

A practitioner's first-hand perspective on ways to address issues raised around campcraft incidents

Think back to when you were learning the skills to work professionally in the outdoors. You would probably have spent a fair bit of time and effort on the learning and practicing of your technical skills development (your J stroke in canoeing, or your protection placement on a slab, for example). It is probable that much less time and focus would be spent on considering and practicing cooking and campfire safety.



As a young practitioner learning my trade in both the UK and the USA, I consider myself lucky (although I didn't know it then) to have been instructed very early on about the importance of stove safety. Part of this learning included stories and first hand recollections of severe burns from pots tipping over and spilling contents onto the upper thighs, torsos and in some cases, feet of participants and staff. Standard operating procedures included diagrams of how to position your cooking 'kitchen' and tools (stoves, fuel etc). There were strict non-negotiables hammered into us by our managers and trainers – for example, no sitting cross-legged in front of a stove, and close-toed shoes must always be worn in the kitchen.

However, according to the data emerging from the 12 month trial of UPLOADS, this component of led outdoor activities is most definitely worthy of further consideration and analysis on a sector wide scale. Interestingly, the idea for this blog opinion piece originated prior to the release of the above-mentioned trial. It came about from discussions of a collective group of outdoor risk managers from multiple Australian organisations who study and review incidents in their workplace. Specifically, we were observing that burns injuries from cooking were occurring within **all** our organisations. To then not long after, see that national, de-identifiable and self-reported incident data from other schools and organisations mirrored our collective organisation's experiences, only endorsed the desire to open a discussion and re-evaluate our collective assumptions and practices around cooking on led outdoor programs. This post is an attempt at that.

The UPLOADS Data

Over a period of 12 months (1st of June 2014 – 31st of May 2015), a total of 114 incidents were reported under the category of "campcraft". Campcraft is the category which describes actions around cooking and campfires. Of these incidents, 69 were injury-causing. Of note, campcraft was the 2nd highest category of injury-causing incidents reflected in the overall data; reporting an injury-causing incidence rate of almost 6 incidents per 1000 participants. Interestingly, the average overall



injury-causing incidence rate was 2.1 incidents per 1000 participants. This means that there was approximately 3.5 more injury-causing incidents reported for every thousand participants involved in campcraft activities, compared to all led outdoor activities overall. A problem obviously exists.

Of the injuries involving the activity of campcraft, 30% (n=21) were from burns. Of the injuries that occurred to the wrist, hand and lower extremities (n= 58), 33% (n=19) were from burns. All reported injuries to the hip, thigh, knee and lower leg were caused by burns.

The vast majority of injuries were minor where care and treatment requirements were localised and the impact of the injury resulted in short-term effects.

Contributing Factors

The most frequently identified factors contributing to campcraft related injuries, illnesses and near miss incidents within the UPLOADS data were reported as:

- Equipment, Clothing and Personal Protective Equipment (identified in 58% of incidents analysed);
- Activity Participant Experience and Competence (identified in 33% of incidents analysed);
- Activity Participant Judgement and Decision-making (identified in 31% of incidents analysed); and;
- Food and Drink (identified in 28% of incidents analysed).

Although the most frequently reported contributing factors were located primarily at the 'sharp end' (e.g. the instructor and participant, and equipment levels) of the system, higher order (or organisational/management) factors were also reported (albeit minimally). These were factors related to:

- Field Managers: Activity and Program Design (identified in 8.3% of incidents analysed) and;
- Parents and Carers: Communication (identified in 5.6% of incidents analysed).

This data may demonstrate a lack of understanding or awareness of how managerial or organisational decisions, policy guidance (e.g. standard operating practices around cooking, active role for accompanying staff), and actions (e.g. staff training), may contribute to the prevention of injuries during campcraft activities.

The Other Kind of Data – From Experience and Observation

In my current role working with schools and organisations auditing and reviewing their risk management systems and practices, I benefit immensely from multiple accounts and first-hand descriptions of incidents and injuries. In this work, I see a lot of different campsites, cooking on stoves, as well as the management of campfires.

As a Risk Manager at The Outdoor Education Group for 12 years, I was also responsible for developing and reviewing policies in relation to such activities with the help and assistance of many others. Additionally, I investigated my fair share of incidents in this area.

