between these factors and lower level factors.

"Participant had been experiencing symptoms of tonsillitis before camp. This was not communicated on the medical form."

Parents / Carers: Communication 5 Documentation

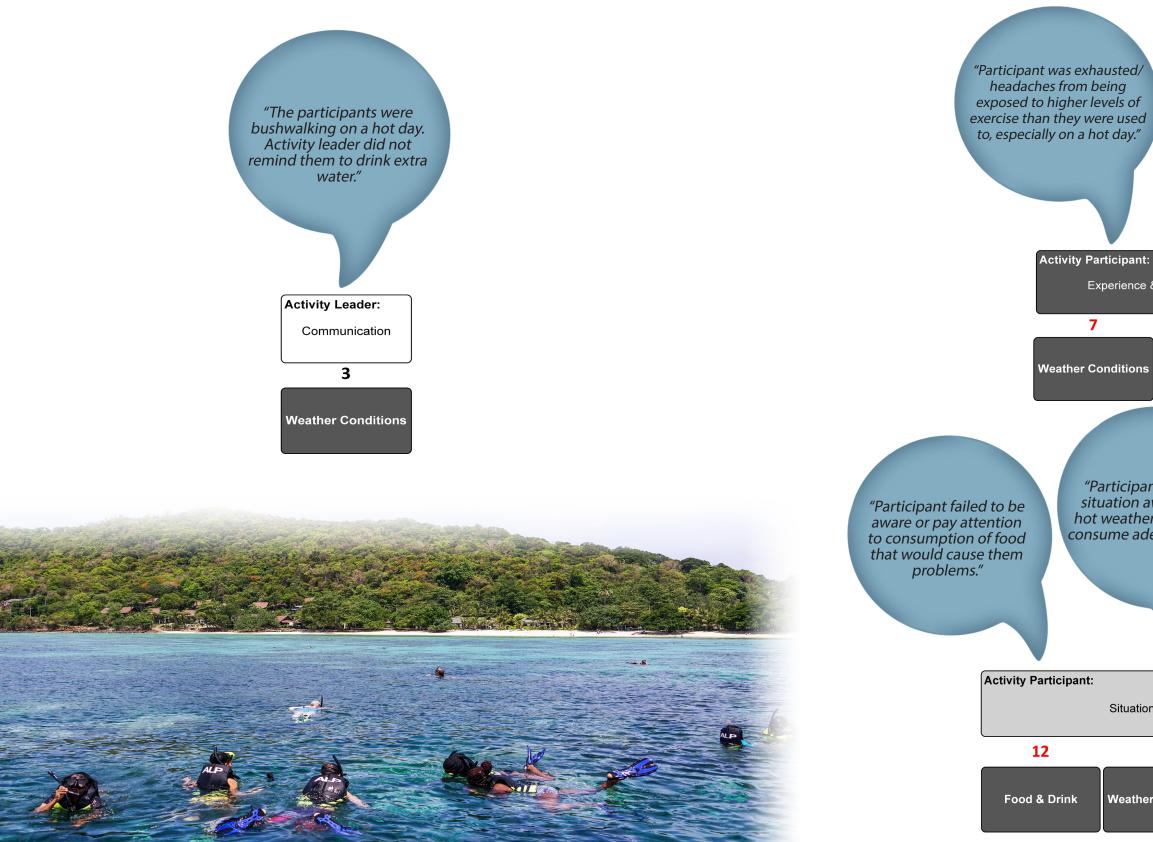
The factors and relationships identified in the bottom two levels of the LOA system describe the flow of events leading up to and during an incident, including the decisions and actions made by leaders, participants, and other members of the activity group. These levels of the system are referred to as the 'sharp end'.



