

The new UPLOADS national incident dataset

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Caloundra



Overview

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- UPLOADS
- Analysis of data September 2018 – Present
- UPLOADS PrIMe
- Implications
- Summary



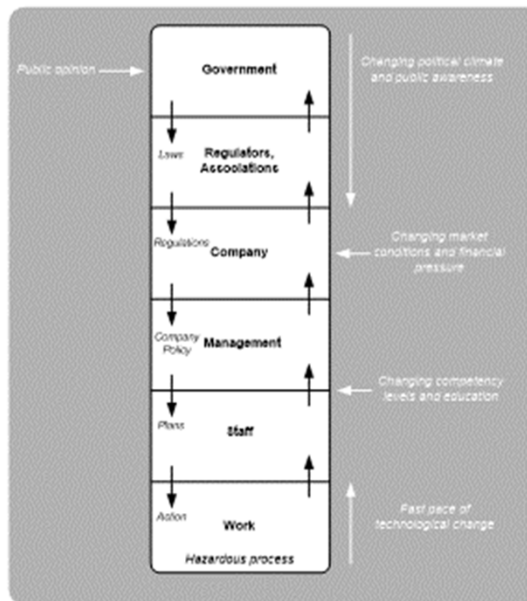
UPLOADS

Understanding and Preventing Led
Outdoor Accidents Data System

Incident reporting and learning

- App provides capacity to report and analyse injury, illness, and near miss incidents
- Organisations can interrogate their own incident data as well as sector-wide data via the NID
- Calculation of incident rate
- New version of UPLOADS removes many of the issues/problems associated with UPLOADS V1.0

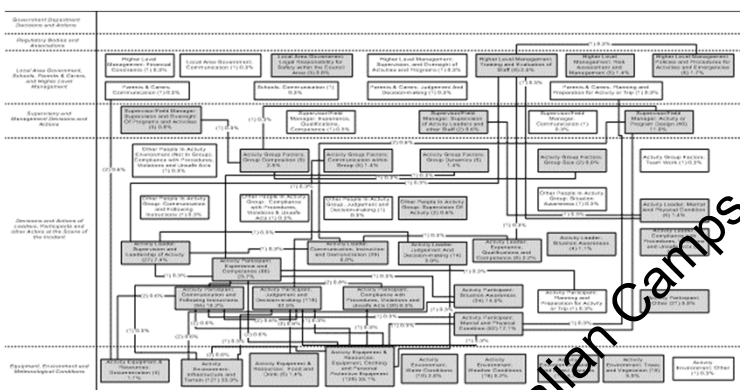
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State-of-the-art

- Consistent with contemporary models of accident causation

Identification of contributory factors across all levels of the led outdoor activity system, including government and regulatory levels



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Incident Reports

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🏠 Home
📄 Incidents
👤 Participation
📊 Explore
⚙️ Settings

🚪 Logout

Injury type: Muscular / Injury location: Knee

First aid: Unsure / Evacuation: Yes - Helicopter / Emergency services: Yes / External medical treatment: Unsure

✔️ **Description** ✎

24 participants and two Activity Leaders began a descent of XXX Falls. Participants were mostly novice abseilers and did not receive training prior to the activity. Therefore, there was not a sufficient ratio of leaders to participants to adequately supervise this task. In addition, the group size did not meet the group size limit (8 participants per activity) imposed by the National Parks and Wildlife Service. The weather was fine and water levels were low. Because each person was not equipped with abseiling gear as is recommended, the descent took longer than expected. The group only intended to descend the first three abseils, but decided to continue after failing to find the expected exit. The expected exit location was not specified in the activity program documentation and the supervisor had not communicated its location to the activity leader. While descending the third abseil, a participant aggravated a prior knee injury, which further delayed progress. The participant did not report their pre-existing injury on the medical/consent form, therefore exposing the participant to an activity not suitable for their circumstance. As a result, the group spent Sunday night at the bottom of fourth abseil. Head office alerted Police and State Emergency Services late on Sunday night that the group was overdue. A SES vertical rescue crew of four responded to XXX Falls early on Monday morning, and reached the missing group at 1100 hours. With no easy escape route, and slow progress of the group, a helicopter extraction of the whole party was required.

✔️ **Contributory factors** ✎

RESOURCES:

- ⓐ1 EQUIPMENT / CLOTHING - Participants were not equipped with sufficient equipment
- ⓐ2 DOCUMENTATION - Did not contain information about the participant's existing medical history, or information about the expected exit

ENVIRONMENT:

- ⓑ3 TERRAIN - No easy escape route slowed down evacuation


LEADER:

- ⓒ4 DECISIONS - Decision to continue descent after not finding the expected exit
- ⓒ6 KNOWLEDGE - Could not find the expected exit

PARTICIPANT:

- ⓓ2 COMMUNICATIONS - Did not advise the organisation about their existing knee injury
- ⓓ5 EXPERIENCE - Participants were novice abseilers

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- Participation
- Explore**
- Settings
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Summary reports

Comprehensive overview reports collating a broad range of data

-  **Overall summary report**
Key stats and charts for all incidents
-  **Injury summary report**
Key stats and charts for injury type incidents
-  **Illness summary report**
Key stats and charts for illness type incidents
-  **Near miss summary report**
Key stats and charts for near misses
-  **Calendar report**
Calendar year heatmap view of incidents, activity participation-days and incident rate.

