Preparedness and Response to ‘Extreme Heat Events’ in South Australia

Val Smyth
Director
Emergency Management
SA Health
What is meant by ‘Heatwave’ and ‘Extreme Heat’?

> **Heat wave**
  - No universal definition
  - General sense defined as prolonged period of excessive heat
  - Research ongoing on effects

> **Extreme heat**
  - Defined as an extended period of very high temperatures

> **SA Bureau Of Metrology (BOM) definition for Adelaide metropolitan area**
  - 5 days at $\geq 35 \, ^\circ C$ or above
  - 3 days at $\geq 40 \, ^\circ C$ or above
A ‘heat wave’ may not describe the whole event

- If temperature drops slightly (e.g. 34.9 °C) the definition is lost
- Temperature may rise again
- However need to regain the criteria (≥35 °C for 5 days or ≥40 °C 3 days) to regain status
- The effect and impact of the high temperatures continue regardless of the ‘blip’
Extreme Heat

> *Extreme Heat Event* describes the whole episode allowing for small breaks in temperature until a sustained drop occurs and impact of heat is decreased

> **Example - January – Feb 2009**

  - 13 day period of intense heat – commencing on Australia Day (the worst heat wave in history for SA for which we have records)
  - From *Jan 27 ≥40 °C for a further 3 days with 45.8 °C* recorded at Edinburgh Air force base with an *overnight minimum of 33.9 °C* in Adelaide
  - Heatwave broken in the middle by a ‘blip’ of just under 35 °C on one day

High temperatures returned the following day
  - Not regarded as heatwave again until SA definition met – but effect and impact unchanged
South Australia – ‘then and now’

> SA often called the ‘driest state in driest continent on earth’
  - If you live in SA – you expect hot dry summers!

Has something changed?

> Evidence of warming.
  - During recent summers – SA encountered significant extreme heat events – especially 08/09/2010
  - Warm wet winter this year
  - Increase of 2-3 C in the north of state and 1.5-2 C in other areas

> Change in community and political attitude/expectations
What can we expect this summer?

- The BOM has indicated we can expect higher temperatures possibly for extended periods of heat.
- Winter has been warm and wet – therefore fuel load is high.
- Grass fuel load is high and curing.
- Flinders and NW pastoral this is particularly noticeable.
Temperature trend for 2008 - 2009

Min/Max temperature during the 2008/09 heat wave in Adelaide (Kent Town)

T degrees Celsius

3 - 17 March 2008
26 January-7 February 2009

SA Health
Outcomes of extreme heat: the human impact - 2009

> **Hospitals**
  - Increased patient presentations to hospitals - up to 970 per day overall

> **Increased ambulance demand (SAAS)**
  - Implementation of Extended Care Paramedic Pilot Program
    - 208 patients were attended by a SAAS paramedic
    - Of these, 112 patients did not have to go to hospital because of this service
Outcomes of extreme heat: the human impact - 2009

Home Care Services

> RDNS
  • 2777 calls to clients
  • 148 visits

> Metro Homelink (MHL)
  • 13,533 clients called/attended by HSS

Increase in gastro outbreaks and food contamination
Potential Impact on the elderly

- Increased risk of heat related illness
- Increased risk to residents with renal and cardiac disease
- May have an impact on the effectiveness of medications – especially mental health medicines
- Resident may not realise they are getting overheated
- May not be able to move out of the heat
Current arrangements to manage Extreme Heat events

> SES Hazard Leader for Extreme Weather which includes Heat
  - Extreme Heat Arrangements Plan developed by SES
  - SES works in conjunction with the B.O.M for forecast of temperatures
SA Health Extreme Heat Health Plan

• Extreme Heat Health Plan
  • An operational response document for health services – based on SES/BOM advice

    ▪ Health actions to implement at each stage of:
      > *Extreme Heat Advice* – 3-5 days in advance
      > *Extreme Heat Watch* – 48 to 72 hours in advance
      > *Heat Warning* – 0 to 48 hours in advance

  ▪ Action Plan for Vulnerable Health Populations when the *Extreme (Warning) Level* is reached
SA Health Extreme Heat Strategies

• SA Health Mental Health Directive
  ▪ Contact of vulnerable clients by phone daily
  ▪ Labour intensive but effective

• Communication Strategy
  > Extreme Heat Health Guide
  > Extreme Heat Fact Sheets
  > Media and radio ads
  > Website information
Care of the vulnerable

Red Cross Telecross REDI

> Funded by Department of Families and Communities

> Service provided by Red Cross
  • Register of vulnerable clients
  • Trained Red Cross volunteers telephone up to 3 times each day on days of extreme heat
  • Service will contact client’s referral source if client cannot be contacted (e.g. RDNS, GP, hospital)
Communication Strategy

Extreme Heat

Guide to coping and staying healthy in the heat
Heat Health Fact Sheets

Fact Sheets on web for download:

- Advice for older people
- Being active in the heat
- Caring for babies and young children in extreme heat
- Caring for older people
- Caring for pets
- Preventing heat related illnesses
- Safe food handling during extreme heat

Refer to:  www.health.sa.gov.au
Examples:- Heat Health Fact Sheets

Extreme heat — health advice

Being active in the heat

Your body produces more heat when you exercise, and that heat combined with the added heat can create dangerously high body temperatures. You risk becoming dehydrated and feeling ill with heat cramps, heat exhaustion or even heat stroke.

