

# The Victorian Experience - 2009



**Dr John Carnie**

Chief Health Officer

Department of Human Services

# Our Environment Our Future

“We will assess the potential public health impacts on Victorians arising from climate change, such as heat waves ... and identify priority areas for action”

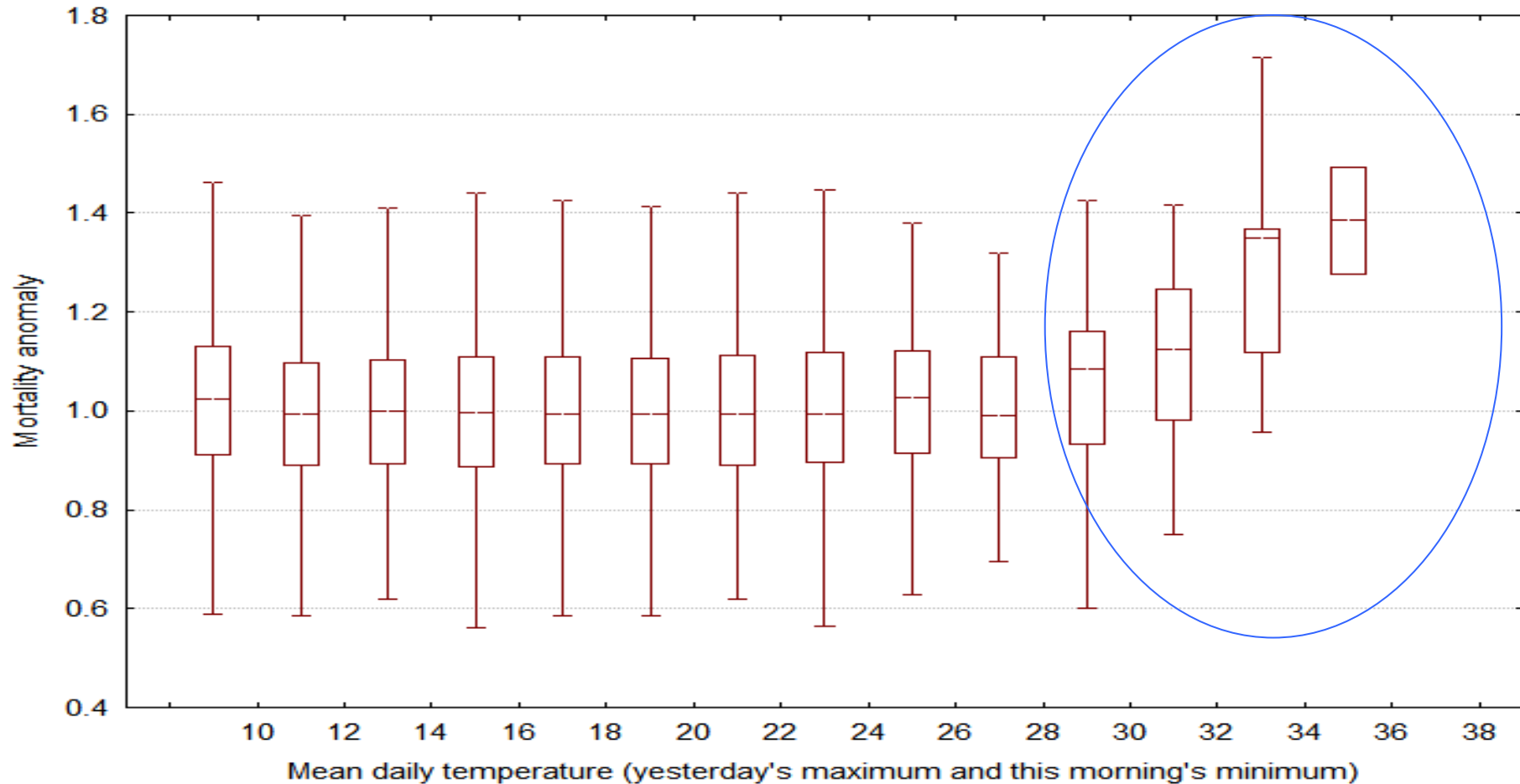


# Victorian Heatwave Strategy

- Funded 22 Local Government pilot heatwave plans \$0.6M
- A heat alert system for metropolitan Melbourne established
- Key health messages
- Development of partners
- Use of existing