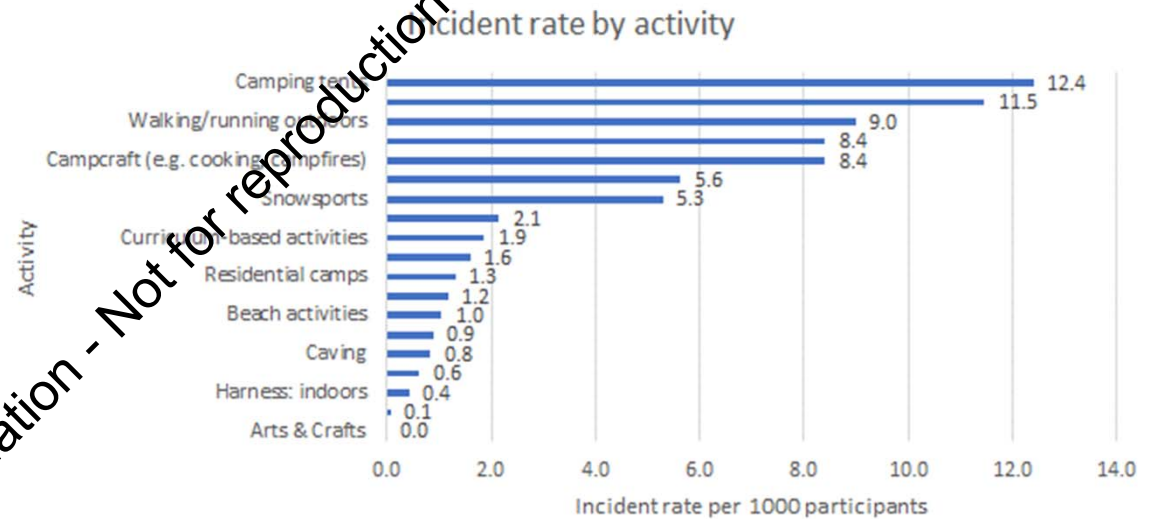
Contributory factor analysis

-  **Accimap**
Accimap diagram showing interactions between contributory factors
-  **Contributory factors**
Number of incident reports for each contributory factor

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Findings to date (2015 – 2018)

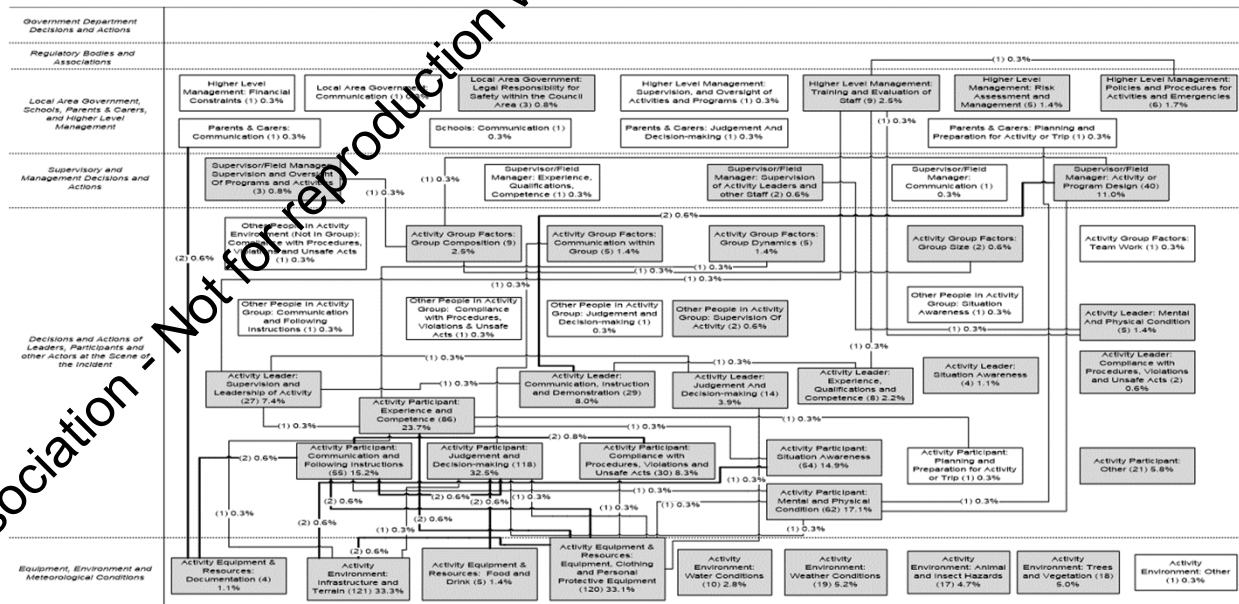
- 2037 incidents reported
- 3086 contributory factors
- Low incident rate
- Most injuries are minor
- Less overtly risky activities have higher injury incident rate



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Findings to date (2015 – 2018)

- Incidents have multiple contributory factors spanning multiple actors
- Key areas for intervention include risk assessment, interactions between parents, centres, schools, documentation, pre-existing injuries, fit between participants and activities, policy and procedures



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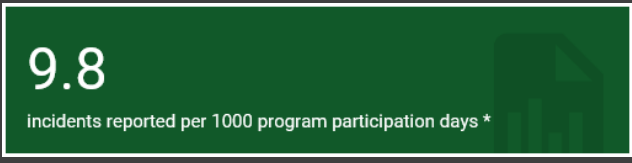
NEW UPLOADS APP

- Improved usability
- Improved classification scheme
- Offline reporting
- Access to NID
- Launched September 2018
- Analysis of data September 2018 – June 2019

