

UPLOADS ANNUAL REPORT 2019



**Australian National Incident Dataset
September 14, 2018 to September 13, 2019**



The Research Team

The research team would like to take this opportunity to thank our funding partners and participants for their continued support and contribution to the Understanding and Preventing Led Outdoor Accidents Dataset (UPLOADS) research project.

Dr Scott McLean ¹

Dr Natassia Goode ³

Miss Lauren Coventon ¹

Prof Caroline Finch ²

Prof Paul Salmon ¹

¹ Centre for Human Factors and Sociotechnical Systems, University of the Sunshine Coast

² Edith Cowan University, Australian Centre for Research into Injury in Sport & Its Prevention (ACRISP)

³ Worksafe Victoria, Ergonomics & Human Factors Unit

Funding Partners



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Introduction

Project Background

The Understanding and Preventing Led Outdoor Accidents Data System (UPLOADS) is a sector-wide incident reporting system that was developed to collect quality data on adverse incidents that occur during Led Outdoor Activities (LOA).

The UPLOADS App is a web-based application used to record: incident reports; LOA participation data; and action plans used to address identified problems. LOA providers are encouraged to use the UPLOADS App to collect and analyse detailed information to detect trends and formulate data-driven incident prevention strategies.

LOA providers are also invited to share their self-reported and de-identified data with the National Incident Dataset (NID). When LOA providers submit their data to the NID, it forms a repository of information that is used by the research team to analyse incidents, contributory factors, and participation data from a national perspective.

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

What is in this Report?

The aim of this report is to present a detailed overview of the data collected via the NID between September 14, 2018 and September 13, 2019. Specifically the report presents the:

- characteristics of incidents (Including: injuries, illnesses, near misses, psychosocial incidents; and damage to equipment)
- frequency of incidents associated with different types of LOA
- network of contributory factors involved in the different types of incidents.

Need More Information?

For more information about the UPLOADS Project and copies of previous reports issued by the research team, visit our website or contact:

The Research Team

Centre for Human Factors and Sociotechnical Systems

University of the Sunshine Coast

Telephone: + 61 7 5456 5288

Email: uploadsproject@usc.edu.au

Website: uploadsproject.org

Inclusion Criteria

Between September, 2018 to September, 2019, 74 Australian based LOA providers registered to use the UPLOADS App and contribute data to the National Incident Dataset (NID).

Eligibility Criteria

To gain an accurate understanding of the type, frequency, and causation of incidents, the research team reviewed the data to ensure that it met the following criteria.

- Data was complete and entered in accordance with the UPLOADS App online training materials.
- Participation data included the breakdown of activities and the number of participants involved in each activity per day.
- Incident reports included descriptions of each contributory factor and relationships between contributory factors.

Confidentiality

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

- Individual identifiable incidents are not reported in isolation.
- There must be at least 20 incident reports for a particular incident type to form the basis for an aggregate analysis (for example, a detailed analysis of three incidents involving a social/psychological outcome would not be published).
- An activity must be conducted by three or more LOA providers to report on incidents associated with a specific LOA (for example, a detailed analysis of archery incidents would not be published if the activity was only conducted by one LOA provider).

Organisation Demographics

18 of the 74 organisations registered to use the UPLOADS App reported data deemed suitable for inclusion in this analysis.

The 18 organisations are based in Australia and operate in 121 locations across all states/territories, and outside Australia.

Organisation Size and Type

Organisation Size	Organisation Types
Based on the number of employees or volunteers: <ul style="list-style-type: none">• 3 x Large (200 or more employees)• 6 x Medium (20 to 200 employees)• 6 x Small (5-20 employees)• 3 x Micro (5 or less employees)	1 x Government / Public Sector 7 x Not-for-Profit 8 x Commercial Enterprise 2 x Other

Overall Incidents

Incident Characteristics

This section provides an overview of all incidents, including injuries, illnesses, near misses, psychosocial incidents, and damage to equipment.

Number of Incidents and Overall Incident Rate

The table below provides an overview of the total number of incidents reported, the number of program participation days, and the number of incidents reported per 1000 program participation days.

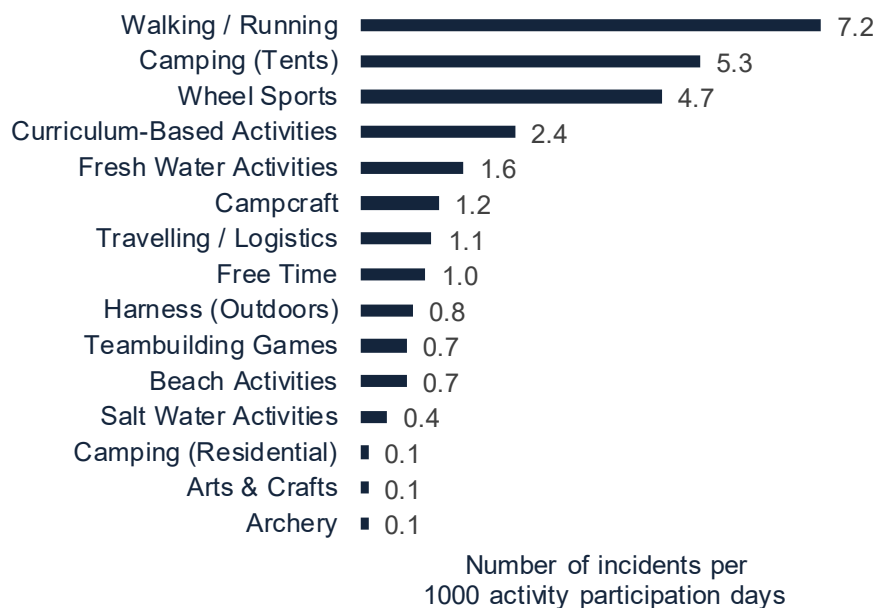
Participation days is calculated using the program length and the total number of participants (for example, if a program is five days with 12 participants, this would equate to 60 program participation days).

2457 Incidents Reported	357691 Program Participation Days	6.9 Incidents reported per 1000 program participation days
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Activity Incident Rate

The activity incident rate describes the number of incidents that occur during 1000 activity participation days.

This graph shows the incident rate for each activity type.

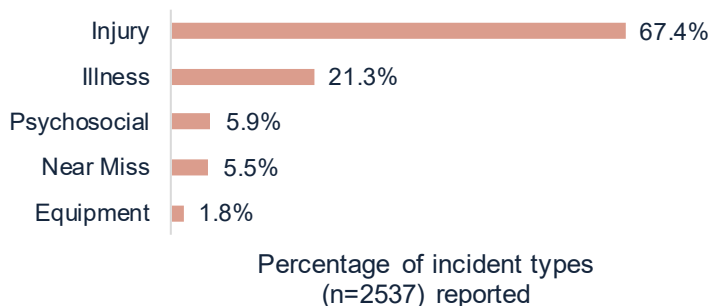


Activity participation days is calculated using the number of days an activity is conducted, and the number of participants exposed to the activity each day. For example, canoeing is conducted over two days, and 11 and 12 participants participated in the activity respectively. This equates to 23 Activity Participation Days.

Incident Types

Of the incidents reported, injuries were the most common incident type.

This graph provides the percentage of incidents by incident type.



From the 2457 incidents reported, 80 reports contained more than one incident type (e.g. An injury and equipment damage incident may have been reported on one incident report).

Actual Severity

78% of the incidents with an adverse outcome were rated as minor in severity. This indicates that most incidents had short term impact, required localised care (for example, first aid), and did not require evacuation from program.

Adverse outcomes are events resulting in injury, illness, psychosocial impacts, or equipment damage. Near misses are omitted from this table, as they are potential severity ratings.

Actual Severity Rating	Number of adverse outcome related incidents
No Impact	18 (<1%)
Minor	1841 (78%)
Moderate	459 (19%)
Serious	49 (2%)
Severe	3 (<1%)
Critical	0 (0%)

Activity Participant Demographics

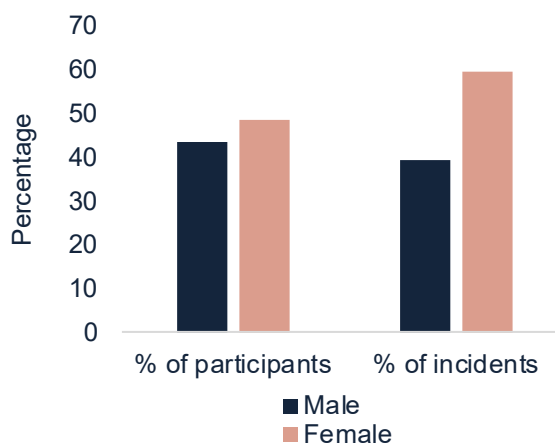
The following sections describe the demographics of activity participants involved in the incidents.

Gender of Activity Participants Involved in Incidents

From the participants involved in led outdoor activities, less than 1% identified as 'other'.

This graph shows that, despite similar rates of participation, females were involved in more incidents than males.

Note: The gender for 8,879 activity participants was not reported.



Age of Activity Participants Involved in Incidents

This table compares the age groups of participants involved in incidents to the total number of participants across all programs.

Participant age	Participants involved in incidents	Participants involved in all programs
0-5 years	5	173
6-12 years	672	45,687
13-17 years	1,653	58,292
18-29 years	16	2,409
30-49 years	1	1,468
50+ years	4	331
Not Reported	52	4,122

AcciMaps

UPLOADS is underpinned by Systems Thinking. This approach argues that safety and behaviour is the shared responsibility of everyone working in the LOA system.

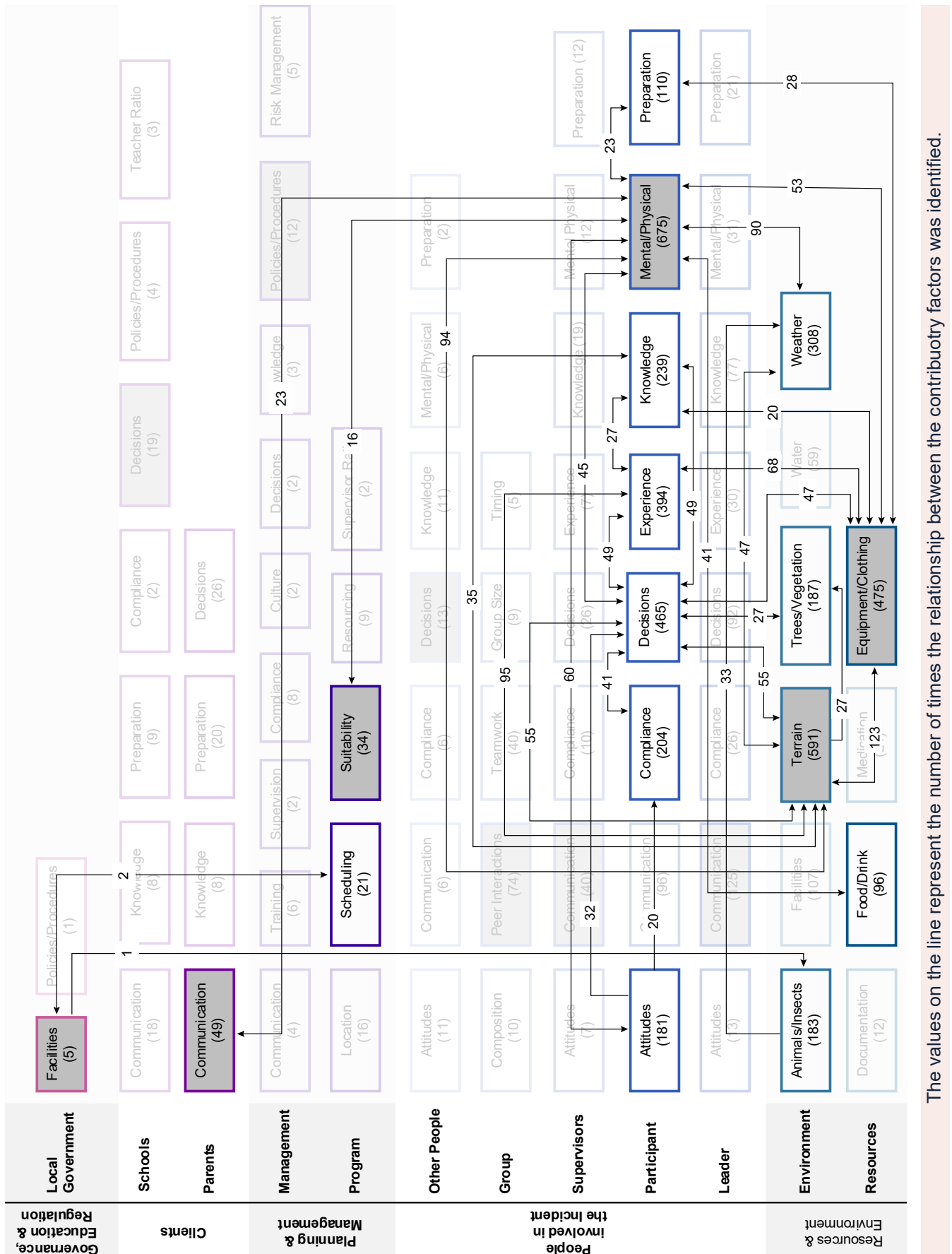
The LOA System contains: Government Departments; Regulators; Schools; Parents/Guardians; Management; Activity Leaders/Supervisors/Participants/Support Staff; the environment; and equipment.