ILLNESS IN THE OUTDOORS

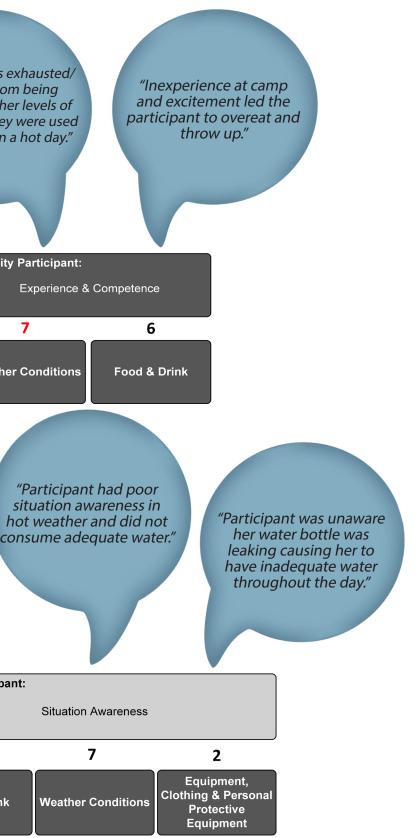
ACTIVITY LEADERS

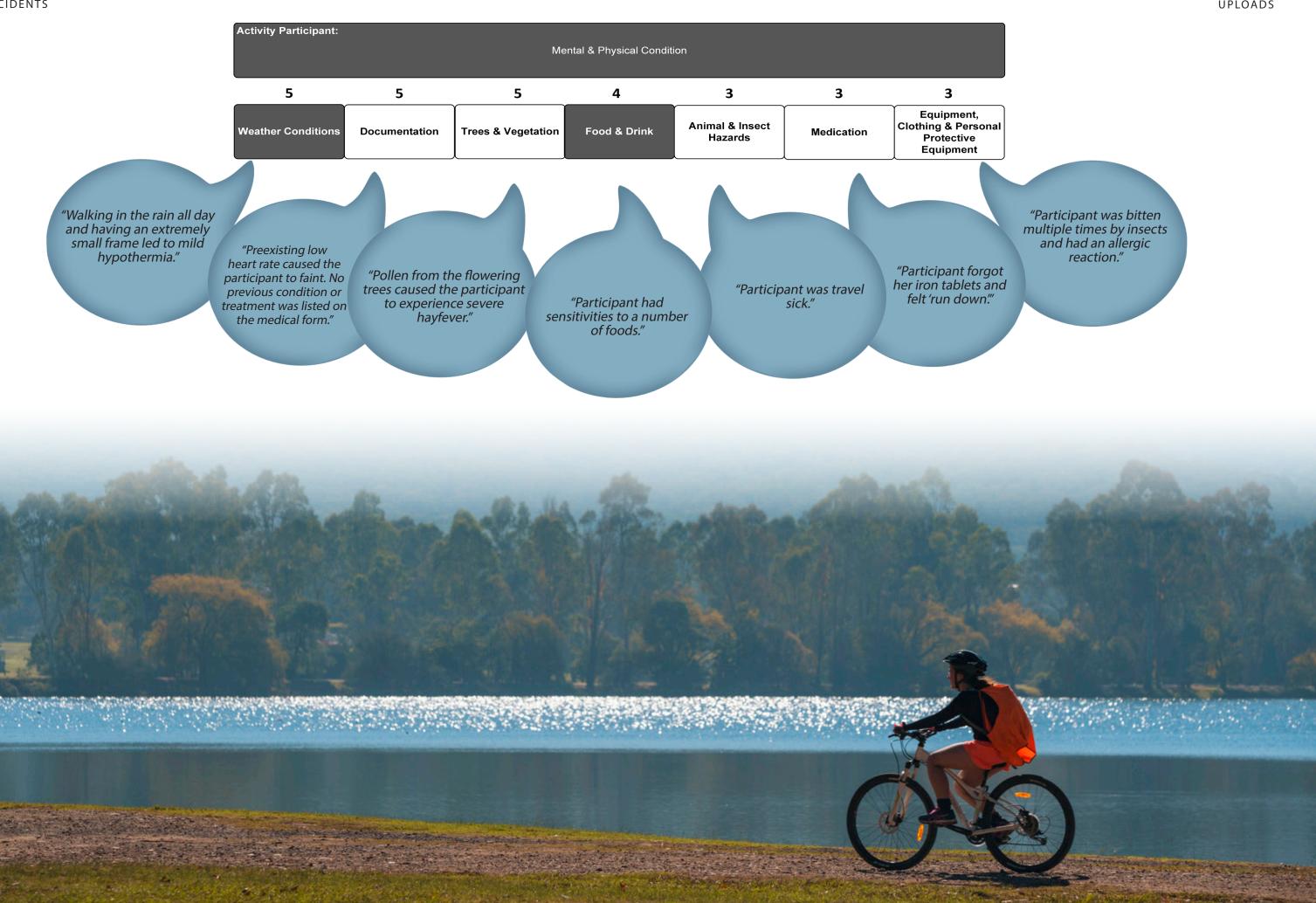
Contributing factors related to the decsions and actions of *Activity Leaders* were identified in 7 incident reports. Six (6) relationships were identified between these factors and lower level factors.