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Incident rates

September 2018 to June 2019

Activity incident rate (some activities omitted due to less than 3 organisations)

ACTIVITY TYPE	NUMBER OF INCIDENTS	ACTIVITY PARTICIPATION DAYS	ACTIVITY INCIDENT RATE
Archery	4	19727	0.2
Beach activities	14	14841	0.9
Campcraft (e.g. cooking, campfires)	133	61946	2.1
Camping (Residential)	8	21682	0.4
Caving	4	629	6.4
Curriculum-based activities	89	25602	3.5
Free time	66	27540	
Harness: Outdoors	109	109566	1.0
Salt water activities	9	16170	0.6
Fresh water activities	141	55544	2.5
Teambuilding games	85	59965	1.4
Travelling / Logistics	20	4164	4.8
Walking/running	606	54888	11.0
Wheel sports	77	24109	7.3
Other	90	40629	2.2
Camping (Tents)	508	80706	6.3
Urban program	-	-	-



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Incident type by severity

Severity definitions

0 NO IMPACT

Consequences: Negligible Treatment: Not required Evacuation: Not required Examples: Falls, equipment failures, rock falls, dangerous weather that did not result in an adverse outcome.

1 MINOR

Consequences: Short term impact Treatment: Localised care (e.g., first aid) Evacuation: Not required Examples: Superficial cut, blisters, splinters, hayfever, travel sickness.

2 MODERATE

Consequences: Short to medium term effects Treatment: Ongoing localised or external care (e.g., formal medical assessment) Evacuation: Temporary cessation of activity, localised or external assessment and treatment, return to activity Examples: Minor burns/cuts, food intolerances, fainting, diarrhea/vomiting.

3 SERIOUS

Consequences: Medium to long term effects Treatment: Timely external medical care Evacuation: Full evacuation (i.e., no return to activity) Examples: Simple fractures, deep cuts/burns, hypothermia, infections.

4 SEVERE

Consequences: Serious long term effects or permanent disablement Treatment: Urgent emergency medical assistance with ongoing care Evacuation: Emergency evacuation Examples: Multiple or complicated fractures (e.g. spinal), anaphylaxis, crushing injuries, severe fever.

5 CRITICAL

Consequences: Certain death or fatality Treatment: Urgent emergency medical assistance Evacuation: Urgent emergency evacuation Examples: Amputation, head trauma, dismemberment, prolonged severe abdominal pain.

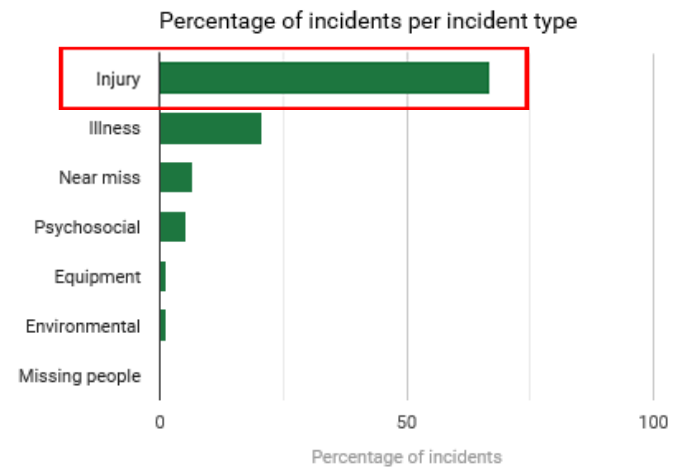
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Incident types by severity

Total incidents **2083** with average actual severity level of 1.2 (SD=0.6)

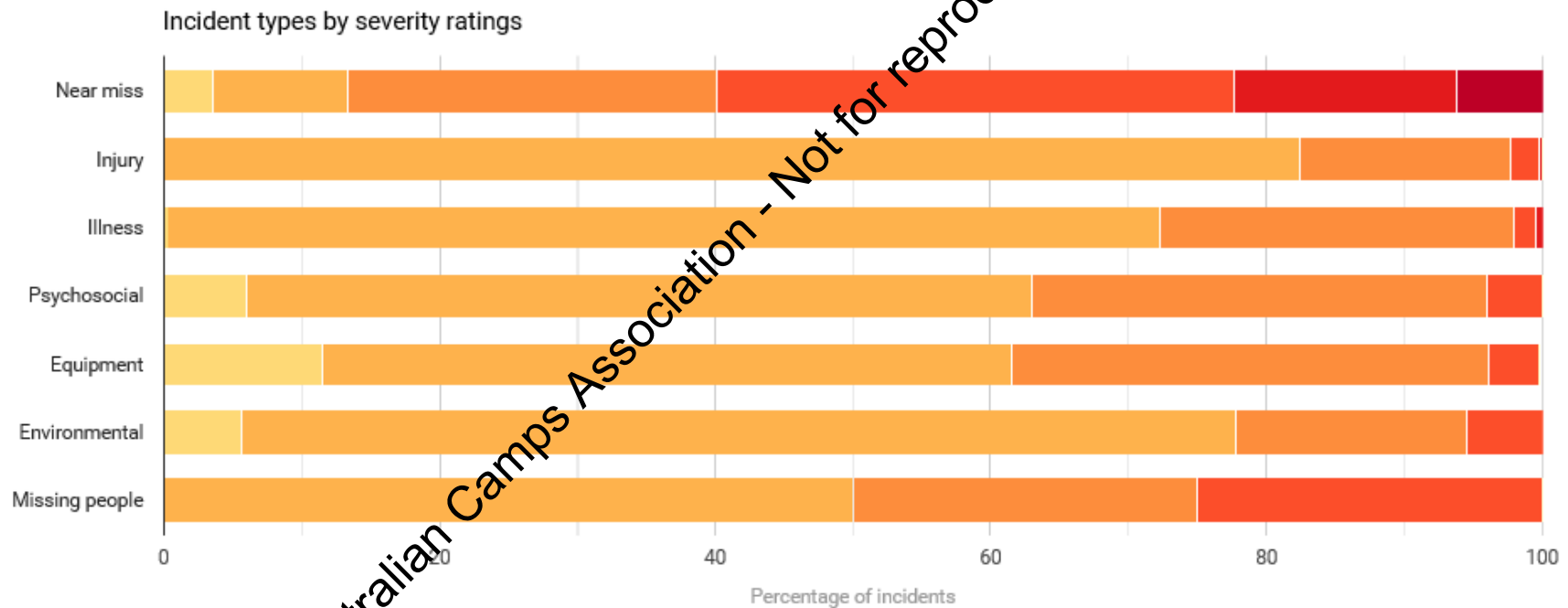
INCIDENT TYPE	SEVERITY							NUMBER OF INCIDENTS	FATAL
	0	1	2	3	4	5	?		
Near miss *	4	14	41	54	21	7	-	141	6.8
Injury	1	1129	229	29	2	-	1	1391	66.8
Illness	1	306	118	8	3	-	-	436	20.9
Psychosocial	6	62	39	4	-	-	-	111	5.3
Equipment	3	18	10	1	-	-	-	32	1.5
Environmental	3	17	6	1	-	-	-	27	1.3
Missing people	-	2	1	1	-	-	-	4	0.2