Contributory factors can be associated with anyone within the LOA system and can occur immediately before the incident, or in the hours, days, weeks, and even years before the incident. Contributory factors include any decisions, actions, events, omissions, or conditions, that could have contributed to the incident occurring. The severity of an incident can also be affected by factors that occur after the event (for example, emergency response time, first aid, or medical treatment provided).

The following sections use AcciMaps to graphically represent the LOA System and the complex network of contributory factors involved in incident causation. The AcciMaps can be used to understand how incidents occurred and identify and address the interacting contributory factors to prevent incidents.

Relationships between Contributory factors

This figure shows the most prominent relationships between contributory factors identified in 2457 reported incidents.



The values on the line represent the number of times the relationship between the contributory factors was identified.

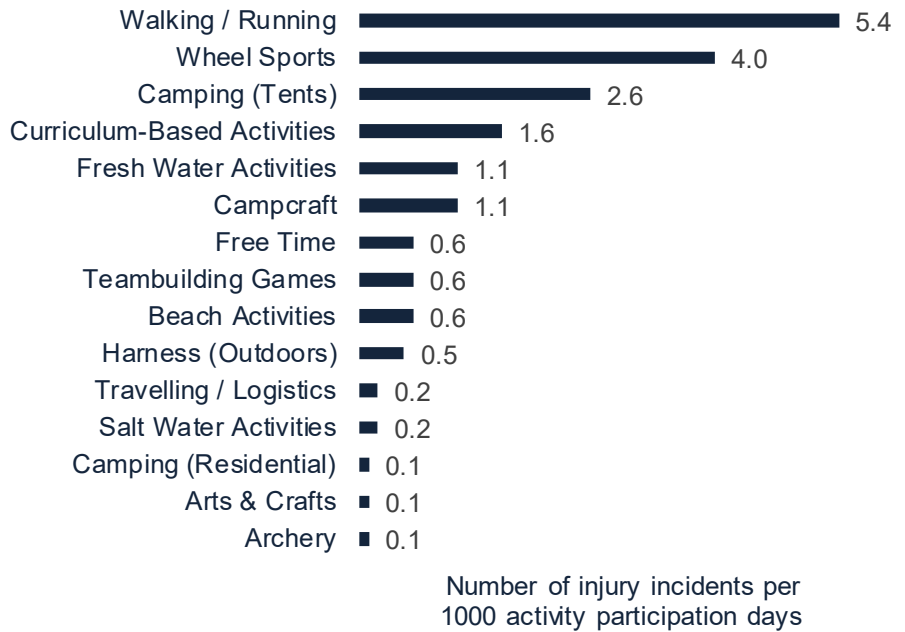
Injury Incidents

Injury Incidents and Incident Rate

1657 Incidents Reported	357691 Program Participation Days	4.6 Incidents reported per 1000 program participation days
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Activity Incident Rate

This graph shows the injury rate for each activity (i.e. the number of injury incidents per 1000 activity participation days).



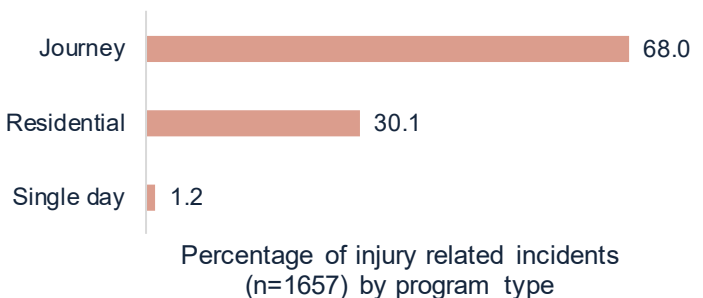
Actual Severity Ratings

Most injuries were rated as minor, with 82% of injuries reported to have short term impact, required localised care (for example, first aid), and did not require evacuation from the program.

Actual severity rating	Number of injury related incidents
No Impact	0 (0%)
Minor	1358 (82%)
Moderate	265 (16%)
Serious	32 (2%)
Severe	2 (<1%)
Critical	0 (0%)

Injuries by Program Type

The majority of injuries occurred on journey-based programs where activities and accommodation occurred at multiple locations, across two or more days. This was followed by residential programs where most activities and accommodation occurred at a single location, across two or more days.



Injury Characteristics

Injury Types and Location

This section describes the frequency of injuries to body locations, and the types of injuries reported at each location. Please note that the injury type for 60 injuries was not reported in the NID.

Note: The values below represent the number of injury types reported in each body location. The percentages on the diagram represent the percentage of injuries reported in each body location.

A. Head or Neck

- Superficial (26)
- Head Trauma (13)
- Other (11)

B. Face

- Superficial (57)
- Wound - Open (15)
- Other (33)

C. Chest

- Muscular (4)
- Crushing (2)
- Other (3)

D. Stomach

- Superficial (12)
- Bite/Sting (3)
- Muscular (2)

E. Lower Back / Spine / Buttocks

- Muscular (29)
- Superficial (11)
- Dislocation/Strain (8)

F. Hip

- Superficial (26)
- Muscular (3)
- Not Applicable (1)

G. Pelvis / Groin

- Superficial (6)
- Crushing (2)
- Dislocation/Strain (1)

H. Shoulder / Upper back

- Muscular (22)
- Superficial (12)
- Dislocation/Strain (10)

I. Upper Arm

- Superficial (10),
- Bite/Sting (3)
- Heat-Related (3)

J. Elbow

- Superficial (60)
- Wound - Open (19)
- Bite/Sting (5)

K. Forearm / Wrist

- Superficial (35)
- Muscular (19)
- Dislocation/Strain (15)

L. Hands / Fingers

- Superficial (243)
- Wound - Open (105)
- Burns (46)

M. Thigh

- Superficial (26)
- Bite/Sting (19)
- Muscular (6)

N. Knee

- Superficial (139)
- Muscular (51)
- Wound - Open (42)

O. Lower Leg

- Superficial (63)
- Bite/Sting (34)
- Wound - Open (18)

P. Ankle

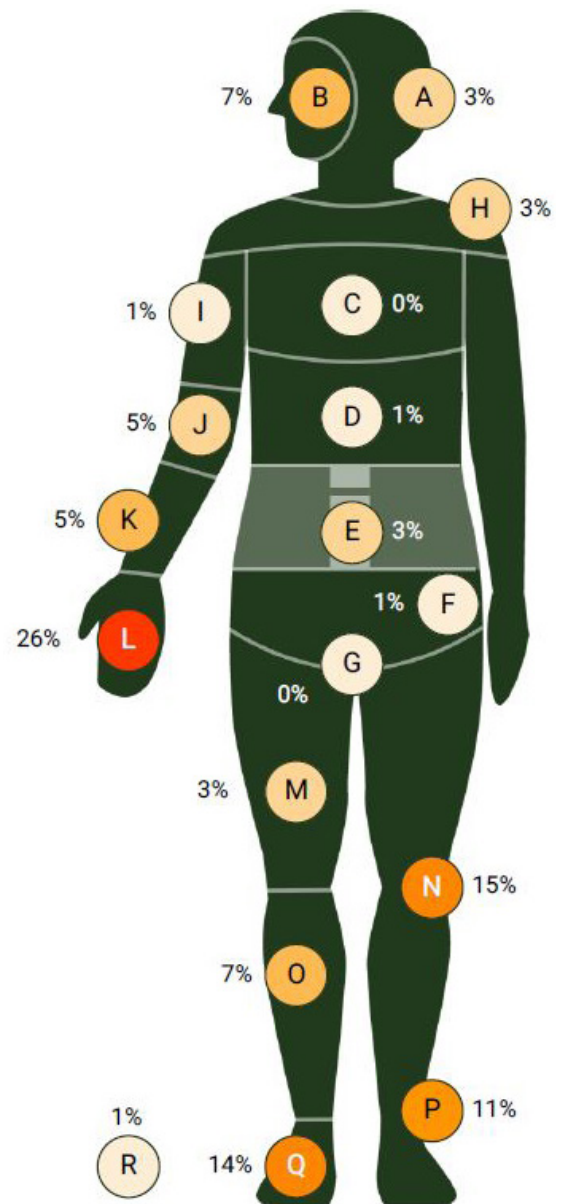
- Muscular (98)
- Dislocation/Strain (49)
- Bite/Sting (31)

Q. Feet / Toes

- Superficial (163)
- Bite/Sting (22)
- Muscular (21)

R. Unspecified

- Superficial (6)
- Bite/Sting (4)
- Other (3)