ACTIVITY PARTICIPANTS

In 117 incident reports, contributing factors related to the decsions and actions of *Activity Participants* were identified by reporters. Between these factors and lower level factors, there were 70 factor relationships identified.



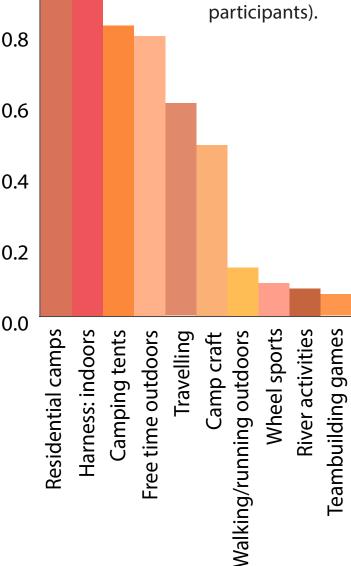


UPLOADS



Near miss incidents

participants).



23 NEAR MISS INCIDENTS WERE RECORDED IN THE UPLOADS NATIONAL INCIDENT DATASET

Residential (i.e., hard top) camps had the highest near miss incidence rate (1.1 incidents per 1000 participants),

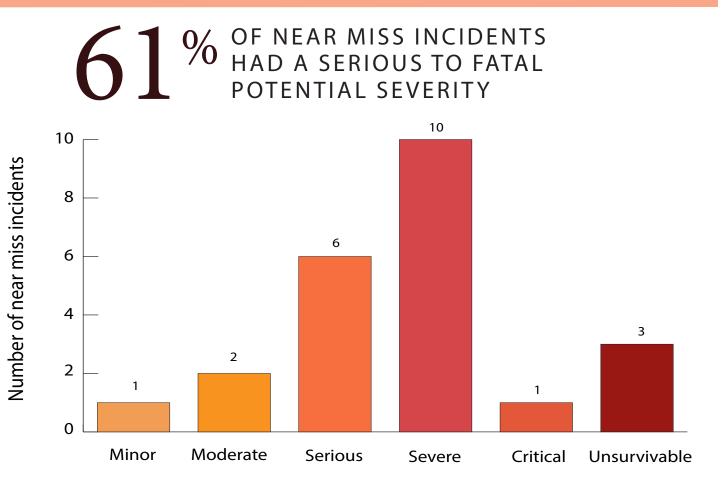
followed by harness: indoors (0.9 incidents per 1000 participants), and camping in tents (0.8 incidents per 1000

> 42% of all activities were not associated with any near miss incidents.

Snowsports Horse/Camel riding Caving Arts & Crafts Curriculum-based activities **Ocean** activities Beach activities Harness: outdoors Archery

Reported near miss incident rate per 1000 participants (No. near miss incidents/No. of participants)

NEAR MISS INCIDENT SEVERITY



Potential Severity Rating

Near miss incidents are rated in terms of potential severity, and refer to any serious mishap that has the potential to cause an adverse event but fails to do so because of chance or because it is intercepted.

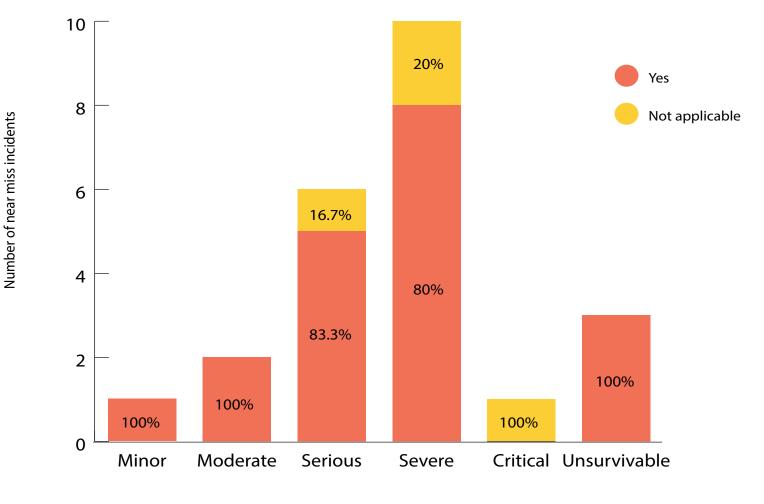
THE NATURE OF **NEAR MISS**

The importance of reporting and analysing near miss incidents in the LOA sector is emphasised by the consistent finding that the majority of these types of incidents are reported to be potentially serious or fatal.