- LaTrobe City Council
- Baw Baw Shire Council
- Wimmera PCP
- Glenelg & Southern Grampians PCP
- Westernport GH Alliance
- Cities of Stonnington & Port Philip
- Hume City Council
- Wodonga City Council
- City Greater Bendigo
- Whitehorse City Council
- Yarra City Council

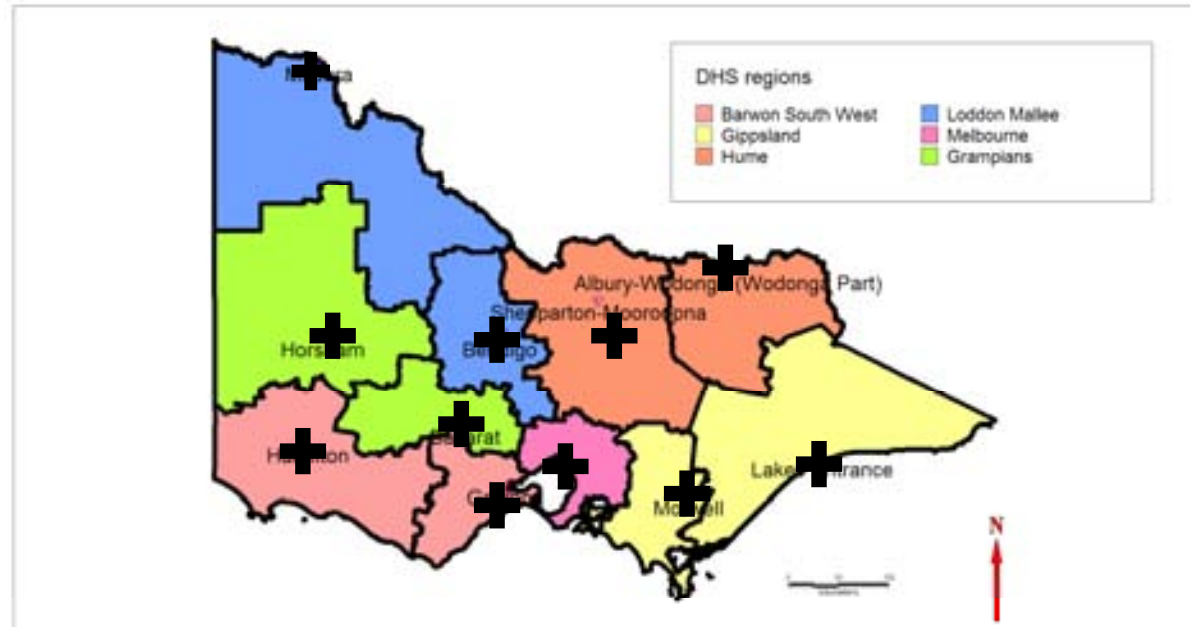
# Mortality persons aged 64 years and older.



Nicholls,N. Skinner,C. Loughnan,M. Tapper,N. 2008. Int J Biometeorol

# Victorian Heat Health Thresholds

| Region/City    | Signal    |
|----------------|-----------|
| Melbourne      | Mean 30°C |
| Bendigo        | Mean 32°C |
| Wodonga        | Max 40°C  |
| LaTrobe Valley | Mean 30°C |
| Horsham        | Mean 32°C |
| Hamilton       | Mean 34°C |
| Lakes Entrance | Max 38°C  |
| Geelong        | Mean 28°C |
| Shepparton     | Mean 30°C |
| Ballarat       | Mean 30°C |
| Mildura        | Mean 35°C |