* Near miss incidents show Potential Severity



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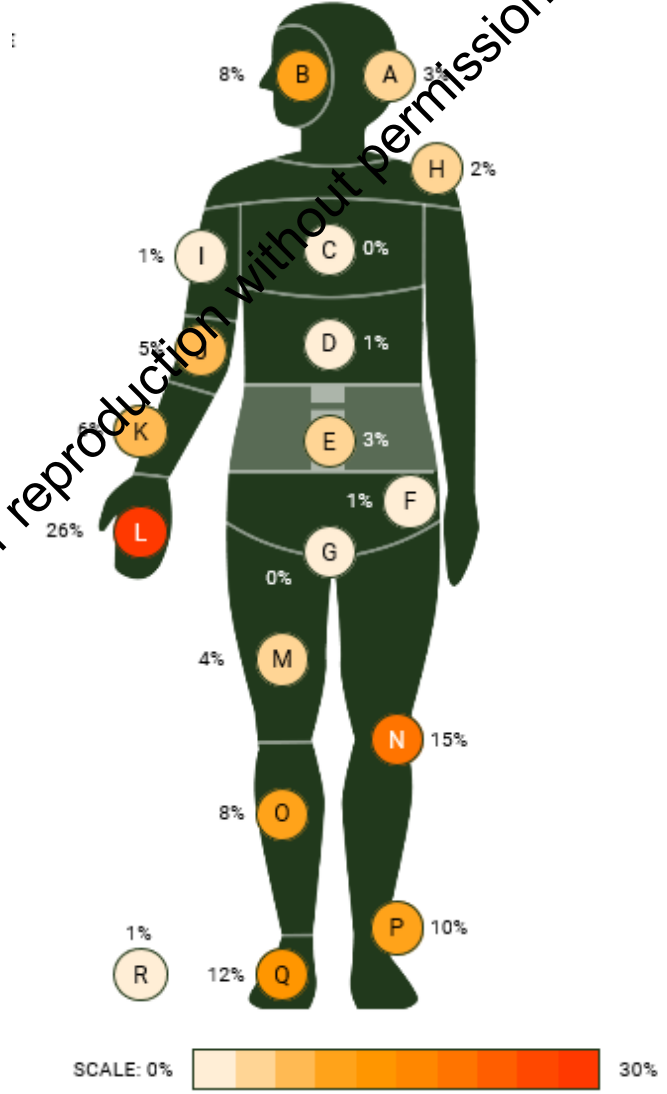
Incident type by severity



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Injury location

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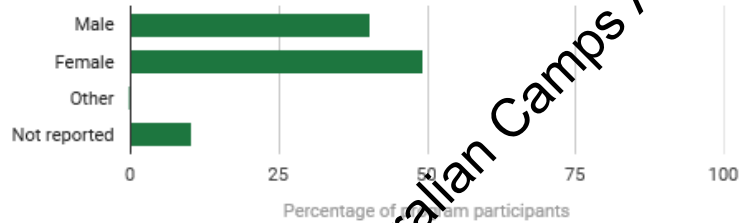
Gender

Total participants involved in programs **64344**

GENDER OF PARTICIPANTS INVOLVED IN ALL PROGRAMS

GENDER	NUMBER OF PARTICIPANTS	% OF TOTAL PARTICIPANTS
Male	25967	40.4
Female	31754	49.4
Other	12	0.0
Not reported	6619	10.3