DEMOGRAPHICS

The majority of people in- The average number of particivolved in near miss incidents pants involved in activities assowere identified as activity par- ciated with near miss incidents ticipants (82.6%). Insufficient was 14. Respectively, the averdata was reported for the cal- age number of activity leaders culation of sex and average and supervisors was 2 and 1. age.

There was an activity ratio of 1 activity leader for every 7 participants when near miss incidents occurred.



Proportions of near miss incidents in potential severity rating categories partitioned by whether the leader was reported to have relevant qualifications

GROUP PROFILE

QUALIFICATIONS

In majority of the near miss incidents (82.6%), the activity leader was reported to have relevant qualifications. In four incidents leader qualifications were reported as "not applicable".

The graph below shows the proportion of near miss incidents by potential severity ratings, partitioned according to leader qualifications.

- activities (42%)
- campcraft (15%)
- walking/running outdoors (10%)

SYSTEMS ANALYSIS OF NEAR MISS INCIDENTS IN THE LED OUTDOORS

53 CONTRIBUTING FACTORS TO NEAR MISS INCIDENTS WERE IDENTIFIED BY REPORTERS



CONTRIBUTING FACTORS WERE IDENTIFIED ON AVERAGE PER NEAR MISS REPORT

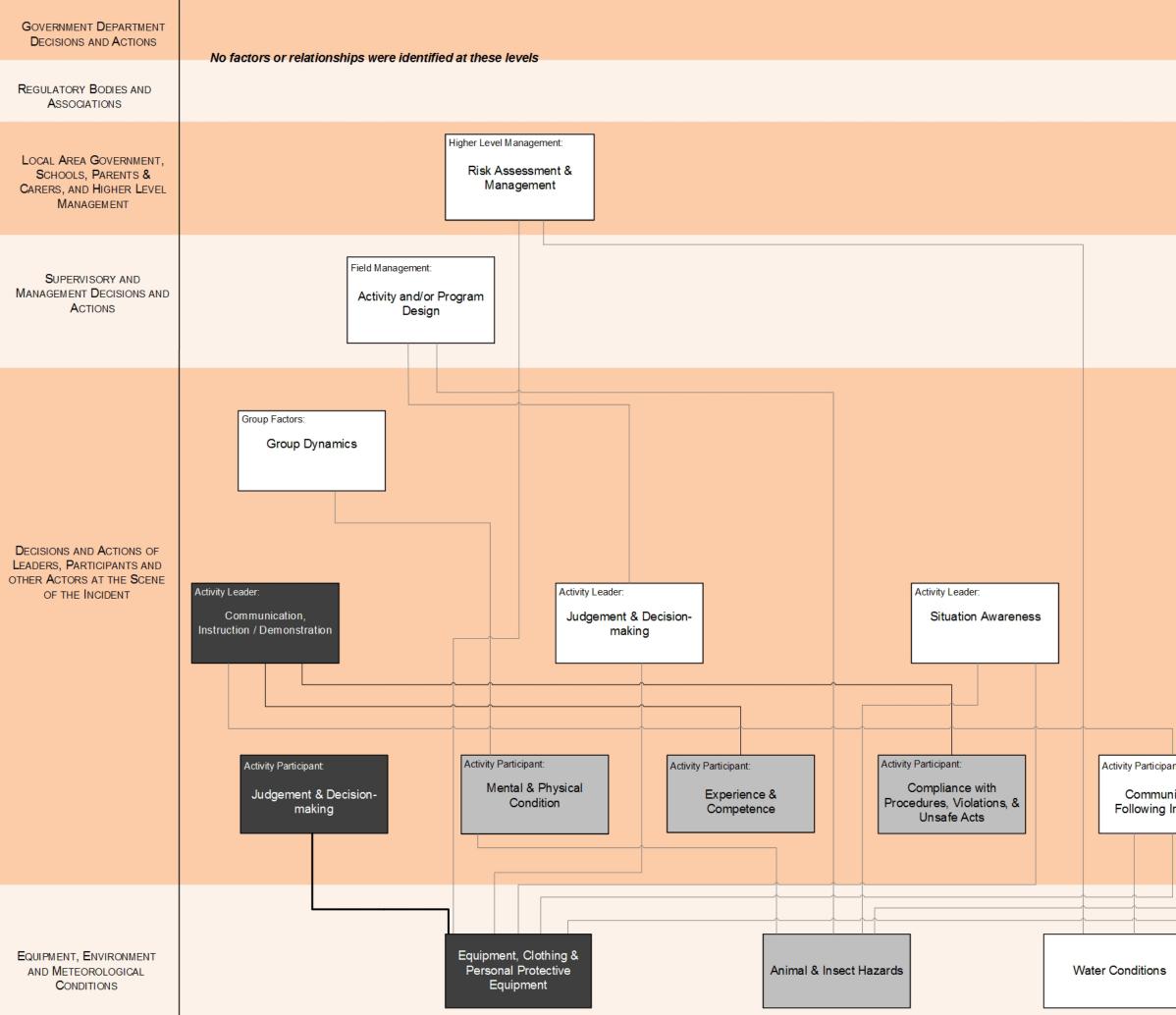
Near miss incident reporters identified contributing factors at four of the five levels of the UPLOADS Accident Analysis Scheme (see table below). The relationships between these factors, and the frequencies with which they were reported, are presented in the AcciMap on the following page.