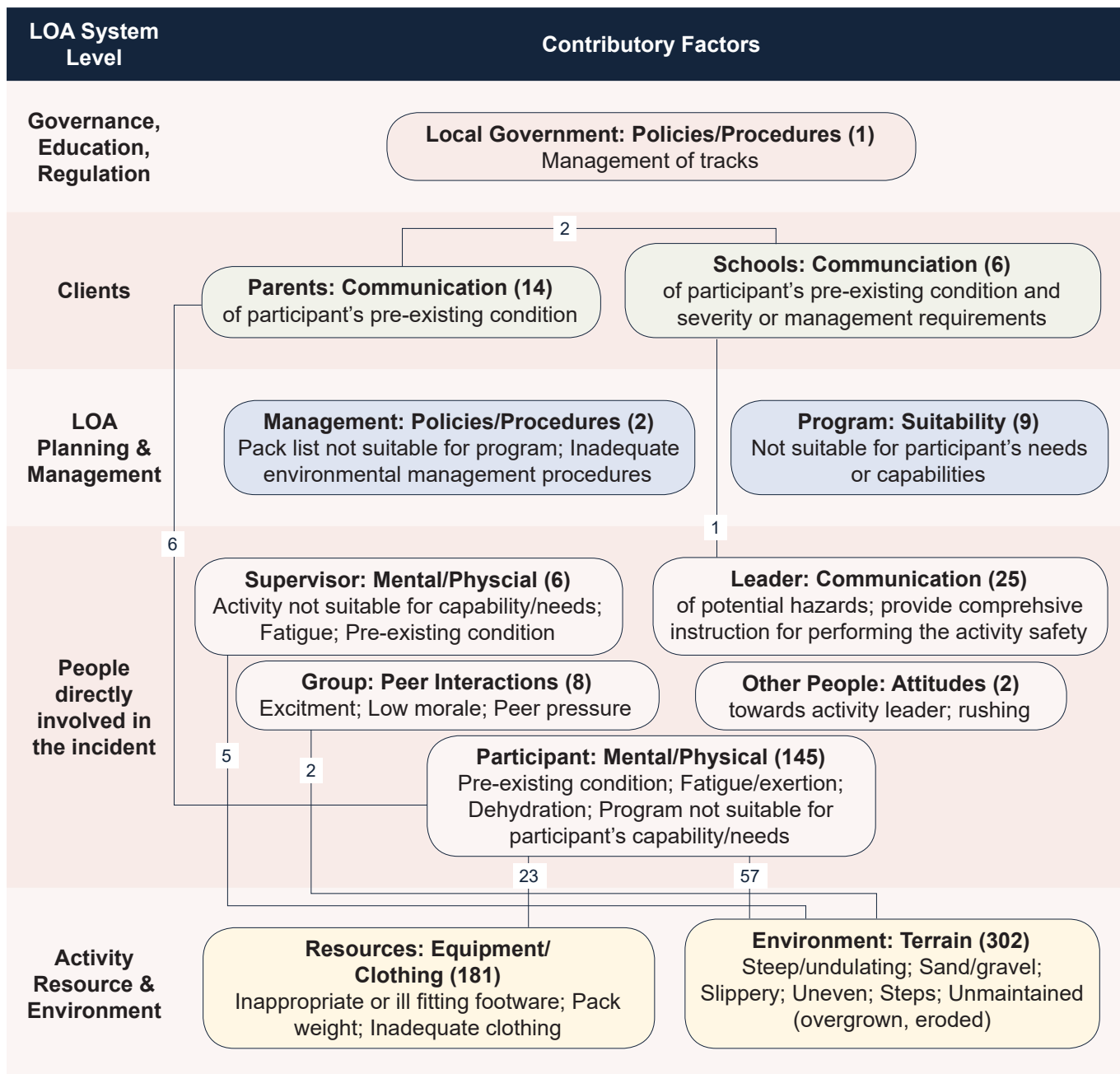


Walking / Running Injuries

The activity with the highest injury rate was walking / running. The most frequent types of injuries that occurred during this activity were:

- superficial (for example, blisters/hot spots, grazes, scratches, cuts)
- muscular
- dislocation/strain
- bite/sting.

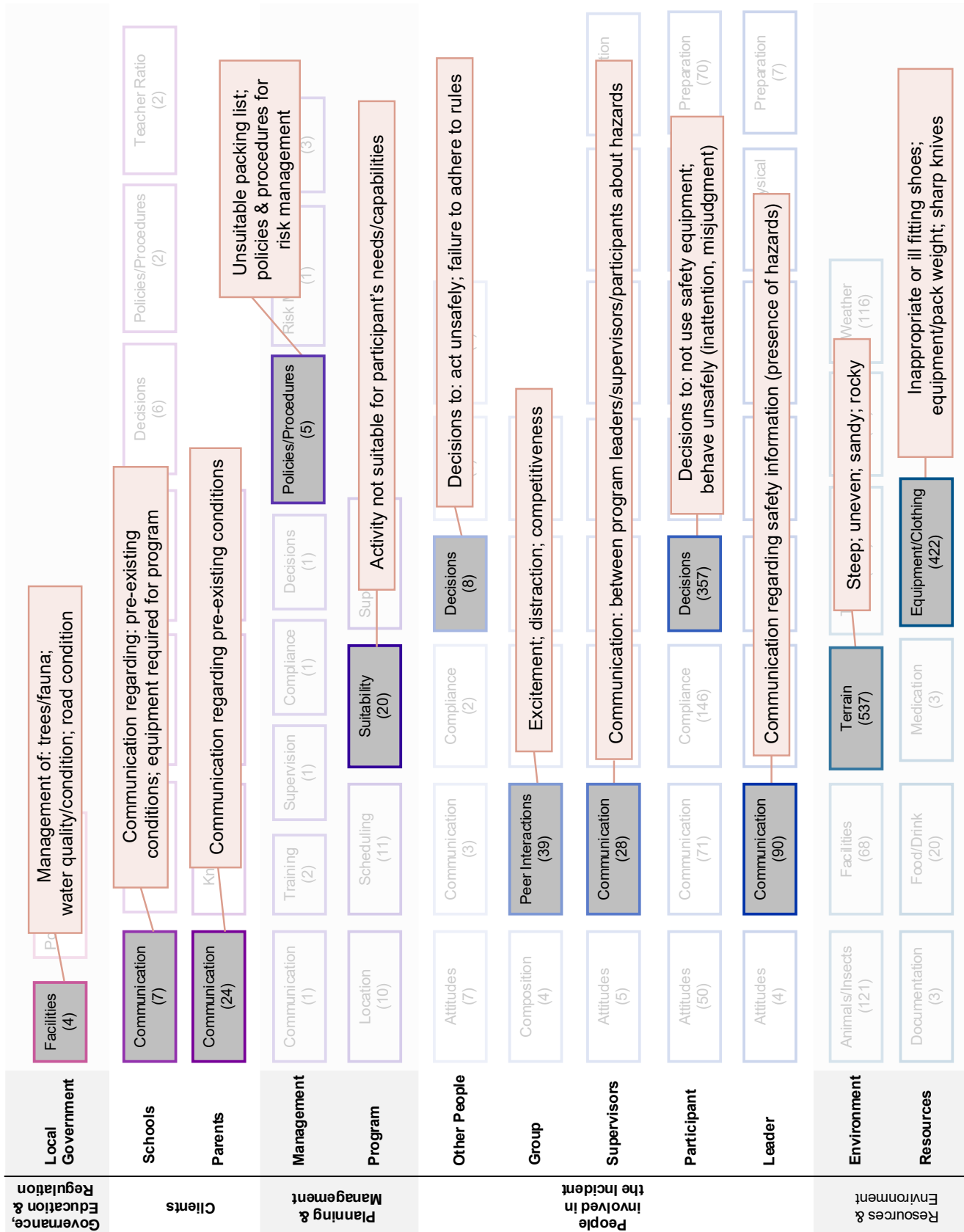
The figure below shows the most frequently identified contributory factors associated with walking / running injuries at each level of the LOA system. The values in brackets represent the number of times the factor was identified. The values on the line represent the number of times a relationship between the factors was identified.



The most frequently identified contributory factors and relationships between factors associated with injuries that occur during walking / running.

Contributory Factor Descriptions

This figure provides examples of how the most frequently identified contributory factors contributed to the injury incidents.



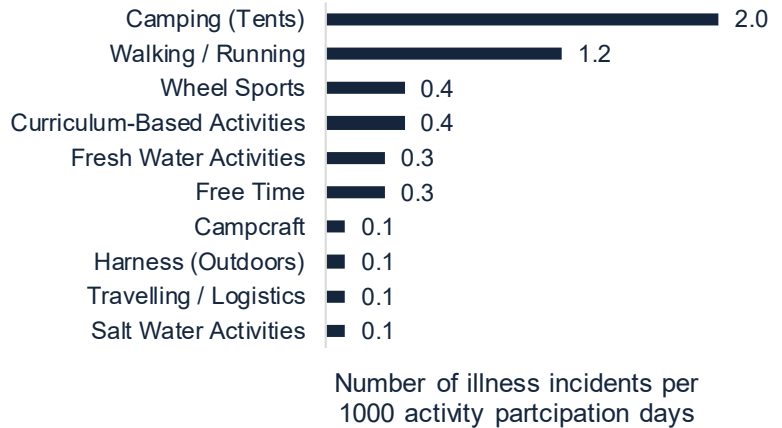
Illness Incidents

Illness Incidents and Incident Rate

523 Incidents Reported	357691 Program Participation Days	1.5 Incidents reported per 1000 program participation days
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Activity Incident Rate

This graph shows the illness incident rate for each activity.



Actual Severity Ratings

Most illnesses were rated as minor, with 73% of illnesses reported to have short term impact, required localised care (for example, first aid), and did not require evacuation from program.

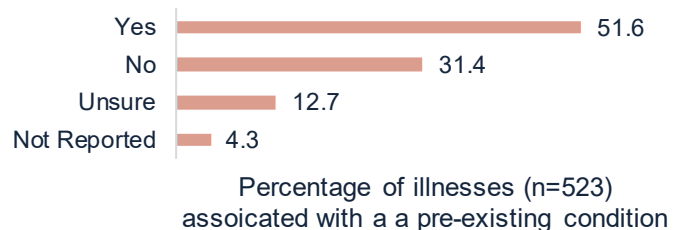
Actual Severity Rating	Number of Illness related incidents
No Impact	3 (<1%)
Minor	379 (72%)
Moderate	131 (25%)
Serious	9 (2%)
Severe	1 (<1%)
Critical	0 (0%)

Note: Some incident reports included more than one incident type (for example, one incident report may have reported an illness and an equipment incident type).

Pre-existing Health Conditions

This graph shows that 52% of illness were associated with a pre-existing health condition. By examining how pre-existing conditions contribute to incidents whilst on programs, we can better design, plan, and deliver programs in a way that can help make outdoor activities safer. Examples of the pre-existing conditions include:

- asthma
- allergies
- cold and flu
- migraines
- menstruation.



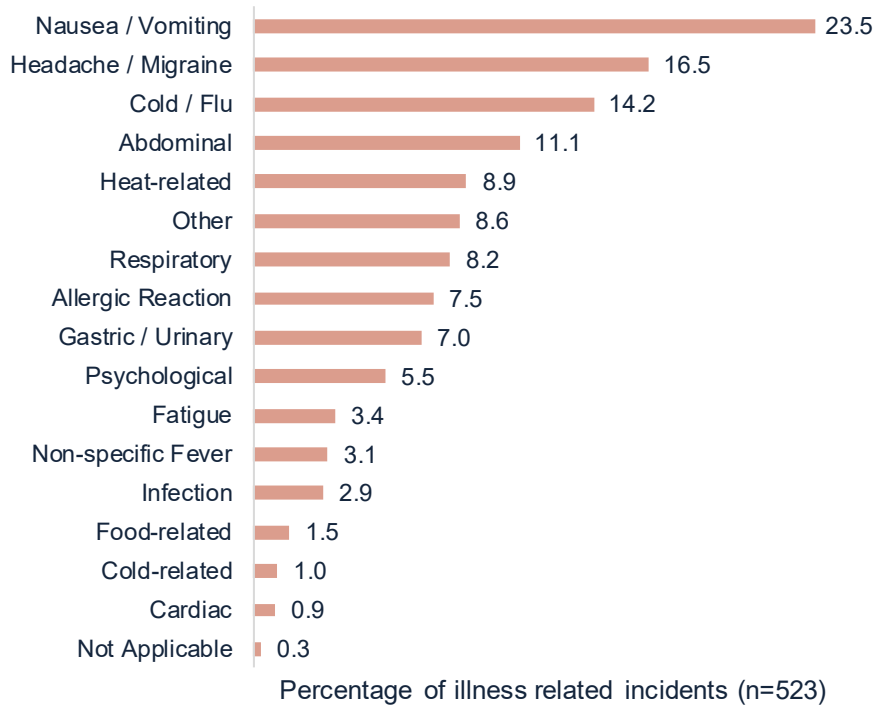
Illness Characteristics

Illness Types

This graph shows the percentage of illness types reported.