Percentage of program participants by gender

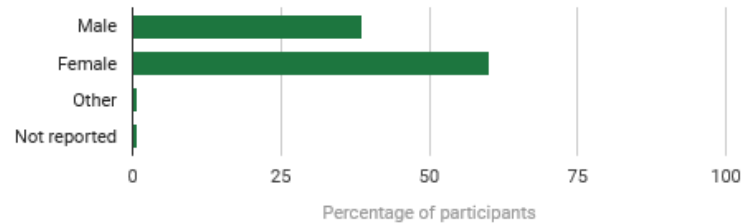


Total participants involved in incidents **2014**

NUMBER OF PARTICIPANTS INVOLVED IN INCIDENTS BY GENDER TYPE

GENDER	NUMBER OF PARTICIPANTS	% OF TOTAL PARTICIPANTS
Male	777	38.6
Female	1213	60.2
Other	12	0.6
Not reported	12	0.6

Percentage of participants by gender



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103054

program participation days

649

incidents reported

6.3

incidents reported per 1000 program participation days *

9.8

incidents reported per 1000 program participation days *

UPLOADS NID

Camps

Camping (tents & residential) and campcraft

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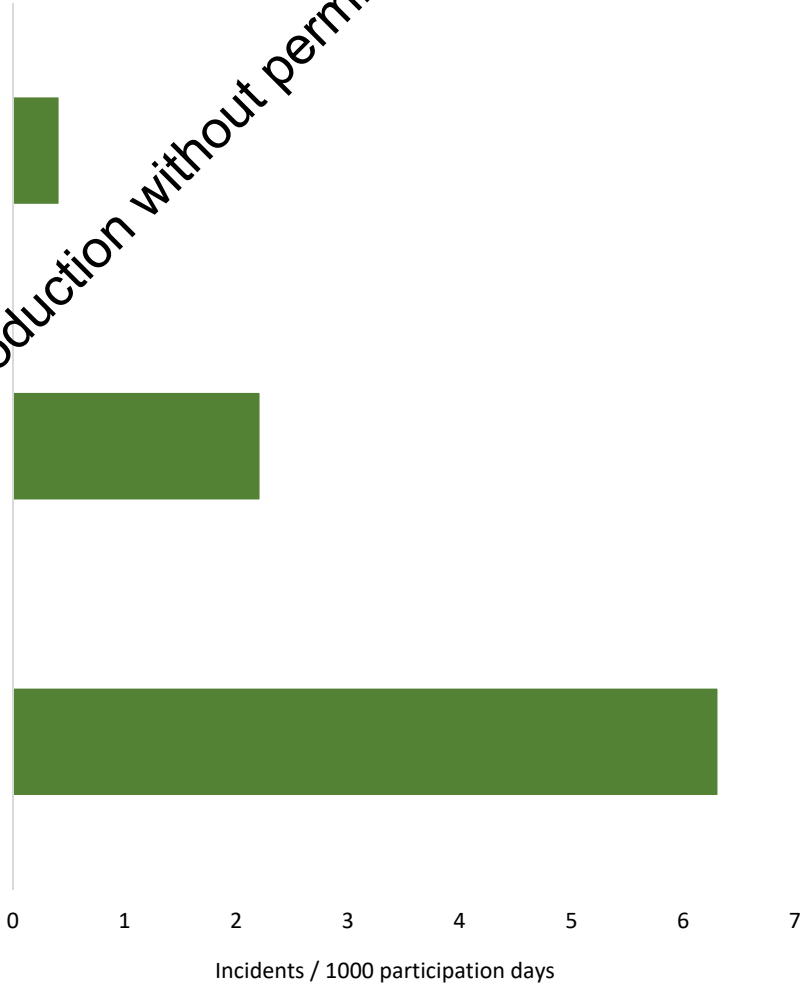
Camps

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Camping (Residential)