GOVERNMENT DEPARTMENT DECISIONS & ACTIONS	There were no factors reported at this level
REGULATORY BODIES & ASSOCIATIONS	Regulatory Bodies • Auditing (4.3%)
LOCAL AREA GOVERNMENT, SCHOOLS, PARENTS/CARERS, & HIGHER-LEVEL MANAGEMENT	Higher Level Management Risk assessment & management (4.3%)
SUPERVISORY & MANAGEMENT DECISIONS & ACTIONS	Supervisor / Field Manager Activity program and/or design (8.7%)
DECISIONS & ACTIONS OF ACTIVITY LEADERS, PARTICIPANTS, & OTHER ACTORS AT THE SCENE	Activity Participant Judgement & decision making (21.7%) Mental & physical condition (17.4%) Compliance with procedure (17.4%) Experience & competence (13.0%) Situation awareness (8.7%) Communication & following instructions (8.7%) Planning & preparation (4.3%)
EQUIPMENT, ENVIRONMENT, & METEOROLOGICAL CONDITIONS	 Activity Equipment & Resources Equipment, clothing, & personal protective equipment (34.8%)

Analysing near miss reports offers a unique opportunity to learn from incidents before they eventuate into serious events. The factors that underpin these incidents are comparable to the contributory factors identified in adverse incidents.



THE NATURE OF **NEAR MISS**



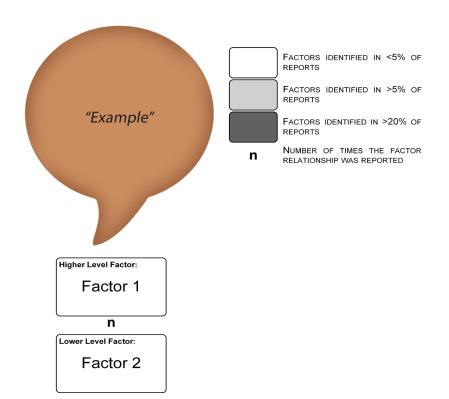
LEGEND	
	Relationships identified in 1 report
	Relationships identified in 2 reports
——	Relationships identified in 3+ reports
	Factors identified in 10-20% of reports
	Factors identified in 20+% of reports

The most frequently reported factor relationships were between Activity Participant Judgment & Decision Making and Activity Equipment, Clothing & PPE, and Activity Leader Communication and Activity Participant factors.

]				
ant:	Activity	Participa	nt:	
inication & Instructions	Situ	uation A	Awareness	

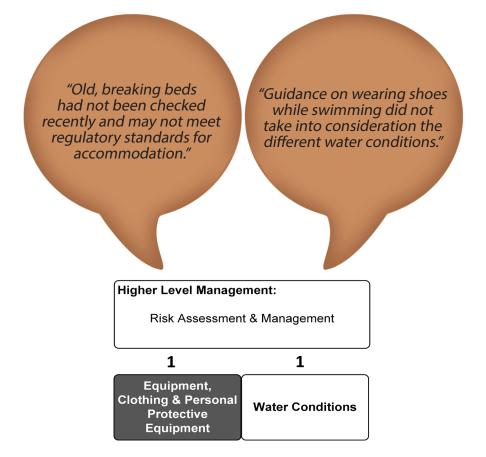


In the following figures, the most frequently identified relationships are presented. Relationships that were most frequently identified by reporters are highlighted in red text.