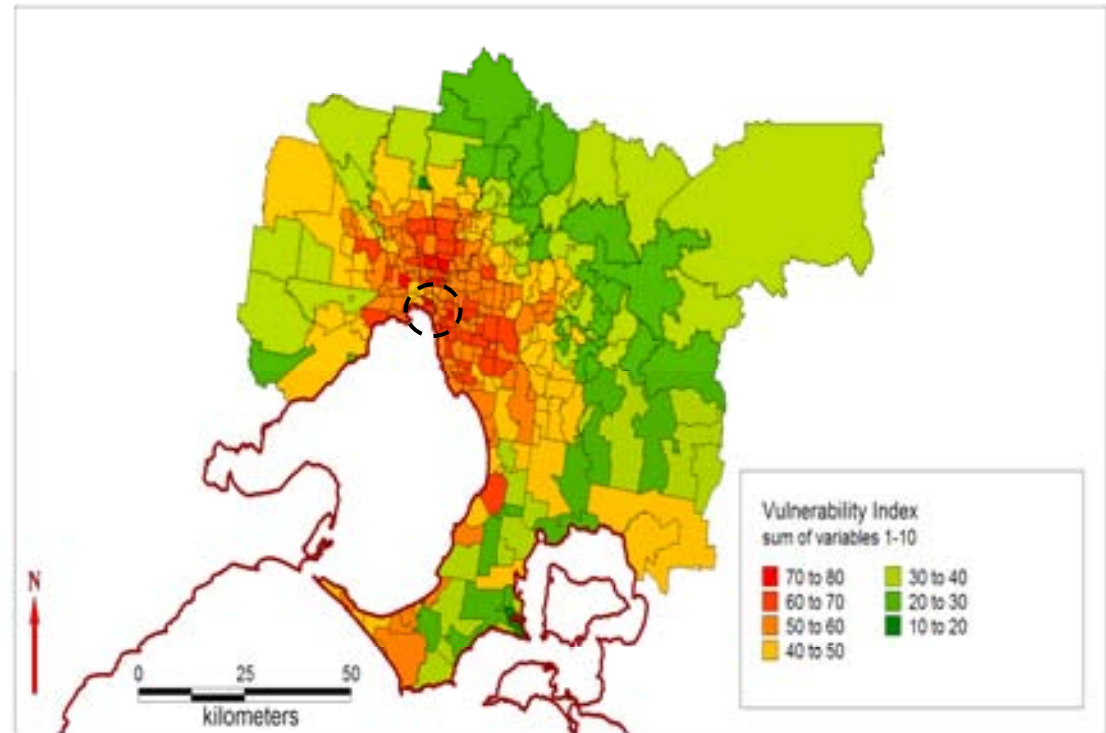
Loughnan, Nicholls & Tapper; Monash University, 2009

## Knowledge of heatwave and health impacts among carers of the elderly

- Organisations undertake a number of 'ad hoc' responses to climate change
- Carers who work with the elderly are aware of their vulnerability to heatwave
- Carers recognise the need to improve their knowledge and skills to respond effectively to heatwave

# Mapping vulnerability

- Age (65+, 0-4 yrs)
- Burden of Disease
- Aged care facilities
- SES
- Urban design
- Single person household (65+)
- Measure of disability
- Population density
- Ethnicity
- Urban Heat Island



# Climate change impacts on population health and vulnerabilities

## PHASE 1

- Identify current Government activity
- Research relationships between climate change and health, vulnerability and equity
- Define methodology
- Develop stakeholder map
- Expert review

Project update, April 2004

### Scoping climate change impacts on population health and vulnerabilities



#### The climate is changing in Victoria

Green roofs, higher temperatures and more extreme weather events have become a reality affecting the health and wellbeing of Victorians.

The March 2009 Climate Change (Global Warming) Challenges and Divisional Congress in Copenhagen confirmed that the worst case Intergovernmental Panel on Climate Change (IPCC) scenario (representing from 1990 onwards being 'medium or exceeded') in Victoria the CSIRO and Bureau of Meteorology have projected this will lead to an average temperature change of 3.4°C by 2030 and 5.4°C by 2070.<sup>1</sup>

As the government department responsible for planning, funding and delivering health, community and housing services, the Department of Human Services (DHS) needs to anticipate the health consequences of our changing environment and identify vulnerable individuals who will be most affected.

#### Understanding the impacts of climate change

DHS is currently working with Anus, the National Centre for Epidemiology and Population Health, Curtin University and Bureau Consulting to develop a methodology to identify future health impacts and vulnerabilities.

Understanding how climate change affects health and wellbeing will better enable DHS, other government departments, agencies and community organisations to adapt their services and policies to the needs of Victorian communities.

#### Working with other organisations

Knowledge and data about climate change exists within many organisations.

To create a methodology to accurately identify the impacts of climate change, the project team is seeking to integrate existing knowledge and data from within the DHS and other government agencies and statutory authorities, actively researching and monitoring climate change and/or its impacts.

A Stakeholder Reference Group of government agencies and statutory authorities undertaking complementary projects or research has been established to assist knowledge transfer. Initial exploratory meetings are being conducted with each of the agencies identified below and the DHS is in the process of considering the engagement of further government agencies identified through these discussions.