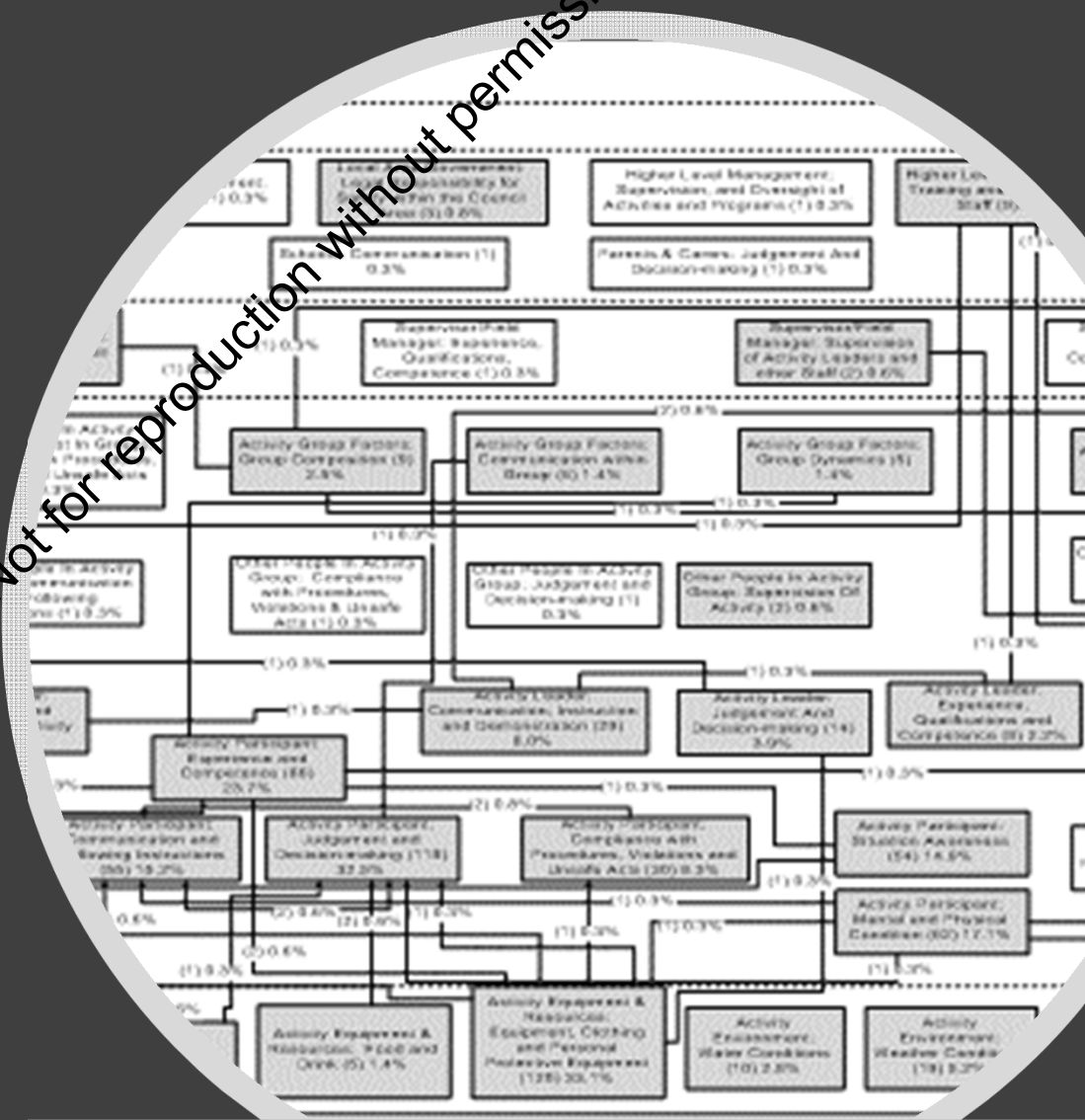
Campcraft

Camping (tents)



Systems analysis of LOA incidents

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Governance, Education & Regulation

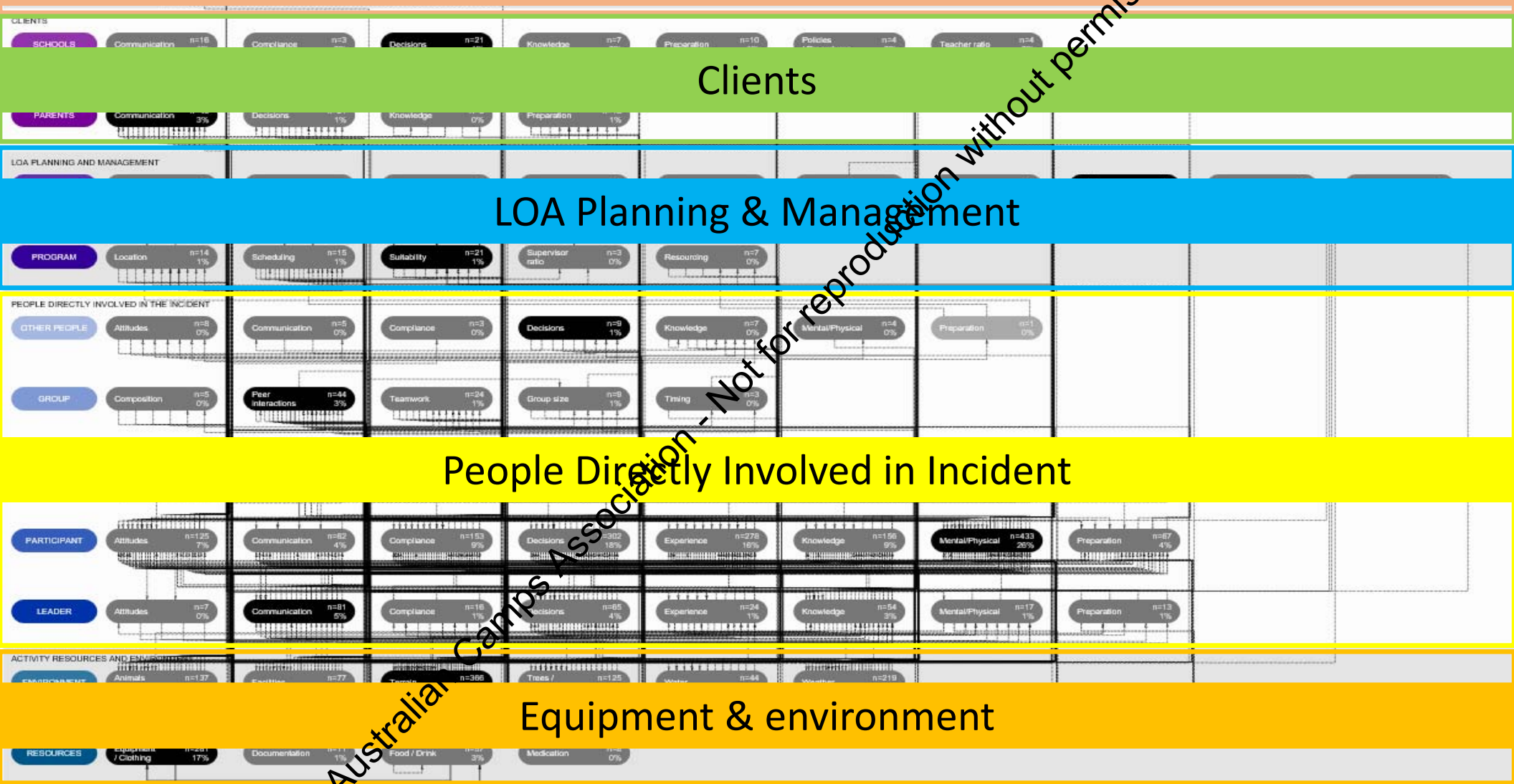
Clients

LOA Planning & Management

People Directly Involved in Incident

Equipment & environment

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Reports

Campcraft (cooking)