Finally, expert witness experience has enabled a personal perspective to be gained from cooking incidents that have led to long and painful consequences, on both the injured participants and their families, and on the staff and organisations involved.

Case Studies

In order to highlight both the reality and the seriousness of burns (in immediate and long term consequences), a number of real case studies and incident synopses are provided below.

Case Study 1

A group of four silver Duke of Edinburgh students were accompanied by a freelance staff member, hired by the school for the first time. The staff member was told by the School that the students were very competent with camping and cooking and that they didn't need 'very strict' supervision in these activities. The staff member's job was to make sure they didn't get lost on the bushwalk. The staff member permitted the students to commence cooking on the first evening and maintained auditory communication with them whilst she set up her tent. Unfortunately, soon after commencing cooking, one of the students suffered full thickness burns to a significant percentage of her body due to an exploding fuel bottle that was left sitting open next to the stove. Over ten years later, the student continues to suffer significant physical and psychological harm as a result of her injuries.



There were no SOP's or risk assessments for the activity of cooking. All students did not have experience cooking or using stoves; one for example had never seen a Trangia stove before. There was no pre-activity briefing or competency assessment regarding use of stoves.

Case Study 2

A group of students on Day 8 of a 10-day rafting trip were camped on the banks of the river. They were Year 11 students and had been participating in outdoor education programs for several years. The groups were 'self-catering' for the program and as such, planned and cooked their own food in small groups. The kitchen was set up and a 'cooking circle' rope was used to delineate the cooking zone in all the separate cooking groups (only the two cooks could be inside this area). The two supervising staff were cooking their food nearby. One group was waiting on their water to boil and the two students were sitting opposite each other and cross-legged in front of the stove. One student leaned over to check the water and when lifting the lid accidentally dropped it, causing the pot to become unbalanced and boiling water to land in the torso/upper thigh area of the student sitting on the opposite side. The

student suffered serious burns to the affected area and was urgently evacuated. He made a recovery however still has physical scars as a result of his injuries.

There were detailed SOP's regarding stove use which stated that participants were not permitted to sit in front of stoves. The SOP's called for a position that enabled one to move away quickly in the event it was required (e.g. a squatting position). Due to the trip being almost over, the age and competence of the students in cooking and no prior incidents, the supervisory team became more relaxed in the risk management controls around cooking.

Case Study 3

A group of students were on a bike trip and on lunch on Day 3, the group decided to have hot chocolate at a picnic area. The stove and pot full of boiling water were sitting on the picnic table and the students were seated around the table. It started to rain and two students got up suddenly from the table to get their raincoats, causing the pot to move and fall off the table, spilling the contents onto the groin of one of the students. He suffered full thickness burns and was evacuated via ambulance where he later underwent surgery.

There were no SOP's or risk assessments relating to cooking on picnic tables, however there was an organisational policy relating to the number of participants in the cooking circle. The staff considered that these policies were related to cooking main meals at campsites as that was what they had learned in their tertiary training. The management staff who write the policies had not previously considered the risk of using stoves on picnic tables.

Other

In researching for this post and speaking with other practitioners and risk managers, I know personally of another six incidents where participants were burned - some seriously - with pots falling off stoves and contents spilling onto bodies. The injuries range from burns to feet (3) (closed toed shoes were not worn in these incidents), burns to the groin (1) and burns to the hands (2).

Emerging Themes

With the benefit of analysis and non-judgemental reflection, some common themes surrounding cooking safety emerge both from these incidents, and from observational experience. The following are a few key ones:

1. Cooking is treated like an action, not an 'activity'

Cooking is conducted every day and in many cases, after an initial 'brief', it is afforded a more relaxed approach to supervision. Yet, the data (both validated through UPLOADS and that personally experienced) paints a picture of cooking incidents being a real concern (the fact that the UPLOADS data shows that the incidents resulting in only minor injuries is most definitely not a reason to do nothing, as these real examples display the potential harm as a result).