The “Other” Illness type was selected for a number of symptoms where the cause was unknown or did not align with the predefined list of illness types. Symptoms included:

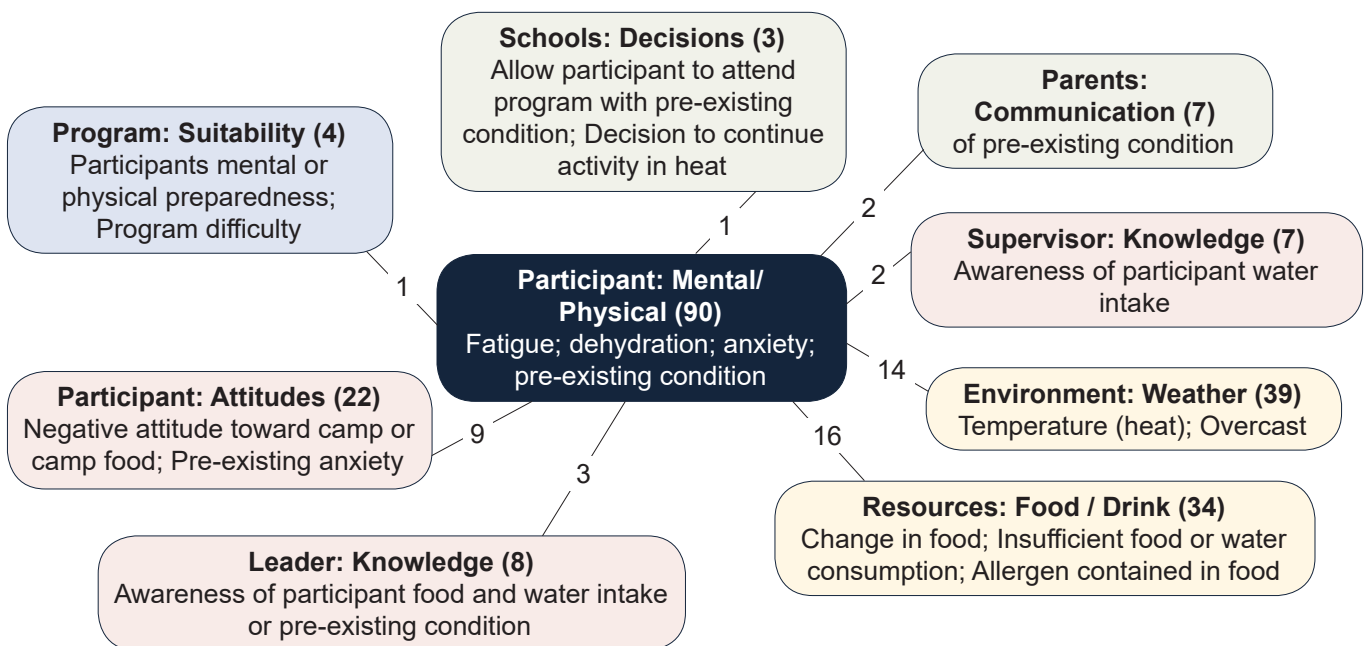
- stuffy nose, red eyes, sneezing
- diabetes
- menstrual pain / distribution of sanitary products
- rashes / eczema
- fatigue
- fainting
- stomach pain.



Note: The illness type was not reported for 37 incident reports.

Nausea / Vomiting Illnesses

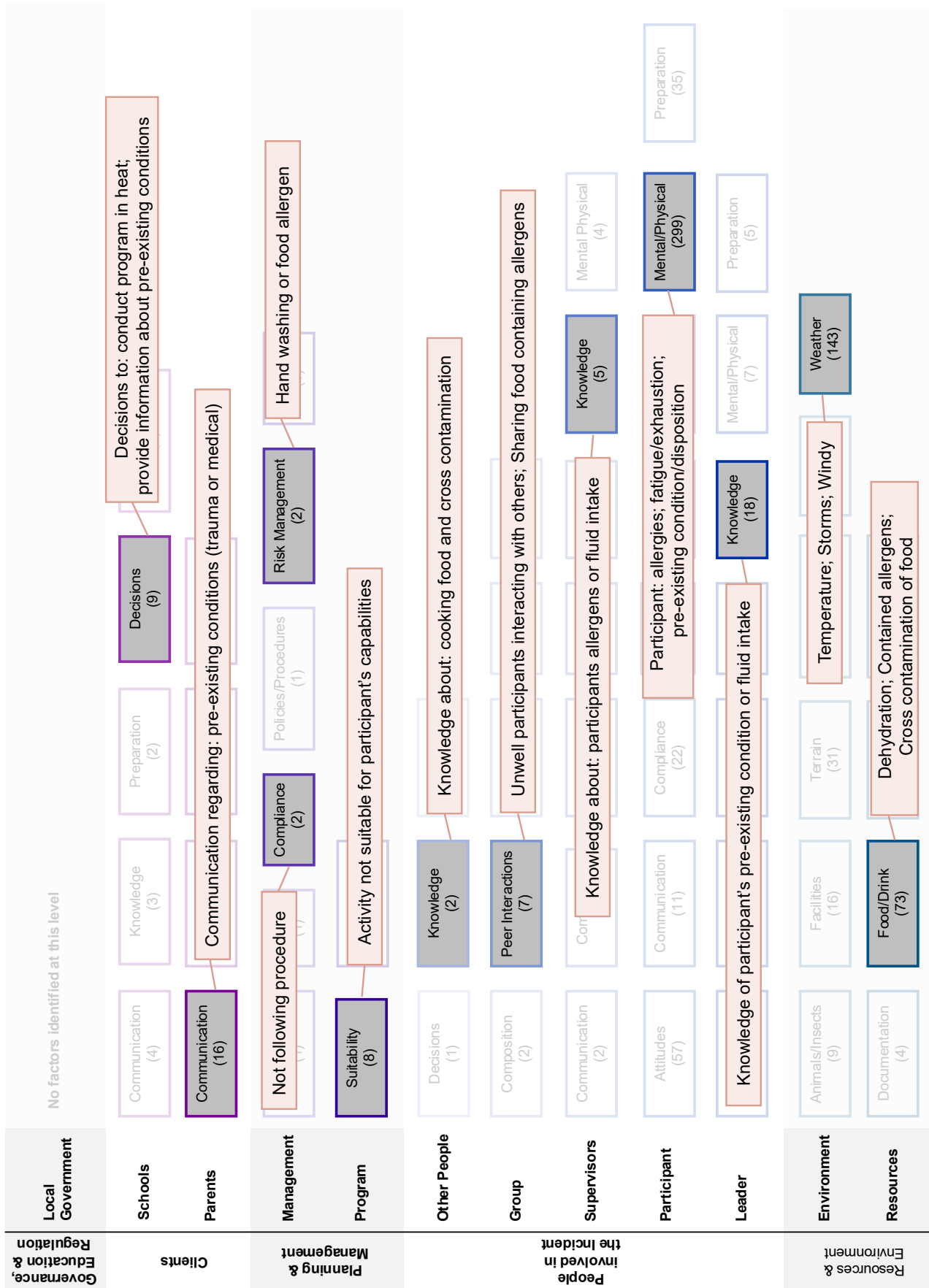
The most frequent illness type was nausea / vomiting. The below graphic shows the most frequently identified contributory factors associated with this illness type. The values in brackets represent the number of times the factor was identified, the values on the line represent the number of times a relationship between the factors was identified.



The most frequent contributory factors and relationships identified in nausea/vomiting incidents.

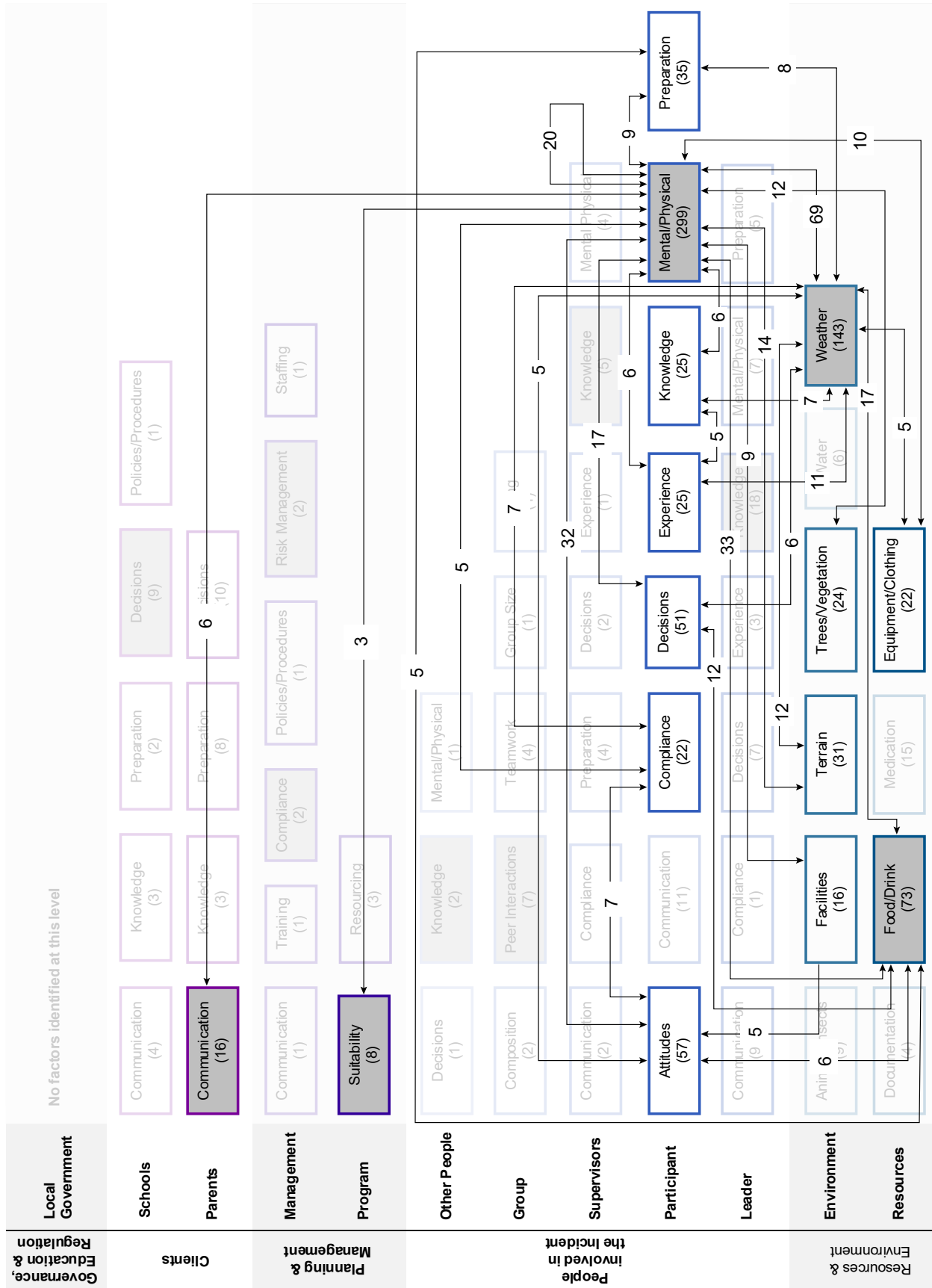
Contributory Factor Descriptions

This figure provides examples of how the most frequently identified contributory factors contributed to illness incidents.



Relationships Between Contributory Factors

This figure shows the most prominent relationships between contributory factors identified in 523 reported illness incidents.



The values on the line represent the number of times the relationship between the contributory factors was identified.

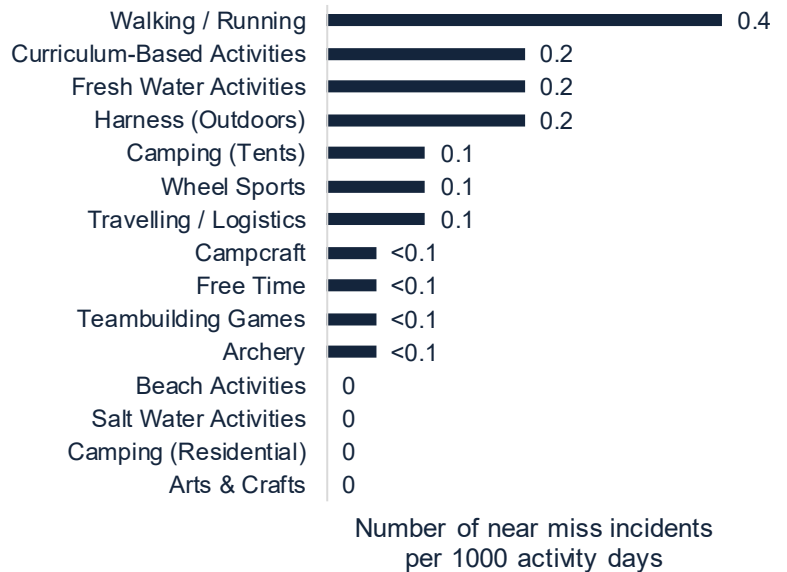
Near Miss Incidents

Near Miss Incidents and Incident Rate

136 Incidents Reported	357691 Program Participation Days	0.4 Incidents reported per 1000 program participation days
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Activity Incident Rate

This graph shows the near miss incident rate for each activity.