- 'Student cut his finger by pressing down on the knife with index finger while using the knife upside down'
- Contributory factors: equipment; knowledge; experience

Camping (tents)

- 'Student was having an asthma attack in tent, didn't have torch and couldn't locate ventilator'
- Contributory factors: Pre-existing condition; preparation; equipment

Camping (residential)

- 'Student was mucking around unsupervised in dorm and knocked head, resulting in a cut to the head'
- Contributory factors: Judgement & Decision making; Supervision; Facilities

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Prominent Contributory factors

Level	Prominent Contributory Factor
Governance, Education & Regulation <ul style="list-style-type: none"> Local Government 	Facilities; Policy/Procedures Maintenance of tracks
Clients <ul style="list-style-type: none"> Schools Parents 	Decisions Communication Inappropriate programming Withholding information
LOA Planning & Management <ul style="list-style-type: none"> Management Program 	Policies/Procedures Suitability Running of programmes Types of programs
People Directly Involved in Incident <ul style="list-style-type: none"> Other people Group Supervisors Participant Leader 	Decisions Peer interactions Communication Mental/physical Communication Near misses on the road Messing about Supervision Pre-existing conditions Supervision
Activity Resources & Environment <ul style="list-style-type: none"> Environment Resources 	Terrain Equipment/Clothing Tracks, steep, slippery, uneven Knives and incorrect footwear

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Prominent interactions btw Contributory Factors

LEVEL	INTERACTION
Governance, Education & Regulation <ul style="list-style-type: none"> Local Government 	Facilities >>> Scheduling Facilities >>> Trees/vegetation Facilities >>> Animals/insects
Clients <ul style="list-style-type: none"> Schools Parents 	Communication >>> Parents preparation Communication >>> Mental/physical
LOA Planning & Management <ul style="list-style-type: none"> Management Program 	Training >>> Decisions Suitability >>> Participant: Mental/physical
People Directly Involved in Incident <ul style="list-style-type: none"> Other people Group Supervisors Participant Leader 	Decisions >>> Attitudes Peer interactions >>> Participant: Decisions Communication >>> Participant: Decisions Experience >>> Terrain Communication >>> Participant: Experience
Activity Resources & Environment <ul style="list-style-type: none"> Environment Resources 	Terrain >>> Participant: Experience Equipment/Clothing >>> Terrain

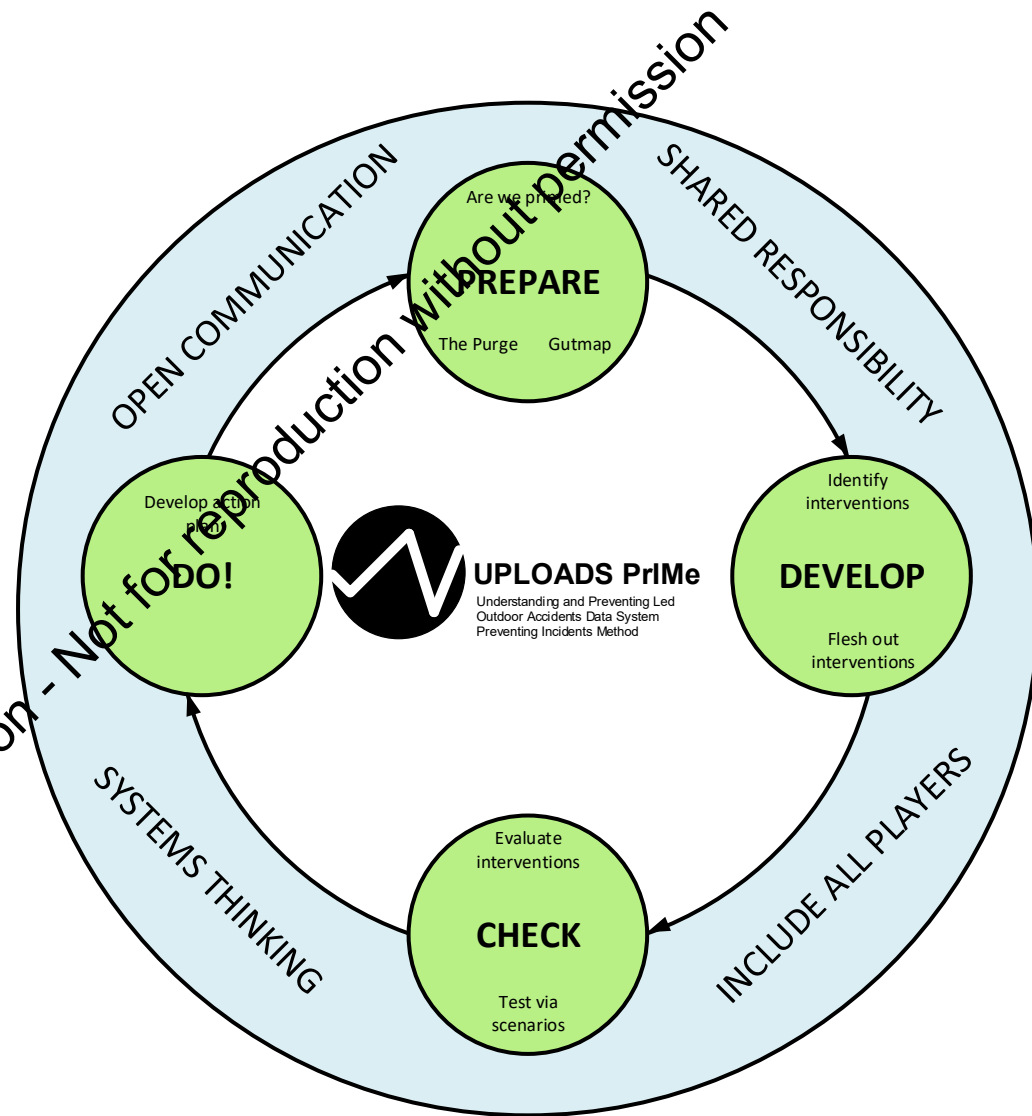
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UPLOADS 2

