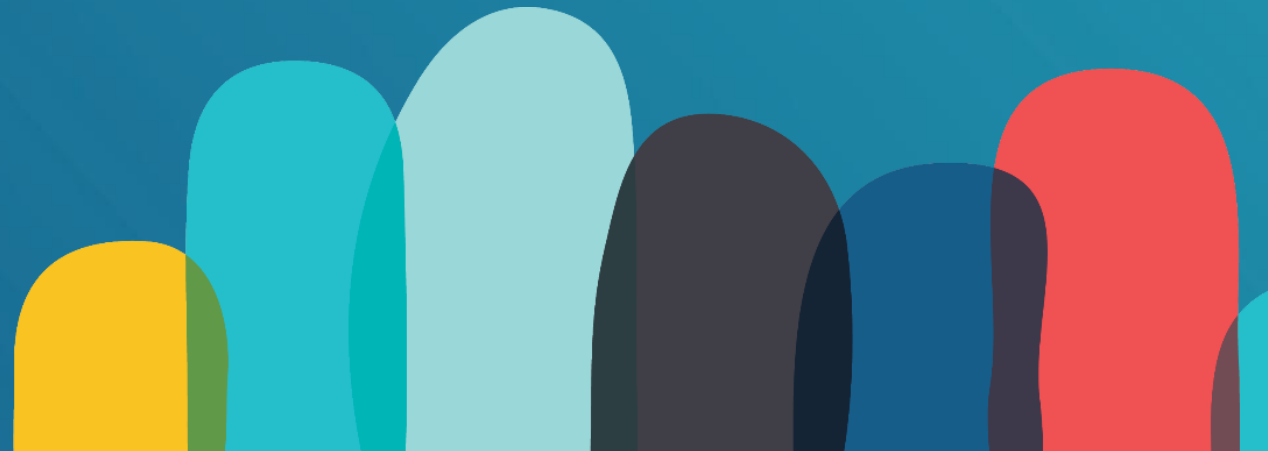
Government of **Western Australia**
Department of **Communities**

Summer Hazards

Think it through



TODAY'S SESSION

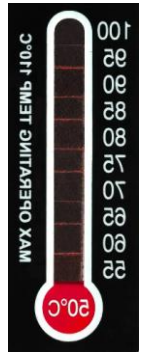
Discuss trends relating to supervision and harm and hazards, including:

- Burn injuries to children
    - We know hot surfaces and equipment can cause serious burns
    - We know hot liquids can cause serious burns
- Children being left unattended in vehicles
- So why does it keep happening?

Burns - Outdoor Surfaces & Equipment

ECRU engaged with a Materials Expert (Scientist) and visited an approved service to test various outdoor surfaces.

This is what we found:



- Even on overcast days, the outdoor surfaces and equipment were incredibly hot to the touch
- Temperature fluctuated almost instantly by a minimum of 10°C between times of cloud cover and sun

Materials Expert – What was tested?

- Composite timber from a play structure taken from the service;
- Composite decking – the make of which purports to generate the lowest surface temperature of all composite materials; and
- Large interlocking jigsaw EVA mat – commonly used in services and is known for it’s lack of heating in the sun.

Test Results

Time of day	Air Temp (°C)	Composite timber from service (°C)	Other brand of composite timber (°C)	EVA Mat – Purple (°C)
0900	27	42	34	29
0930	29	50	44	30
1000	31	56	49	33
1100	32	60.5	52	34
1200	34	62	55	38
1300	34.5	65	56	38
1400	35	65	58	42
1500	36	66	61	44