Potential Severity Ratings

This analysis shows the potential severity ratings for near miss incidents. These ratings are 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.

36% of near miss incidents had the potential to result in a serious adverse event. This level of severity would result in medium to long term effects, require timely external medical care and full evacuation.

Potential Severity Rating	Number of near miss incidents
No Impact	6 (4%)
Minor	13 (10%)
Moderate	32 (24%)
Serious	49 (36%)
Severe	25 (18%)
Critical	11 (8%)

Why are near miss incidents important?

Near misses provide insight on potential incidents, and contributory factors and relationships associated with incident causation. Continuing to report and analyse near misses can help identify proactive incident prevention strategies to mitigate the likelihood of adverse outcomes.

The following table shows that the most frequently identified contributory factors at each level of the LOA system are similar for near miss and injury incident types associated with walking / running. By analysing near misses, your organisation can use the information to identify trends and incident prevention strategies to help mitigate the likelihood of adverse outcomes.

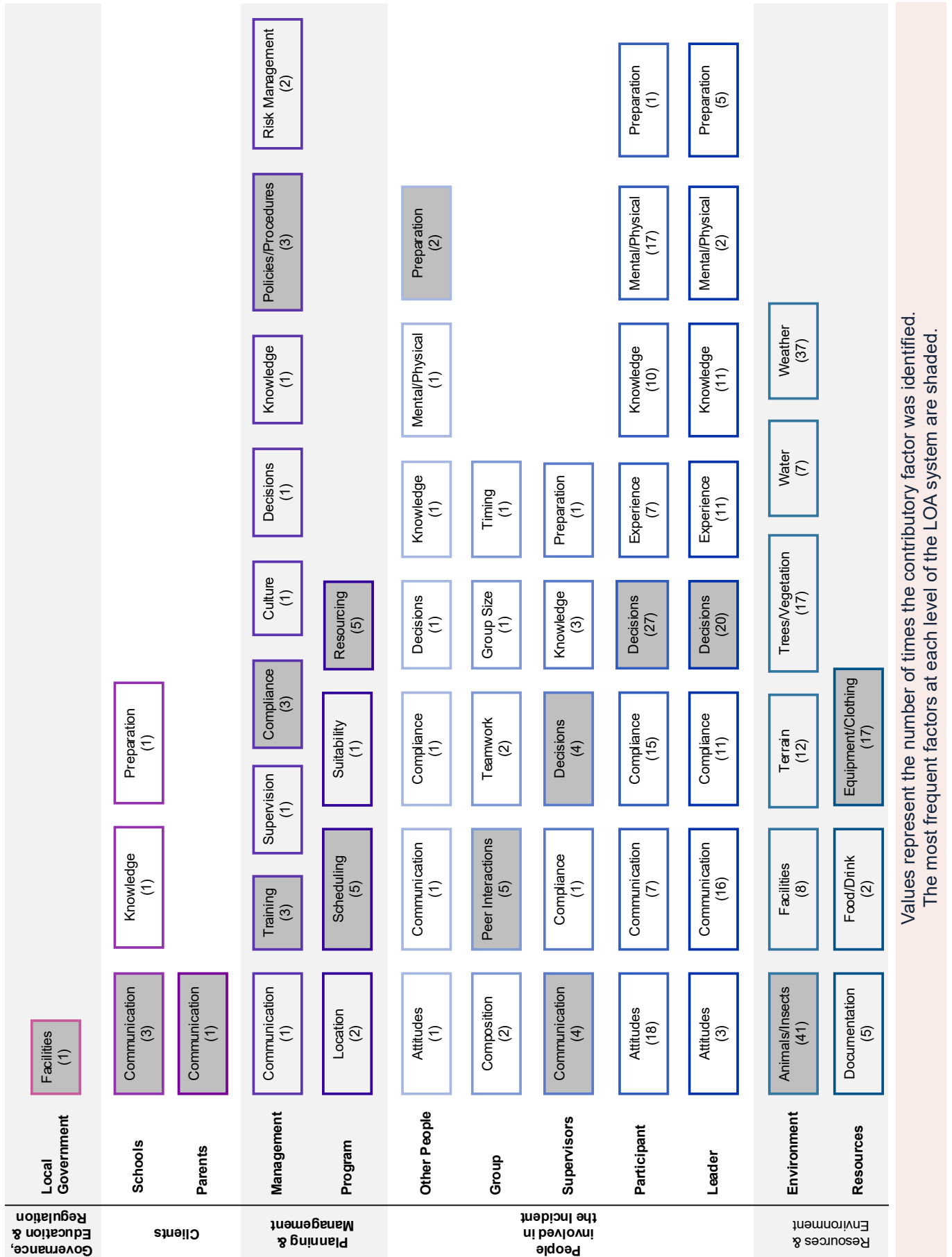
This table compares the three most frequently identified contributory factors at each level of the sociotechnical system for near miss and injury incident types associated with walking / running.

The factors in bold represent the factors identified in both near miss and walking / running incidents.

		Walking / Running Incidents	
		Near Miss <i>40 incidents reported</i>	Injury <i>580 incidents reported</i>
Governance & Education & Regulation	Local Government	Not Identified	Policies / Procedures
	Schools	Preparation	Preparation Communication Decisions
Clients	Parents	Not identified	Communication Decisions Preparation
	Management	Risk Management	Policies / Procedures Communication
LOA Planning & Management	Program	Scheduling Location Resourcing	Scheduling Location Suitability
	Other People	Mental / Physical Compliance Preparation	Mental / Physical Attitudes Communication
People Directly involved in the Incident	Group	Peer Interactions Teamwork Timing	Peer Interactions Teamwork Timing
	Supervisors	Preparation Communication Decisions	Preparation Communication Mental / Physical
	Participant	Mental Physical Decisions Attitudes	Mental Physical Decisions Experience
	Leader	Communication Decisions Knowledge	Communication Decisions Knowledge
	Environment	Terrain Trees / Vegetation Animals / Insects	Terrain Trees / Vegetation Weather
Activity Resources & Environment	Resources	Equipment / Clothing Food / Drink Documentation	Equipment / Clothing Food / Drink Documentation

Contributory Factors

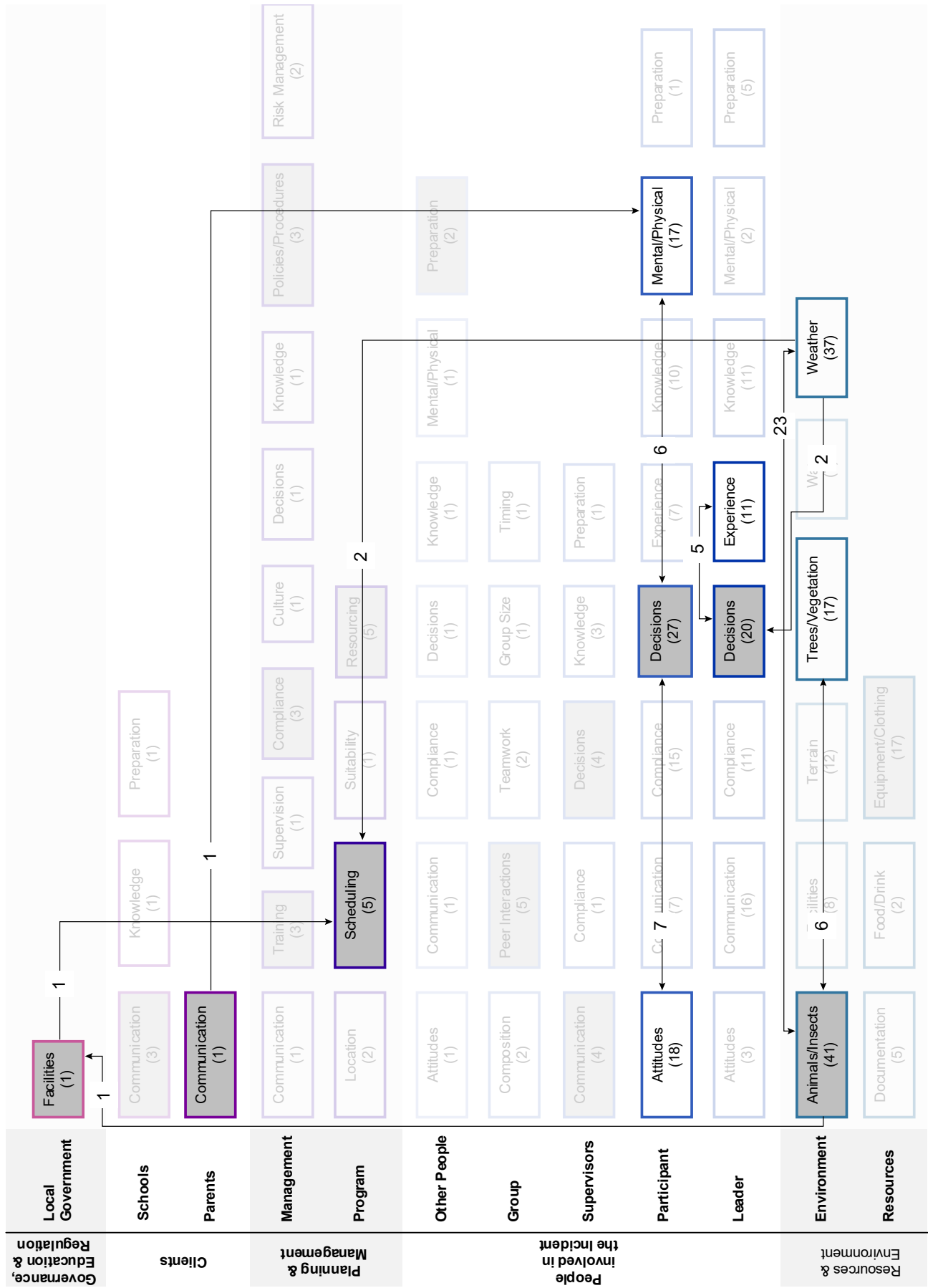
This figure shows the contributory factors identified in 136 near miss incidents.



Values represent the number of times the contributory factor was identified. The most frequent factors at each level of the LOA system are shaded.

Relationships Between Contributory Factors

This figure shows the most prominent relationships between contributory factors identified in 136 near miss incidents.



The values on the line represent the number of times the relationship between the contributory factors was identified.

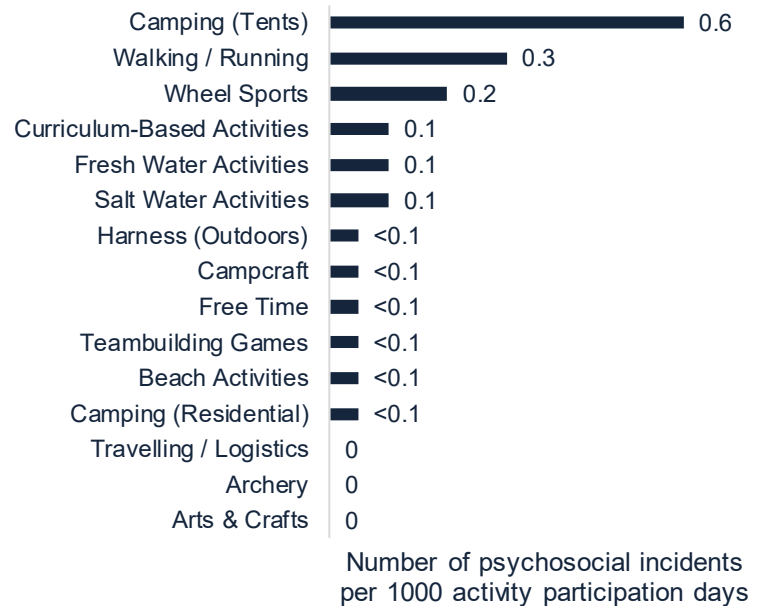
Psychosocial Incidents

Psychosocial Incidents and Incident Rate

146 Incidents Reported	357691 Program Participation Days	0.4 Incidents reported per 1000 program participation days
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Activity Incident Rate

This graph shows the Psychosocial incident rate for each activity.