Use common sense — slow down during the heat, stay indoors as much as possible and avoid over exertion and strenuous activity.

- Aim to exercise very early in the morning, or at night when the temperature is cooler.
- In hot conditions, reduce the time you spend warming-up less and exercise at a lower pace.
- Don’t exercise if you feel unwell, or are recovering from recent illness.
- If you start to feel ill whilst exercising, slow down or stop.
- If you exercise outdoors during the heat try to find some shade.
- Drink plenty of water before and during exercise. At least 2 – 3 litres of water should be drunk a day during hot weather.
- Some drinks are specifically designed to help hydration as they help replace the sodium, chloride and potassium you lose through sweating.
- Clothing should allow easy evaporation of sweat from the skin. It should be light, loose and made of a loose weave, and provide protection from the sun. Cotton rather than synthetic fabric is a better choice as it absorbs sweat and is not usually irritating to the skin.
- If possible, wear a wide-brim hat and sunglasses. Cape do not provide adequate sun protection.
- Sunscreen should be applied at least 20 minutes before exposure to the sun so it can be absorbed into the skin and provide effective protection.
- Reapply sunscreen as instructed on the bottle. In general, this is every 2 – 3 hours or more often if sweating heavily, or if swimming.
- Children must be protected from over-exposure to hot weather, especially with sensible or endurance exercise like football.
- Females may suffer more during exercise in the heat because of their greater percentage of body fat, compared to men.
- Have a back-up plan so you don’t have to exercise outdoors during hot weather. Work out at an air-conditioned gym, walk laps inside a shopping centre or enjoy walks in an air-conditioned building.

Further information on how to cope and stay healthy in times of extreme heat can be found on our website www.health.sa.gov.au

Version 1.1 November 2013
What can you do to protect yourself and your resident/clients?

> Prepare before the hot weather comes
> Have a plan and exercise regularly
> Ensure you staff are aware and keep plan where you can easily be located
> Have contact numbers near your phone in case you need help
> Know what to do if your residents/clients have symptoms of heat related conditions and who to ask or contact for help
> Contact clients living in their own home each day during very hot weather
Action Plan

Action plan being developed for aged care facilities and their community residents as a guide for preparation and response to an extreme heat event

**SA Extreme Heat** Action Plan for Aged Care facilities

Actions recommended to be implemented at each stage of ‘Extreme Heat’ Alerts issued by the SASES

‘Alert Levels’ have been developed by the SA State Emergency Service (SASES) in conjunction with the Adelaide Bureau of Meteorology, Kent Town (BOM) and form the Temperature Triggers for Action as in the ‘Extreme Heat’ Arrangements Annex A to the SASES Extreme Weather Hazard Plan for SA.

The SASES is the Hazard Leader for Extreme Weather (this includes Extreme Heat)

The Alert levels are issued by the SASES in advance of an extreme heat event. They are based on the forecast Average Daily Temperature (ADT) for Adelaide for 3 consecutive days’ temperatures as provided by the BOM Adelaide (Kent Town). The ADT is an average of the minimum overnight and maximum daily temperature occurring that day.

### Seasonal Preparation

Actions to be taken in September in preparation for the lead up to hotter months (October to March) Heat advice available on the SA Health and SASES websites

Public Alerts WILL NOT be issued by the SASES

#### PREPARATION

- Department of Social Services (formerly DoHA)
  - Prepare for and maintain a state of increased readiness.
  - Advise aged care peak bodies, facility providers and other agencies to be prepared for impending hot weather and ensure their heat health action plans are current and able to be implemented.
  - Revise and update as required:
    - Relevant information/advice
  - Arrange distribution of any relevant information to government and non-government aged care peak bodies and facilities.
  - Develop other fact/information sheets according to need.

- Aged Care Peak bodies
  - Revise and update
    - Topics specific information and communications strategies for websites
    - Develop additional information as appropriate
    - Liaise with DSS and SA Health to identify any changes of practice for the coming season.

---

SA Health
What can you do to protect yourself and your resident/clients?

> Regularly check the radio, TV or the Internet for the local heat forecast from the Bureau of Meteorology
> Check that fans and air conditioners are working (clean filters/air vents)
> Have enough supplies of food, bottled water, toiletries to last up to 1 week
> Make sure you have enough routine medications for 2 weeks
> Consider how you will manage if the power goes out
What can you do to protect yourself and your resident/clients?

> Put together an emergency kit
  • torch, batteries, candles, matches, radio, first aid items, important phone numbers

> Do not forget to look after pets
  • keep them cool and shaded
  • have enough food for them for 1 week

> Keep out of the heat as much as possible

> Take time to rest and recover after the heat is over – it will not last forever!!

> If the situation is an emergency call 000

> For further advice you may also call the Department of Social Service 24 hour number 1800288475