LOCAL AREA GOVERNMENT, SCHOOLS, PARENTS & CARERS, AND HIGHER LEVEL MANAGEMENT

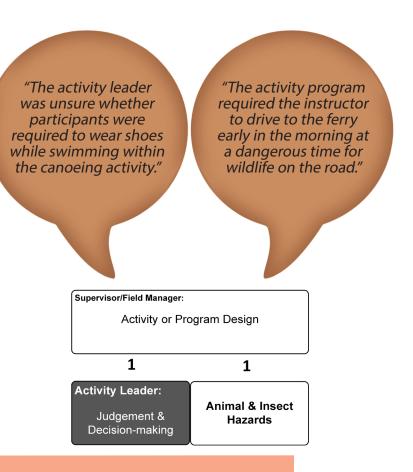
Risk Assessment and Management was identified in two reports as a contributing factor. Two (2) relationships were identified between this factor and lower levels of the system.



42

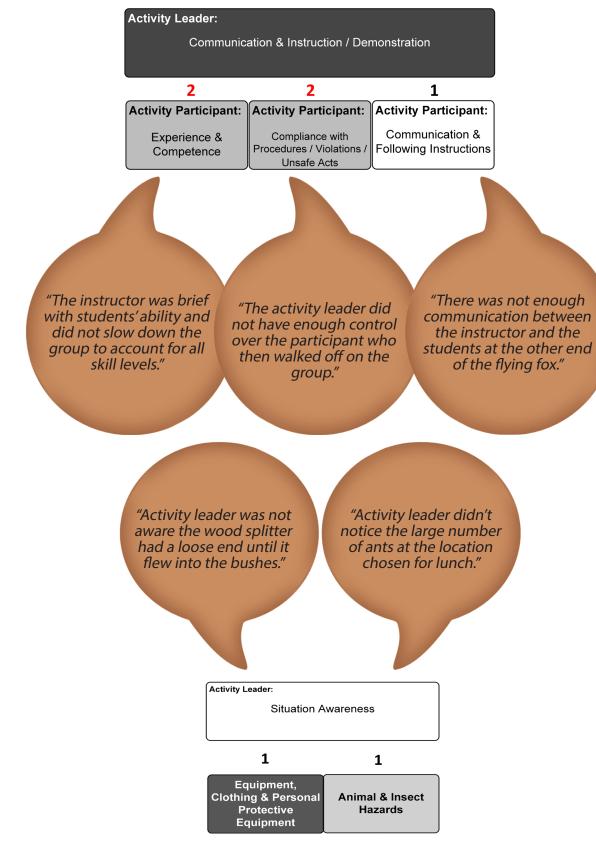
SUPERVISORY AND MANAGEMENT DECISIONS AND ACTIONS

Contributing factors at the Supervisory & Management Decision level were identified in 2 incident reports. Two (2) relationships were identified between these factors and lower levels of the UPLOADS framework.



ACTIVITY LEADERS

Eleven (11) incident reports identified contributing factors from the *Activity Leader* level of the UPLOADS framework. Eight (8) relationships were identified between these factors and lower level factors.



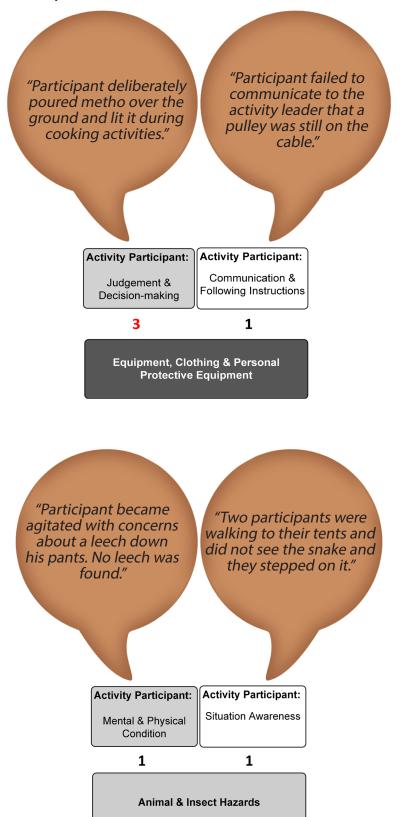
ACTIVITY GROUP FACTORS



In 2 reports, contributing factors at the Activity Group Factor level of the system were identified. One relationship was identified between Activity Group Composition and Participant Mental & Physical Condition.