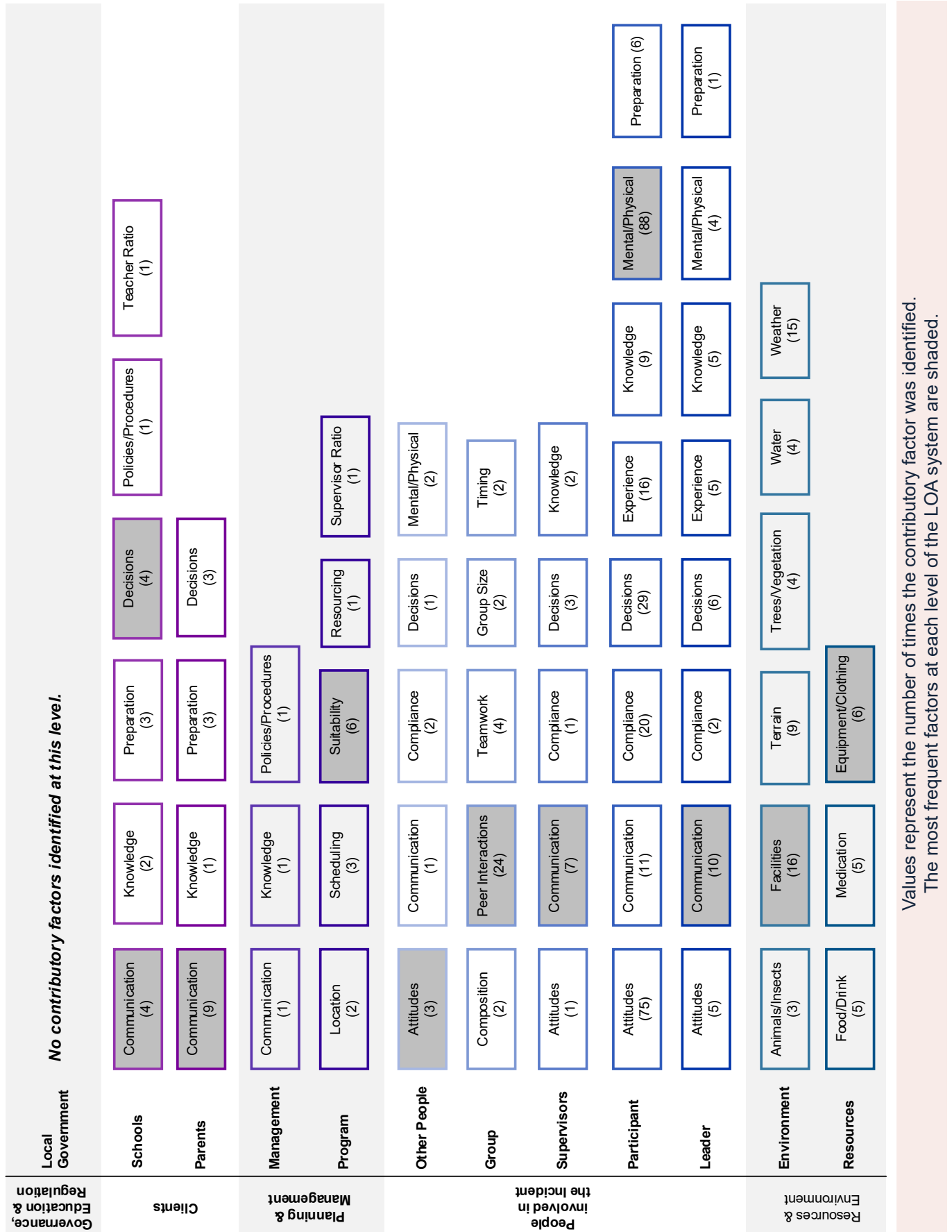
Psychosocial Incident Types

Examples of the types of psychosocial incidents reported include:

- pre-existing mental health conditions, for example:
 - anxiety
 - depression
 - eating disorders
 - Oppositional Defiant Disorder (ODD)
 - self-harm
- pre-existing trauma (for example, a death in the family)
- homesickness
- mental exhaustion
- stress
- peer pressures
- behavioural issues.

Contributory Factors

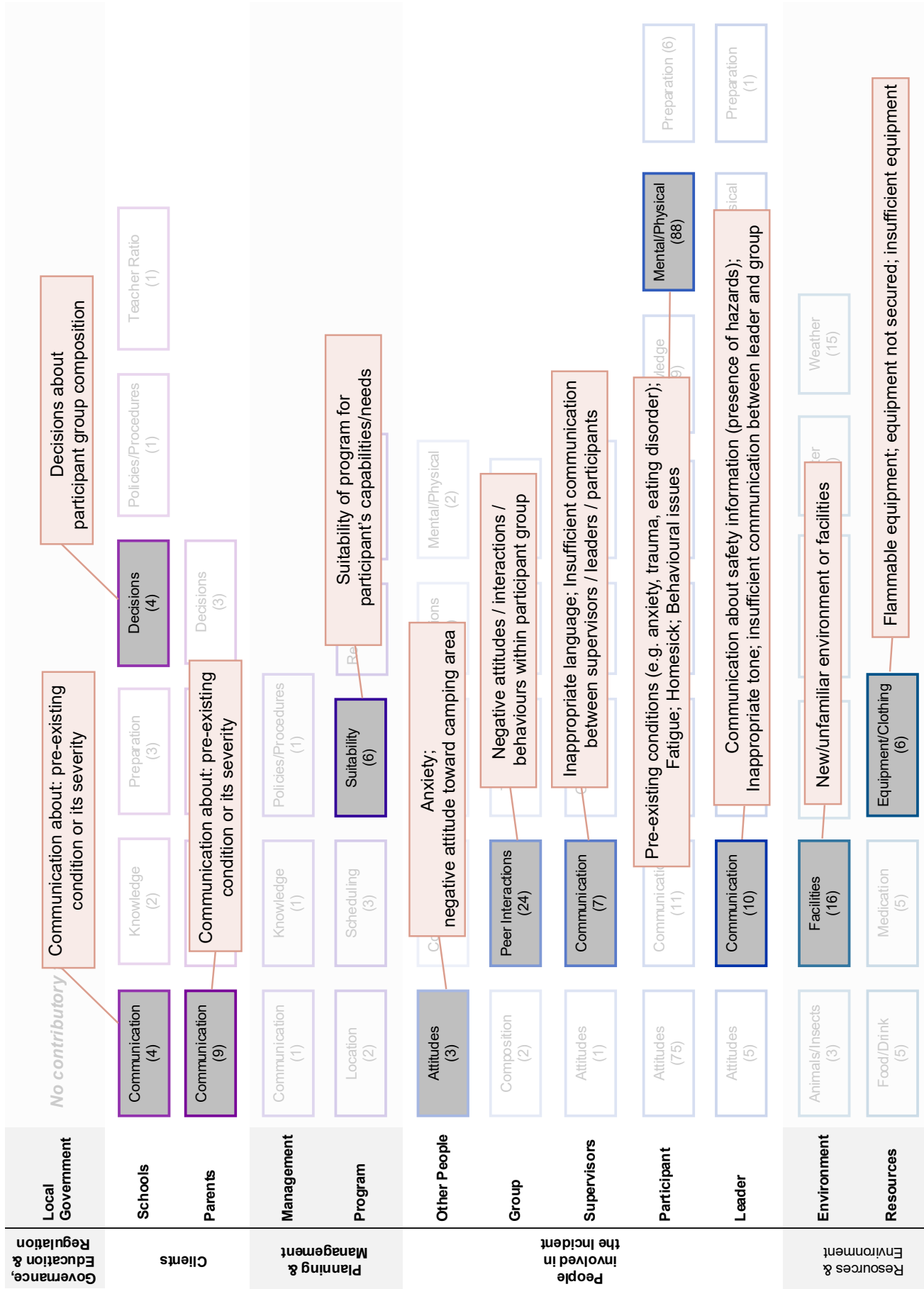
This figure shows the contributory factors identified in 146 psychosocial incidents.



Values represent the number of times the contributory factor was identified. The most frequent factors at each level of the LOA system are shaded.

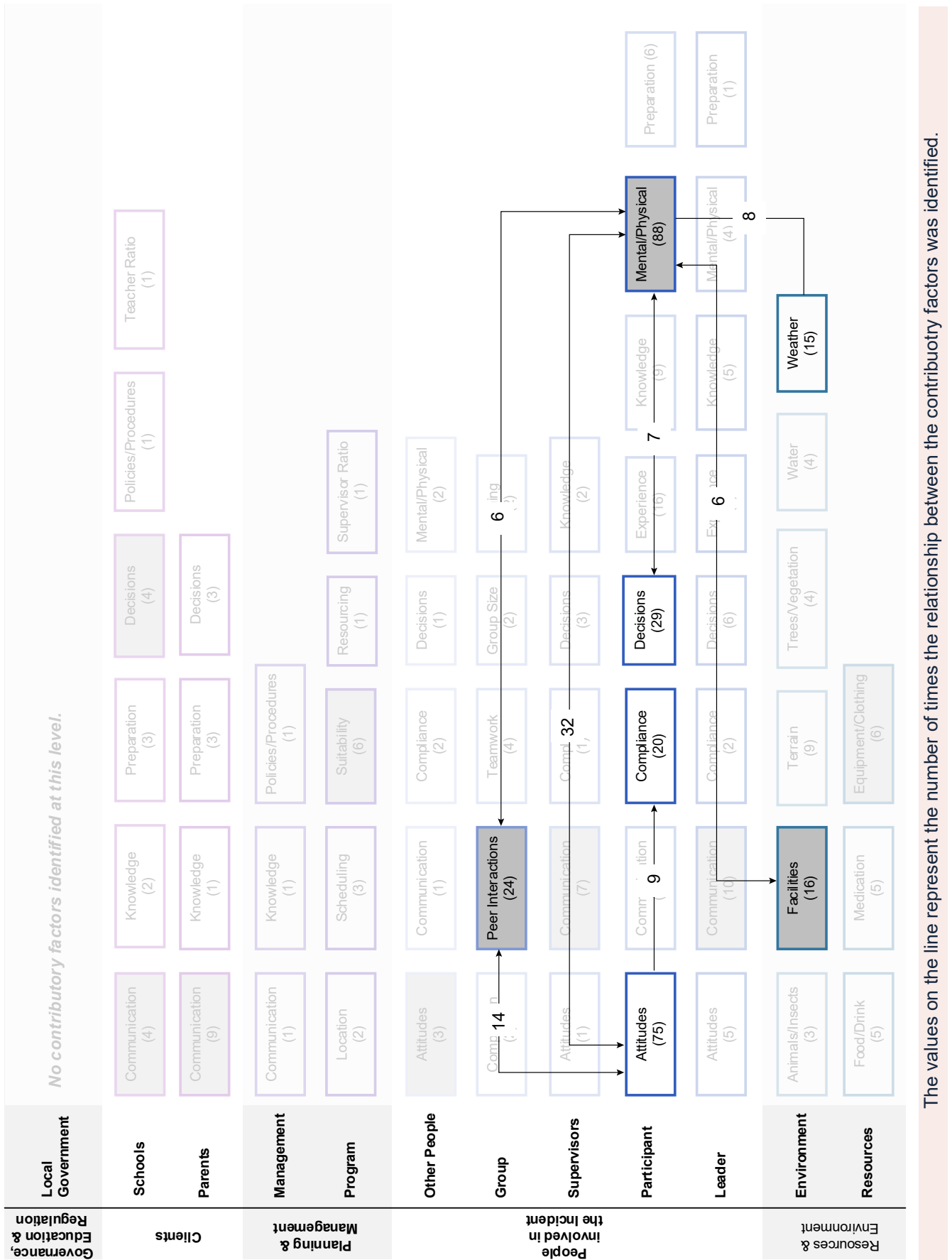
Contributory Factor Descriptions

This image provides examples of how the most frequently identified contributory factors contributed to psychosocial incidents.