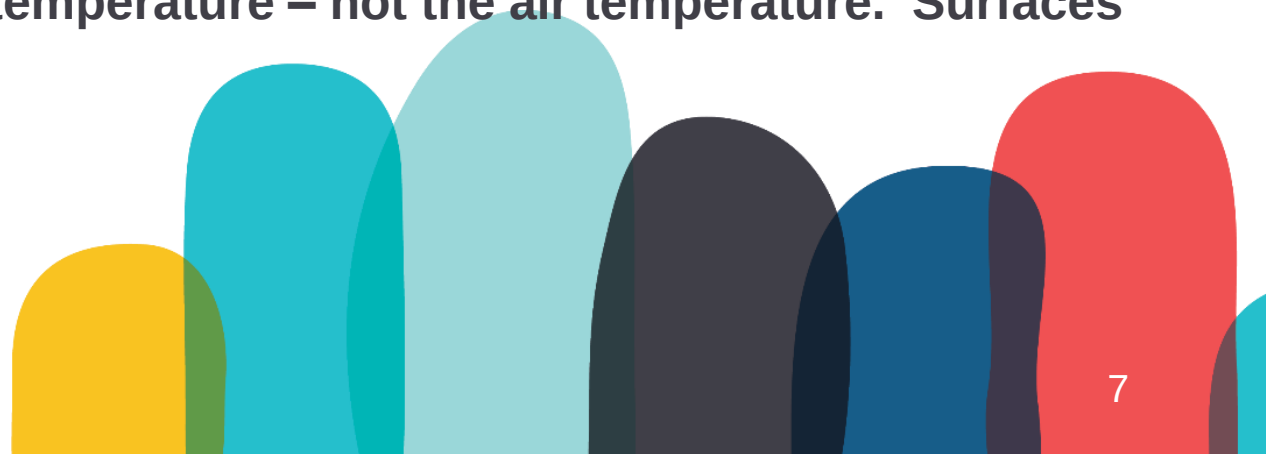
Findings

- At 40°C, a material will feel hot to touch and make most adults withdraw on contact (children may have slower reactions due to inexperience in being burnt AND children have more sensitive skin)
- At 44°C, 1st degree burns occur, causes pain and redness
- At 52°C, transition from 1st to 2nd degree burns, causes severe pain and typically results in tissue damage e.g. blisters
- At 60°C, transition to 3rd degree burns - causes maximum pain resulting in tissue damage (known as full thickness burns)

Findings – What we know:

- These types of burns occur even on mild days, we have seen these occur when it's been in the low 20's
- Surfaces can reach burning point enough to cause injury, particularly in small children, as they not able to pull away as quickly and their skin is more susceptible to burns
- Even materials that generate lower heat, still heat up and cause burns
- Just because something meets Australian Standards, does not mean it won't heat up or pose a risk to children
- Vigilance, appropriate risk assessments, communication, high level embedded practice are crucial in minimising risk

***NOTE: the temperature stated refers to the surface temperature – not the air temperature. Surfaces can reach in excess of 40°C on mild days e.g. 20°C**



Surface Burns - How do I minimise or remove the risk?

Things to consider:

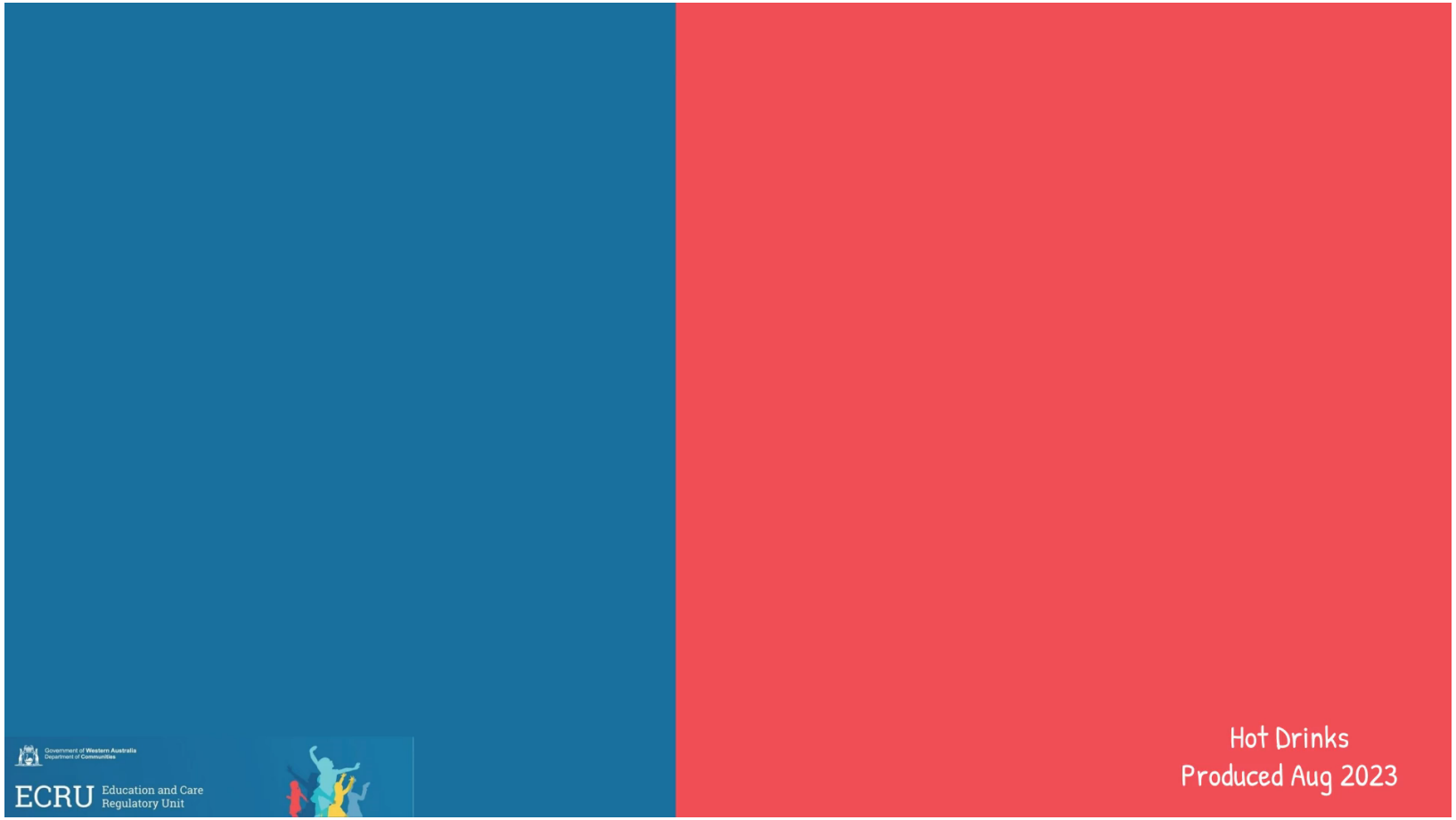
- Check surfaces – are they too hot for children and likely to cause injury?
- Revisit policies – is there a policy around hot surfaces?
- Are the policies sufficient, if not – what will you do?
- What checks are in place to make sure the area is safe?
- What checks as a provider have I implemented to make sure there is embedded good practice? What audits do I have in place?

Hot Liquids in an Education and Care Service

What we know about hot liquid burns:

- Children's skin is much more sensitive than an adults
- It just takes a second for a child to sustain severe burns from hot liquids
- These are all preventable injuries
  - How do I minimise the risk at my service?
  - Are my colleagues on the same page?

Think it through



What are the risks? How do I minimise or remove them?

Examples of risks (not exhaustive)

- Hot Drinks – Save it for the staff room
- Hot food & Microwave – not only burns mouths, it can burn skin. Some foods stay hot for longer, such as pasta/noodles, which also stick to the skin increasing the risk of burns.
- Cleaning – do I need to use hot water? If yes, then do it only after the children have left
- Activities – Do I need to use hot water for activities such as making playdough and cooking?
- What are my alternatives in all of these situations?
  - Is there a risk assessment?
  - Is there a policy and procedure?
  - If so, what does it say? Do we need to update it?
  - If you don't have a risk assessment, why not? Do we need one?