- Develop structured process for translating systems-based accident data into prevention strategies (UPLOADS-PrIME)
- Test effectiveness of UPLOADS by comparing the incident and safety records of organisations using UPLOADS versus organisations not using UPLOADS

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UPLOADS PrIMe

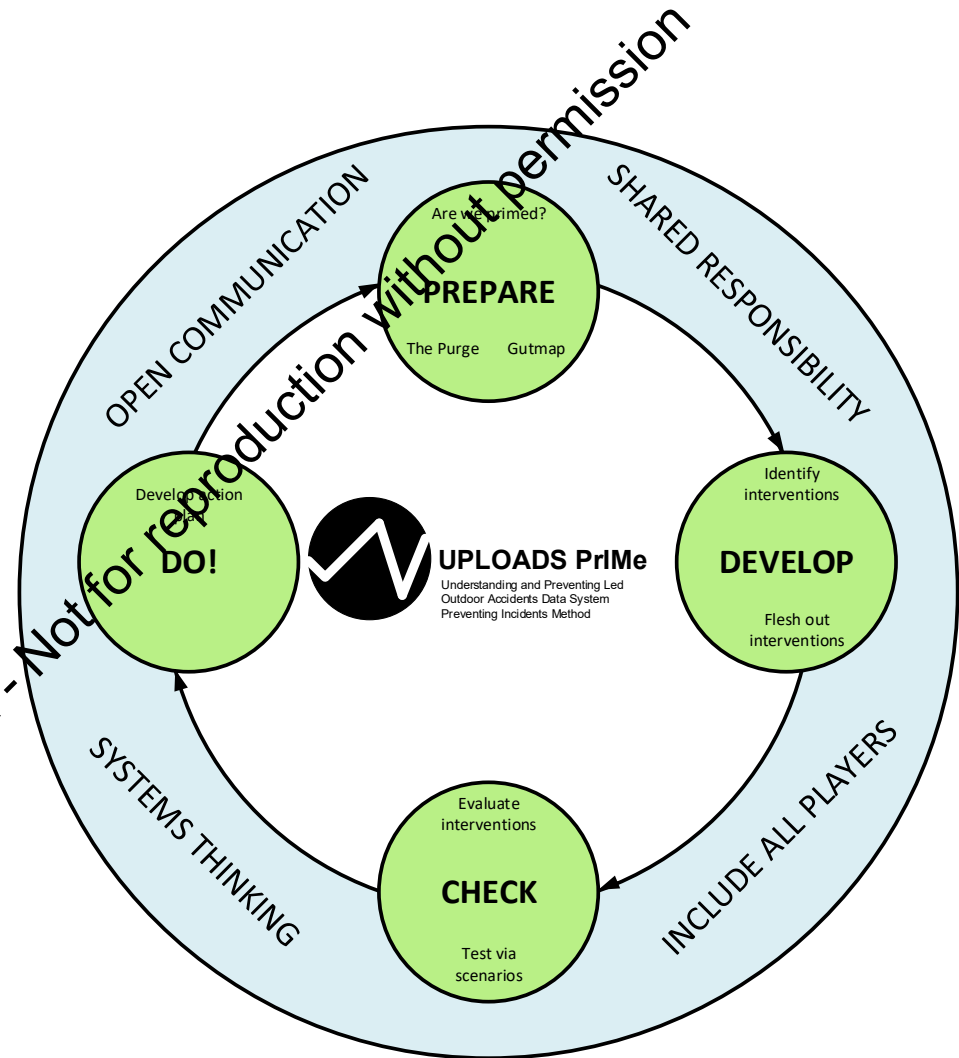


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7 Step Process

Preparation

1. Are we Primed?
2. The Purge
3. The Gutmap
4. Identify PrIME strategies
5. Flesh out PrIME strategies
6. Test PrIME strategies
7. Complete PrIME Action Plan



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Using PrlMe

- Workshop July 31st Melbourne (Location TBA)
- Contact uploadsproject@usc.edu.au for PrlMe materials
- Online training materials coming soon

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Summary

- New UPLOADS app up and running
- Provides capacity to interrogate own data and sector wide data
- UPLOADS PrIME provides a rapid and structured process for responding to safety issues
- UPLOADS and UPLOADS PrIME free and available to all Australian LOA providers

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Questions?

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