Relationships between Contributory Factors

This image shows the most prominent relationships between contributory factors that were identified in 146 psychosocial incidents.



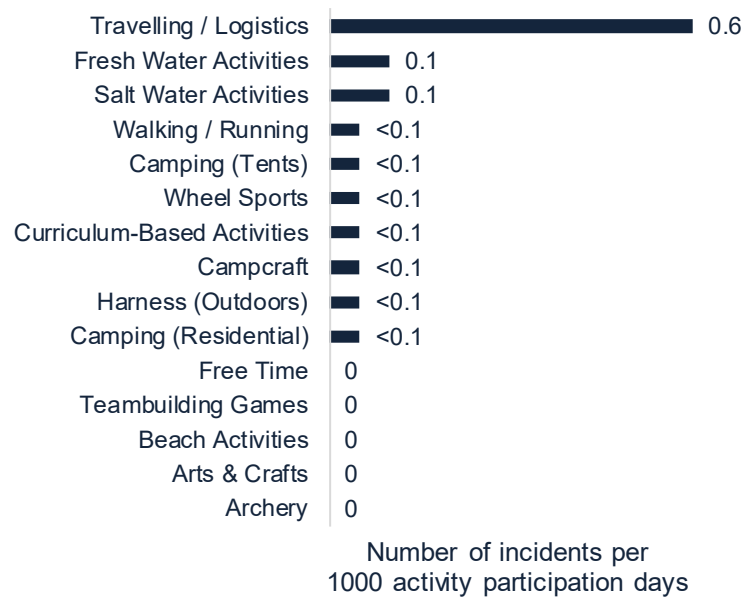
Equipment Damage Incidents

Equipment Damage Incidents and Incident Rate

44 Incidents Reported	357691 Program Participation Days	0.1 Incidents reported per 1000 program participation days
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Activity Incident Rate

This graph shows the equipment incident rate for each activity.



Equipment Damage Descriptions

The following types of equipment was identified as being damaged:

- vehicles
- trailers
- tents
- camp facilities (for example, buildings)
- push bikes
- activity related equipment (for example, carabiners).

Vehicles were the most frequently damaged equipment type, accounting for 25% of the total equipment damages reported. This was followed closely by trailer (22.7%) and tent (15.9%) damage.

Contributory Factors

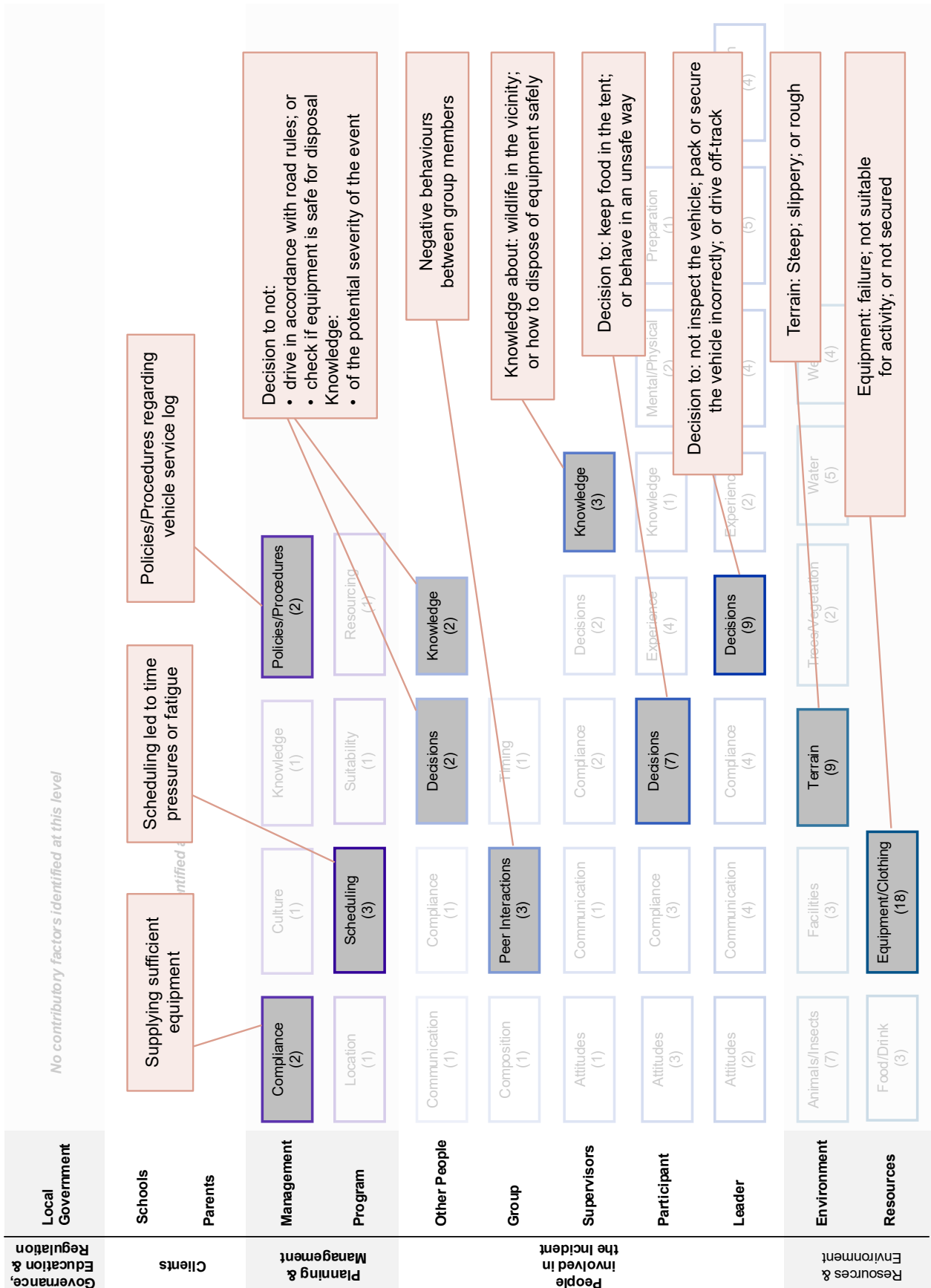
This image shows the contributory factors that were identified as contributing to 44 equipment damage incidents.

Category	Contributory Factors								
Local Government	No contributory factors identified at this level								
Schools	No contributory factors identified at this level								
Parents	No contributory factors identified at this level								
Planning & Management	<table border="1"> <tr> <td>Compliance (2)</td> <td>Culture (1)</td> <td>Knowledge (1)</td> <td>Policies/Procedures (2)</td> </tr> <tr> <td>Location (1)</td> <td>Scheduling (3)</td> <td>Suitability (1)</td> <td>Resourcing (1)</td> </tr> </table>	Compliance (2)	Culture (1)	Knowledge (1)	Policies/Procedures (2)	Location (1)	Scheduling (3)	Suitability (1)	Resourcing (1)
	Compliance (2)	Culture (1)	Knowledge (1)	Policies/Procedures (2)					
Location (1)	Scheduling (3)	Suitability (1)	Resourcing (1)						
Other People	<table border="1"> <tr> <td>Communication (1)</td> <td>Compliance (1)</td> <td>Decisions (2)</td> <td>Knowledge (2)</td> </tr> </table>	Communication (1)	Compliance (1)	Decisions (2)	Knowledge (2)				
Communication (1)	Compliance (1)	Decisions (2)	Knowledge (2)						
People Involved in the Incident	<table border="1"> <tr> <td>Composition (1)</td> <td>Peer Interactions (3)</td> <td>Timing (1)</td> </tr> </table>	Composition (1)	Peer Interactions (3)	Timing (1)					
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<table border="1"> <tr> <td>Attitudes (1)</td> <td>Communication (1)</td> <td>Compliance (2)</td> <td>Knowledge (3)</td> </tr> </table>	Attitudes (1)	Communication (1)	Compliance (2)	Knowledge (3)					
Attitudes (1)	Communication (1)	Compliance (2)	Knowledge (3)						
Participant	<table border="1"> <tr> <td>Attitudes (3)</td> <td>Compliance (3)</td> <td>Decisions (7)</td> <td>Experience (4)</td> <td>Knowledge (1)</td> <td>Mental/Physical (2)</td> <td>Preparation (1)</td> </tr> </table>	Attitudes (3)	Compliance (3)	Decisions (7)	Experience (4)	Knowledge (1)	Mental/Physical (2)	Preparation (1)	
	Attitudes (3)	Compliance (3)	Decisions (7)	Experience (4)	Knowledge (1)	Mental/Physical (2)	Preparation (1)		
<table border="1"> <tr> <td>Attitudes (2)</td> <td>Communication (4)</td> <td>Compliance (4)</td> <td>Decisions (9)</td> <td>Experience (2)</td> <td>Knowledge (4)</td> <td>Mental/Physical (5)</td> <td>Preparation (4)</td> </tr> </table>	Attitudes (2)	Communication (4)	Compliance (4)	Decisions (9)	Experience (2)	Knowledge (4)	Mental/Physical (5)	Preparation (4)	
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Resources & Environment	<table border="1"> <tr> <td>Animals/Insects (7)</td> <td>Facilities (3)</td> <td>Terrain (9)</td> <td>Trees/Vegetation (2)</td> <td>Water (5)</td> <td>Weather (4)</td> </tr> </table>	Animals/Insects (7)	Facilities (3)	Terrain (9)	Trees/Vegetation (2)	Water (5)	Weather (4)		
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<table border="1"> <tr> <td>Food/Drink (3)</td> <td>Equipment/Clothing (18)</td> </tr> </table>	Food/Drink (3)	Equipment/Clothing (18)							
Food/Drink (3)	Equipment/Clothing (18)								

Values represent the number of times the contributory factor was identified. The most frequent factors at each level of the LOA system are shaded.

Contributory Factors Descriptions

This image provides examples of how the most frequent contributory factors contributed to equipment damage incidents.