2. General lack of policy around seating position in front of stoves

There are general standard operating practices in many schools and organisations around having 'cooking circles' (to minimise human traffic and congestion in the kitchen) or 'refuelling zones' (a separate place to refuel a stove), yet little exists around seating position in front of a stove. As this is a foreseeable hazard with potential for real and serious harm, organisationally, it is absolutely vital to have a clear and known practice in relation to accepted position around stoves – in my own opinion, I advocate a squatting position with something soft to protect the knee so that it is both comfortable cooking but importantly, the cook is able to move away quickly in the event of spills. (I realise some practitioner's consider this to be an uncomfortable position for participants to maintain however, in my own experience, I don't believe this is a sufficient reason to allow sitting in front of stoves).

3. Risk Assessments are not specific in relation to cooking hazards

If cooking is represented in risk assessments, it is typically allocated a one liner in relation to the source of hazard (stoves), the potential harmful outcome (burns), and the risk controls (supervise students). It would perhaps be more effective, given the incident statistics and the potential for serious injury associated with the activity of cooking, to discuss all the reasonably foreseeable ways that someone could be injured associated with cooking, followed by what can be done about it. It would again treat cooking as an activity and not solely an action.

4. General lack of policy direction around stove position

A common area of policy perspective between professionals who received their training in Australia, compared with those who hail from overseas (primarily the USA and Canada) is the different of opinion around stoves being only placed on the ground. My own opinion, backed up only and unashamedly, with personal experience and knowledge of specific incidents, is to not permit dependent groups to cook and sit off the ground at picnic tables (for the exact reasons outlined in Case Study 3).

5. Cooking, heat and food preparation is a foreign activity to many students

Many of us report that our students are not that adept at chopping vegetables or in knowing the difference between a zucchini and a cucumber. The activity of cooking can be quite foreign to students and is not something they do a lot of at home. It is questionable as to the level of hazard awareness they would have around the camp kitchen and the ability to recognise when a situation is hazardous. In some cases, motor skills (such as those needed to manoeuvre pot grippers etc.) can be severely lacking.

6. Supervision is not generally a 'team effort' around cooking

Within technical activities and in other aspects of an outdoor education program, the supervisory team often has an agreed approach and facilitates the activity as a team. There is generally an agreed understanding of roles, boundaries and a combined approach. Within cooking, this can sometimes be missing. In fact, the time when cooking dinner occurs is sometimes used as a rest period for a staff member. It is their 'time out'. It may also coincide with scheduled call-in times back to base. Supervision is a key component in activities that

are unfamiliar and where there is the potential for harm to occur. Consequently, I would argue that cooking certainly fits this bill and is a time when supervision should be direct and 'tight'. If the rest and scheduled call-ins need to wait till the heat is turned off, so be it.

What Now?

This post is specifically associated with using stoves however there are certainly similarities associated with campfire safety. It is intended to highlight an area that both the UPLOADS data and personal experience informs us, requires further reflection and consideration of our practices. As we know, accidents and incidents in complex systems are caused by multiple factors and there is no such thing as a root cause. It would be far too simplistic (and wrong) to blame the freelancer in Case Study 1 or the student in Case Study 2. The manager in Case Study 3 who wrote the SOP's would likely not have been thinking about policies around stoves on picnic benches, and the risk of boiling water spilling from such heights.

All the incidents described above, as well as every single number reflected in the UPLOADS data, reflects an injury to someone. As such, they also represent the real opportunity for learning and reflection.

Preparing and cooking a meal together is perhaps one of the most powerful and memorable aspects of any program. Our participants are invited to assume real ownership of their choices and actions, and the camp kitchen is a place where real social connections and learning can occur. For us, as professionals however, it is also a place where our collective risk management strategies must be directly focused on the areas where foreseeable harm could and, as experience and data both tell us, has occurred.

In short, safety around sources of heat must be an integral component in any outdoor risk management plan.

Dr. Clare Dallat Bio

Dr. Clare Dallat is a Partner Investigator on the UPLOADS project. She feels strongly about the importance of applying both rigorous research and implementing these findings in a practical, achievable way to maximise the benefits for all participants in led outdoor activity programs. Practicing what she preaches, Clare has completed an APA-funded PhD program to develop a practical risk assessment tool that identifies and manages risks at all stages involved with the design, preparation and delivery of led outdoor activity programs. She is the Director of Risk Resolve (a risk management service assisting schools and organisations to further improve their risk and crisis management systems) and a member of the Accreditation Council for the Association for Experiential Education (AEE). Clare can be contacted at: dallatc@oeg.edu.au