Even under direct supervision, all of the above scenarios have resulted in serious burn injuries to children

Children being left unattended in vehicles

It doesn’t have to be a hot day…

Dangers of a child left in a vehicle

- Alarmingly, every year in Australia, over 5,000 children are rescued after being left unattended in a vehicle (source: KidSafe)
- We know even on a mild day, temperatures in closed vehicles can quickly rise to over 52°C
- Body temperatures can double after just a few mins (even with windows slightly open)
- If you can forget why you walked into a room, you can forget a child in a vehicle
- We all know it's dangerous, but in an education and care setting, complacency, a lack of good embedded practices and a lack of governance are inevitably the cause of children being left in vehicles

Source: KidSafe

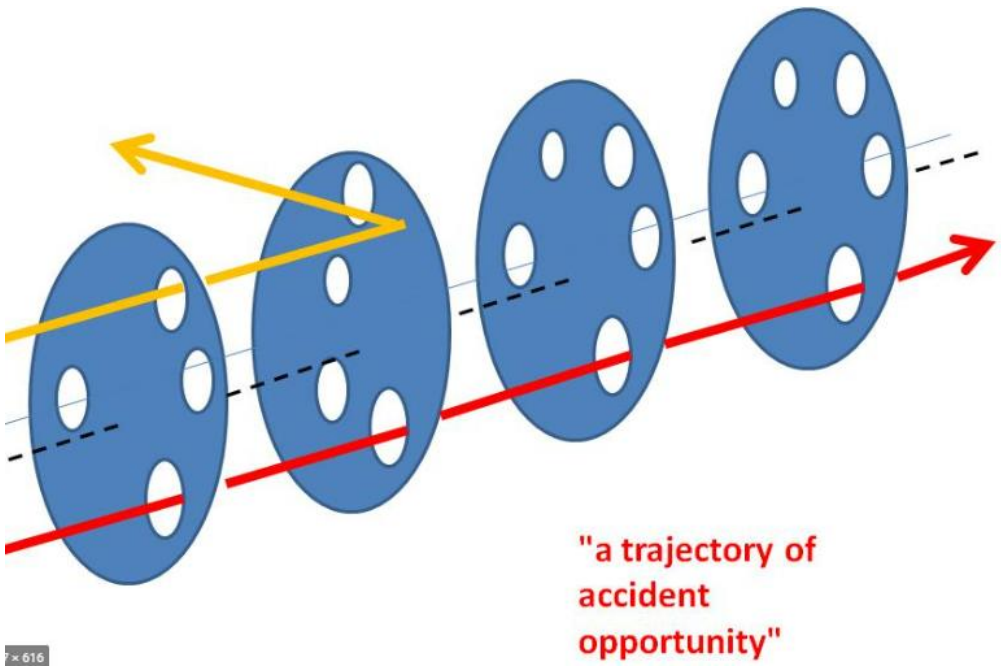
Department of Communities Source KidSafe

How do we minimise the risk?

- Have strong robust risk management systems in place
  - Multiple layers of defence against accidents/incidents “Swiss Cheese Risk Model”
- Embed the practice
  - What are the practices – is everyone doing what they’re supposed to?

    ‘I usually do it but I didn’t that day…….’
  - What audit process are in place to make sure the practice is embedded?
- Develop and implement robust checking mechanisms
  - Headcount documents
  - Staff to the risk, not to minimum ratio requirements
  - Transition times – always, always a heightened risk!

The Swiss Cheese Model



- Accidents happen due to the influence of one or more factors
- Each slice is a line of defence against accidents /incidents
- Every slice has holes – the size and number of holes vary
- Each slice has its own unique set of holes
- These holes represent areas of potential failure
- When the slices are stacked together, they represent the organisation's defence against risk
- If the holes line up – the risk of something happening is increased