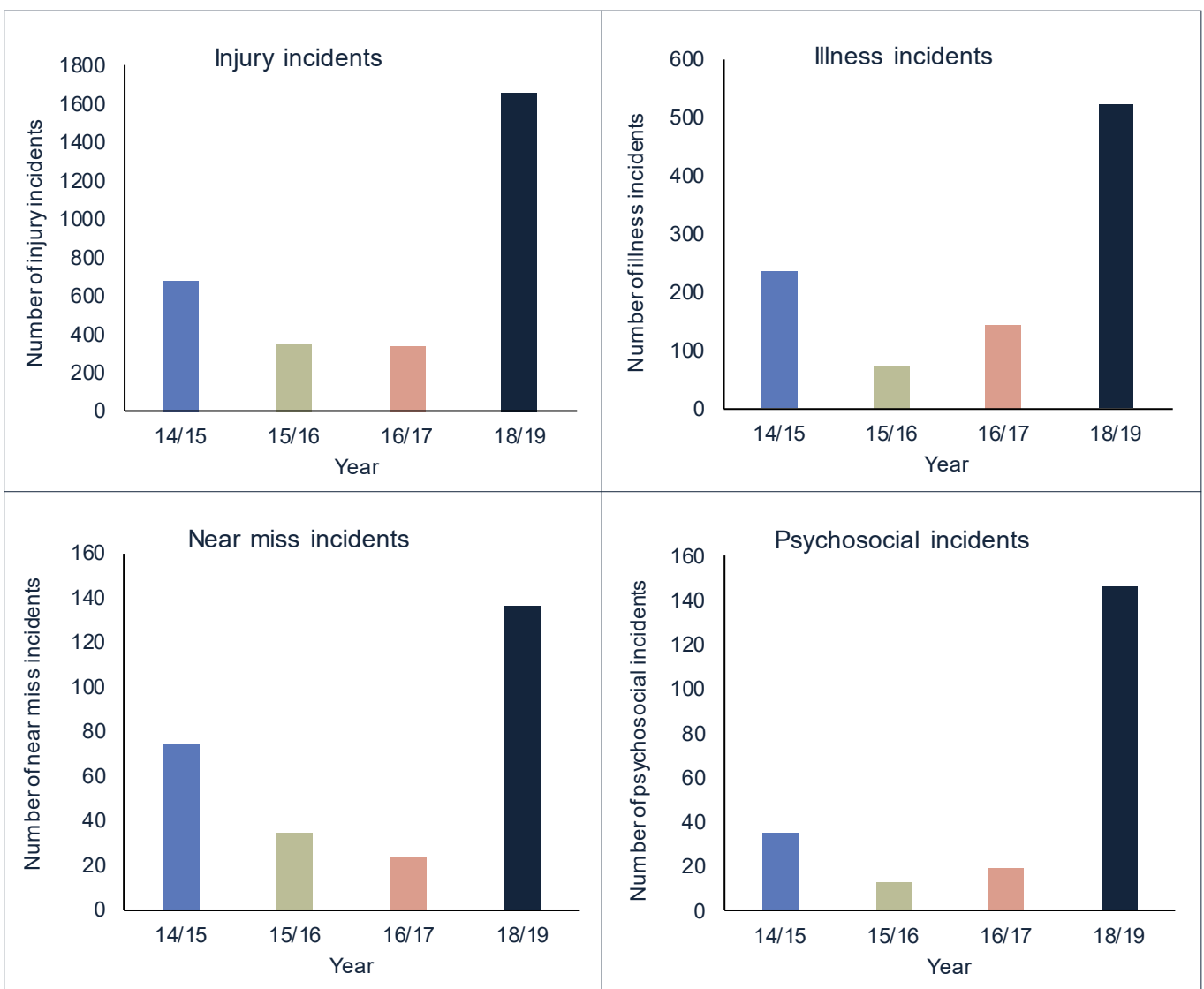


Discussion

A number of important findings can be drawn from the analysis of the UPLOADS National Incident Dataset, in particular those relating to incident reporting and incident rates, incident severity, and contributory factors and the relationships between them.

Incident Reporting

This is the first annual report based on the new UPLOADS App. The ease of use as well as the offline reporting capability has resulted in marked increase in the number of incidents reported. Indeed, more incident reports were submitted to the NID in the past year than the past three years combined when using the old UPLOADS system (the figure below shows a comparison of the previous number of incidents reported). As such, this annual report provides a more accurate reflection of the nature of safety within LOA compared to previous annual reports.



This figure shows the absolute number of incidents reported to the NID over the past four years, for different incident types.

Incident Rates

Despite the increase of reported incidents in this report compared to previous UPLOADS datasets, the overall incident rate (6.9 per 1000 participation days) and for injuries (4.6/1000), illnesses (1.5/1000), psychosocial incidents (0.4/1000) and near misses (0.4/1000) remains low. For injuries in particular, the incidence rate of 4.6 is lower when compared organised sports such as cricket (242/1000), horse-riding (122/1000), soccer (107/1000) and netball (51/1000; Finch, Cassell, & Stathakis, 1999). This finding is consistent with previous UPLOADS analyses and provides further evidence that participating organisations are effectively managing risk in LOA's.

The analysis also shows which activities have the greater incidence of injuries, illnesses and near miss incidents. For injury incidents, walking and running (7.2/1000), camping in tents (5.3/1000) and wheel sports (4.7/1000) had the highest injury incidence rates. For illnesses, camping in tents (2/1000), walking and running (1.2/1000) and wheel sports (0.4/1000) had the highest incidence rates. For near misses, walking and running (0.4/1000), curriculum-based activities, fresh water activities, and harness (outdoors) (all 0.2/1000) had the highest incidence rates. Finally, for psychosocial activities, camping in tents (0.6/1000), walking and running (0.3/1000) and wheel sports (0.2/1000) had the highest incidence rates.

Again, consistent with previous analyses, this suggests that risks associated with overtly risky activities appear to be well managed compared to those activities that are perceived to be less risky (e.g. walking and running, camping in tents). In addition, these findings are comparable with those from other regions such as New Zealand, where Salmon et al (2014) found high incidence rates in walking/running and campcraft. An explanation is that there may be less controls in place during activities that are perceived to be less risky, and that activity leaders may relax their supervision. The findings indicate that further work is required to ensure the safety of participants during activities such as walking and running, camping and campcraft, and free time.

Incident Severity

For the actual severity of incidents, 78% were minor, 19% were moderate, 2% were serious, less than 1% were severe, and most importantly no critical incidents were reported. These results are a positive reflection on the safety of the LOA, as the severity ratings indicate that almost all injuries required only localised care with no ongoing treatment. More concerning is the potential severity of the near miss incidents. For instance, of the 136 near miss incidents reported 8% (11) were potentially critical incidents which is certain death or fatality, and 18% (25) were potentially severe incidents involving serious long-term effects or permanent disablement. This highlights the value of reporting near miss incidents and indicates that efforts should be made to learn from the protective factors which interacted to prevent the near misses from turning into adverse incidents.

Contributory Factors

Overall, the most frequently identified contributory factors were activity participant mental condition, terrain, equipment and clothing, activity leader communication, peer interactions, and parent communication. Other pertinent contributory factors identified included activity centre policies and procedures, facilities, supervisor communication, and program suitability for participants.

It is important to note that the contributory factors identified relate to a diverse set of LOA stakeholders, including activity leaders and participants, supervisors, activity centre management, parents, schools, and local government. This provides further evidence that the responsibility for LOA safety is shared across many stakeholders, and that high levels of coordination are required to maintain safety.

The relationships identified between the contributory factors offer insight into LOA incident causation. The most frequently reported contributory factor relationships were between Activity Equipment and Clothing and Terrain, between the Terrain and Participant's mental and physical condition, and between the Weather and Participant's mental and physical condition. This suggests that consideration should be given to how the activity environment and weather may adversely impact participants, and that the equipment used may be critical for preventing incidents in adverse environments and weather conditions.

The relationships highlight how changes higher up in the LOA system can influence incident rates. For example, relationships were found between Parent's communication (23) and Program suitability (16) and Participant's mental and physical condition, suggesting that poor communication between parents and schools and activity centres and unsuitable programs is having an influence on participant's mental and physical condition during programs. These findings suggest that, rather than introduce interventions during the activity itself, interventions should focus on attempting to improve communications between parents, schools and activity providers, and also on ensuring that programs are designed based on participant needs and capabilities.

Developing Incident Prevention Strategies

This analysis provides indications of where interventions could be implemented to prevent future LOA incidents; however, the specific nature of interventions will be dependent on the activity providers implementing them, and so we do not provide specific recommendations here. For organisations wishing to develop and implement safety interventions. It is recommended that they use the UPLOADS Preventing Incident Method (UPLOADS PrIME). UPLOADS PrIME has been developed specifically to support organisations when developing incident prevention strategies in response to safety issues that have been identified via the UPLOADS incident reporting system. PrIME is a simplistic process that enables organisations to develop and implement appropriate interventions designed to remove contributory factors identified via UPLOADS. For further information regarding UPLOADS PrIME, visit our website (www.uploadproject.org) or contact the UPLOADS Team (phone: 07 5456 5288 or email uploadproject@usc.edu.au).

Conclusions

The findings once again demonstrate that LOA injury, illness, psychosocial and near miss incidents represent systems issues 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 to the National Incident Dataset. It is recommended that organisations wishing to respond to any of the issues identified in the current analysis use UPLOADS PrIME to develop and implement appropriate safety management strategies.

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 (LOA)	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 used 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 carabiners was not locked. If the student had fallen, this may have led to a serious injury.
Participation	The number of participants undertaking LOA 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.
Program Roles	Activity Participant: People actively participating in the activity (e.g. students or clients) Activity Leader: People instructing the activity (e.g. leaders, guides, or instructors). 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). Other: Other people involved in the incident (e.g. drivers, support staff, or caterers)
Program Participation Days	The program length and total number of participants (e.g. a program is five days with 12 participants)
Activity Participation Days	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 Factor	Contributory factors include any decisions, actions, events, omissions, or conditions, that could have contributed to the incident occurring. This includes the decisions and actions of everyone in the system (for example, managers, schools, parents, peak bodies, government) not just leaders and participants
Relationships / Interactions between contributory factors	An relationship / interaction between two contributory factors is present when one factor influences another by either creating, enabling, facilitating, strengthening, or weakening it
Program Type	Journey: Most activities and accommodation occur at multiple locations, across two or 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)

Term	Definition
Severity Types	Actual severity is based on the response to the event and the outcome 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.
Severity Rating - No Impact	No Impact <ul style="list-style-type: none"> • Consequences - negligible • Treatment - not required • Evaluation - not required • Examples - falls, equipment failures, rock falls, or dangerous weather that did not result in an adverse outcome.
Severity Rating - Minor	Minor <ul style="list-style-type: none"> • Consequences - short term impact • Treatment - localised care (e.g. first Aid) • Evaluation - not required • Examples - superficial cut, blisters, splinters, hay-fever, travel sickness
Severity Rating - Moderate	Moderate <ul style="list-style-type: none"> • Consequences - short to medium term effects • Treatment - ongoing localised or external care (e.g., formal medical assessment) • Evaluation - temporary cessation of activity, localised or external assessment and treatment, return to activity • Examples - minor burns/cuts, food intolerances, fainting, diarrhoea/vomiting
Severity Rating - Serious	Serious <ul style="list-style-type: none"> • Consequences - medium to long term effects • Treatment - timely external medical care • Evaluation - full evacuation (i.e., no return to activity) • Examples - simple fractures, deep cuts/burns, hypothermia, infections
Severity Rating - Severe	Severe <ul style="list-style-type: none"> • Consequences - serious long term effects or permanent disablement • Treatment - urgent emergency medical assistance with ongoing care • Evaluation - emergency evacuation • Examples - multiple or compound fractures (e.g. spinal), anaphylaxis, crushing injuries, severe fever
Severity Rating - Critical	Critical <ul style="list-style-type: none"> • Consequences - certain death or fatality • Treatment - urgent emergency medical assistance • Evaluation - urgent emergency evacuation • Examples - amputation, head trauma, disembowelment, prolonged severe abdominal pain.

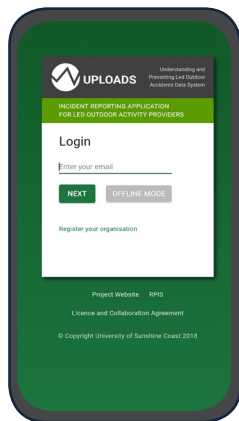


UPLOADS

Understanding and Preventing Led Outdoor Accidents Data System

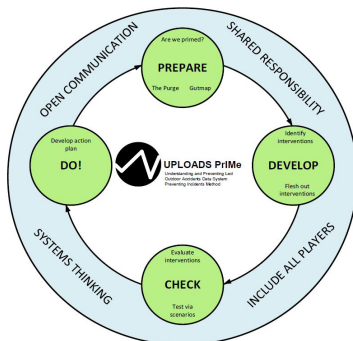
UPLOADS is a standardised national incident reporting and learning system for the led outdoor activity sector in Australia.

The UPLOADS App and UPLOADS PrIME are used to identify trends and develop incident prevention strategies to help make led outdoor activities safer.



The UPLOADS App
Collect data about incidents and near misses and identify potential safety issues.

Making outdoor activities safer for you, and the wider community



UPLOADS PrIME
Use Preventing Incidents Method (PrIME) to identify incident prevention strategies.

If you would like to use the UPLOADS Incident Reporting System contact the UPLOADS Team

www.uploadspjroject.org | (07) 5456 5288 | uploadspjroject@usc.edu.au