ACTIVITY PARTICIPANTS

Twenty-one (21) reports identified contributing factors at the *Activity Participant* level of the framework. Between these factors and lower level factors, there were 6 factor relationships identified.





Learning with UPLOADS

There are a number of important lessons incidence rate (7.4 incidents per 1000 pertaining to incident causation in participants), followed by residential Australian LOAs that can be drawn from the analysis of the UPLOADS National Incident Dataset.

INCIDENCE RATES

The incidence rate for injuries, illnesses and near misses is considered very low (2.2, 0.9, and 1.1 per 1000 participants respectively). When compared to other sports such as cricket (242 injuries per 1000 participants), horse-riding (122/1000), soccer (107/1000) and netball (51/1000; Finch, Cassell, & Stathakis, 1999), the injury rate for LOAs is relatively low. These incidence rates have also remained relatively stable over the three years in which UPLOADS has been in operation.

Dataset also shows which activities have the greater incidence of injuries, illness and near miss incidents during illnesses and near miss incidents.

For injury incidents, free-time outdoors, The residential camps and campcraft contributing (i.e., cooking and camp fires) had the Participant Mental & Physical Condition, highest recorded number of injuries Activity Participant Situation Awareness, (15.7, 7.4, and 6.2 incidents per 1000 Activity Equipment, Clothing & PPE, and participants, respectively). Camping in tents had the highest illness-related

camps (4.2 incidents per 1000 participants) and walking/running in the outdoors (1.9 incidents per 1000 participants). Notably, these findings are again consistent across the previous UPLOADS dataset analyses (Clacy et al., 2016; van Mulken et al., 2015).

The consistency of the incident rates for these activities suggests that further attention should be given to safety management during these types of activities, which are less overtly risky (compared to harness or water based activities, for example).

CONTRIBUTORY FACTORS

Perhaps the most important contribution of the National Incident Dataset is the The analysis of the National Incident collection of information regarding the systemic factors that contribute to injury, LOAs.

> frequently identified most factors were Activity Infrastructure & Terrain.

Whilst these are important, the key to prevention strategies may better focus preventing future adverse events lies in on the broad network of contributing understanding why actions made sense factors driving adverse events, as opposed at the time. Accordingly, various other to focusing on the issues associated with contributory factors were identified instructors, participants, equipment and including organisations risk assessment and the activity environment in isolation. management processes, communications between schools, parents and activity CONCLUSION providers, and activity or program design.

The findings once again demonstrate that injury, illness and near miss in that they are underpinned by a network of contributory factors that reside across the overall LOA system. A range of contributory factors and relationships were identified across the incidents reported in the National Incident Dataset. There remains work to do to ensure that the full range of contributory factors are being reported; however, the contributing organisations should be commended for the rich dataset that they have provided.

The relationships identified between the contributory factors reported in the National Incident Dataset also offer detailed insight incidents represent systems issues into LOA incidents. The most frequently reported contributing factor relationships were between Activity Equipment, Clothing & PPE and Infrastructure & Terrain, and Activity Participant Situation Awareness and their Experience & Competence. Relationships were also found between higher and lower level factors, as seen between Parent & Carer Communication and Documentation; Higher Level Management Risk Assessment & Management and Infrastructure & Terrain; and Activity & Program Design and Activity Participant Experience & Competence.

Examining these networks of contributing factors and their relationships reveals the prominent contributing factors from across the LOA system, from the immediate environment to the influence of the parents and carers of activity participants. By considering the complexities of safety in the Australian LOA sector, future incident



AFTERWORD

We would like to acknowledge the sector's critical role in producing the UPLOADS National Incident Dataset. This dataset represents a huge contribution of time and effort from the organisations involved, both in terms of data collection and maintaining the quality of the reports. We would like to thank those organisations and our funding partners. We would also like to urge others to contribute data in future. The future of UPLOADS is dependent upon the provision of data from participating organisations across Australia. Whilst we acknowledge that practitioners are working under significant pressures and time constraints, we urge the sector to continue contributing data. Without data, it is not possible to generate meaningful analyses or for the UPLOADS National Incident Dataset to survive. The UPLOADS team are currently working towards developing a new reporting system which will reduce the administrative burden of contributing data.







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