#### Stakeholder Reference Group

- Department of Social Services
- Department of Innovation, Industry and Regional Development
- Department of Planning and Community Development
- Department of Primary Industries
- Department of Sustainability and Environment
- Department of Transport
- Environment Protection Authority
- Victorian

<sup>1</sup>[http://victoriagovernment.com.au/mediacentre/updates/04\\_04\\_09/ClimateChangeImpact040409.pdf](http://victoriagovernment.com.au/mediacentre/updates/04_04_09/ClimateChangeImpact040409.pdf)

A Victorian Government Initiative 

# Pilot heatwave planning

- Inclusion into existing municipal plans
- Use of vulnerability registers
- Explored the feasibility of cooling centres
- Use of HACC services to support vulnerable aged populations
- Extensive media campaigns

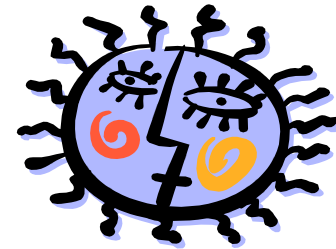


# About the Wodonga Heatwave Plan

## Stage One

### **Pre summer preparation April 1 to November 30**

- Implement Heatwave Awareness Campaign (April to Nov)
- Identify vulnerable groups
- Identify cool areas
- Engage key stakeholders



## Stage Two

### **During summer prevention December 1 to March 31**

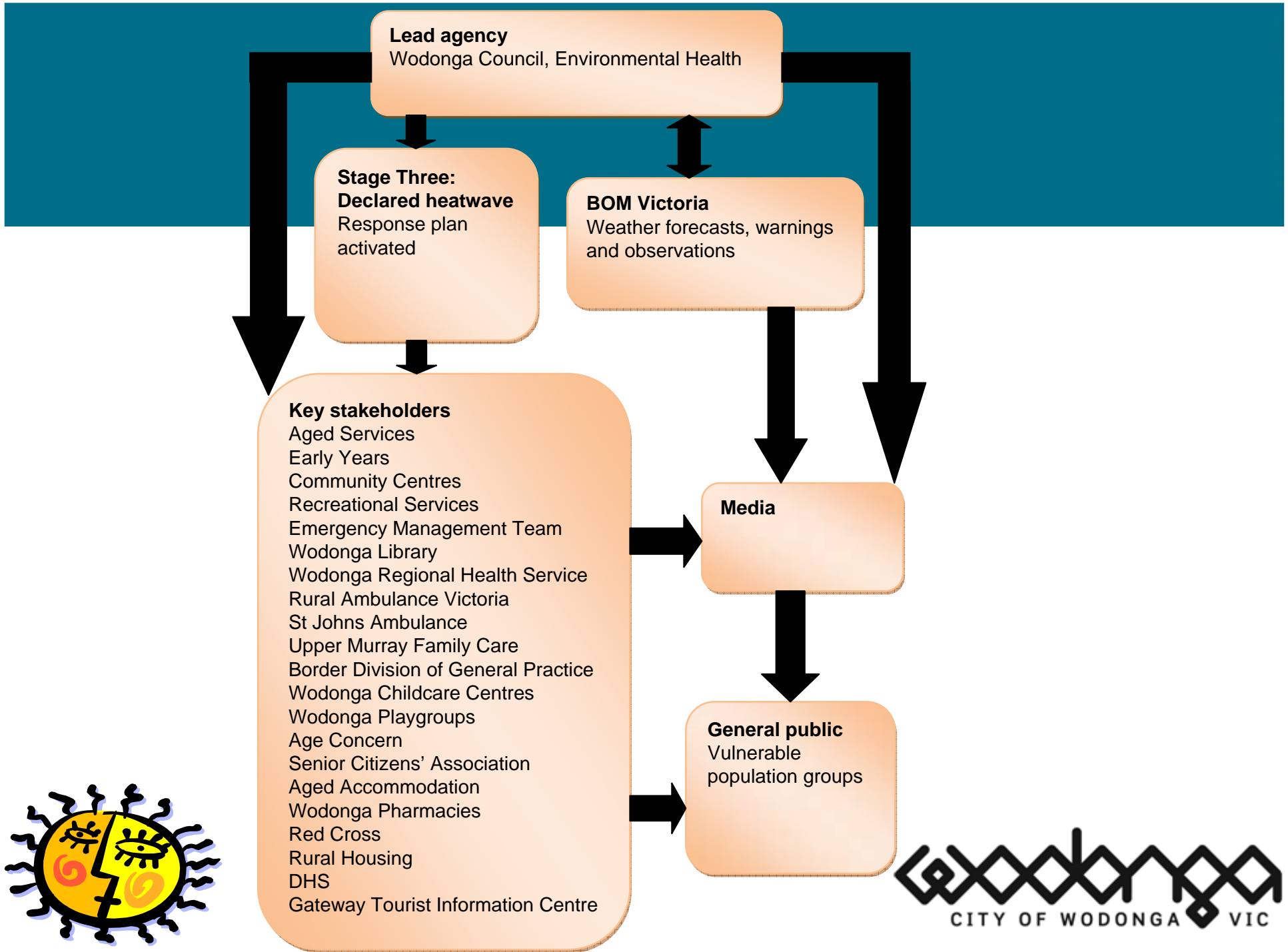
- Implement Heatwave Awareness Campaign (Dec to March)
- Advise key stakeholders of roles and responsibilities
- Set up Heatwave Hotline
- Check BOM reports four times a day

## Stage Three

### **Heatwave response Bureau of Meteorology declared heatwave**

- Alert media
- Advise key stakeholders to enact specific actions
- Implement Heatwave Hotline
- Inform Emergency Management Team
- Record BOM reports four times a day





# Plan in action: Jan/Feb 2009

## What worked well

- Lead agency to drive Stage Three
- Communication plan – prompt action
- Clear stakeholder roles and responsibilities
- Media support



## What could have been done better

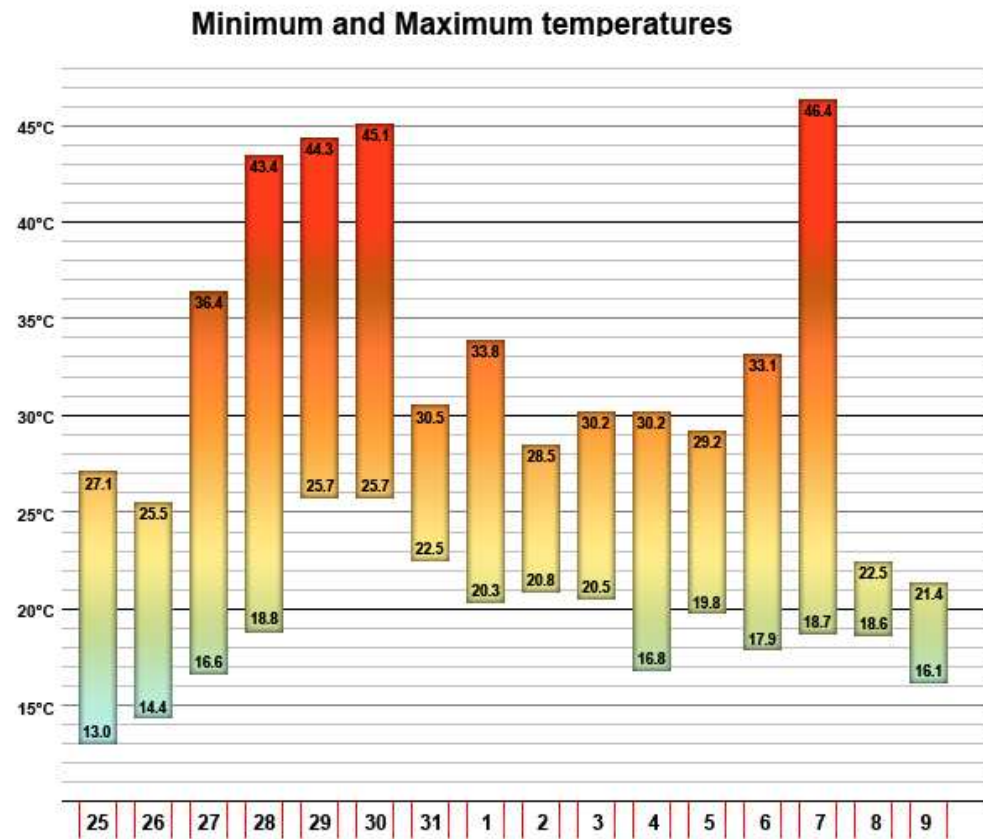
- Stage One and Two prevention strategies
- Communication with stakeholders
- Steering group comprised of key organisations



# 2009 Victorian Heatwave

## Week of 26/01 to 01/02

- Record high temperatures
  - 45°C daily maximum
  - 26°C overnight minimum
- Friday 6 – Sunday 8 February
  - Extreme winds
  - Record high 46°C
  - Extreme bushfire danger
- Severe impact on Public Transport systems with 20-30 trains cancelled during peak hours
- On Friday 30<sup>th</sup> Jan 500,000 households were without power for several hours



**Melbourne City**  
January - February 2009

# Activation of Victorian Heatwave Strategy

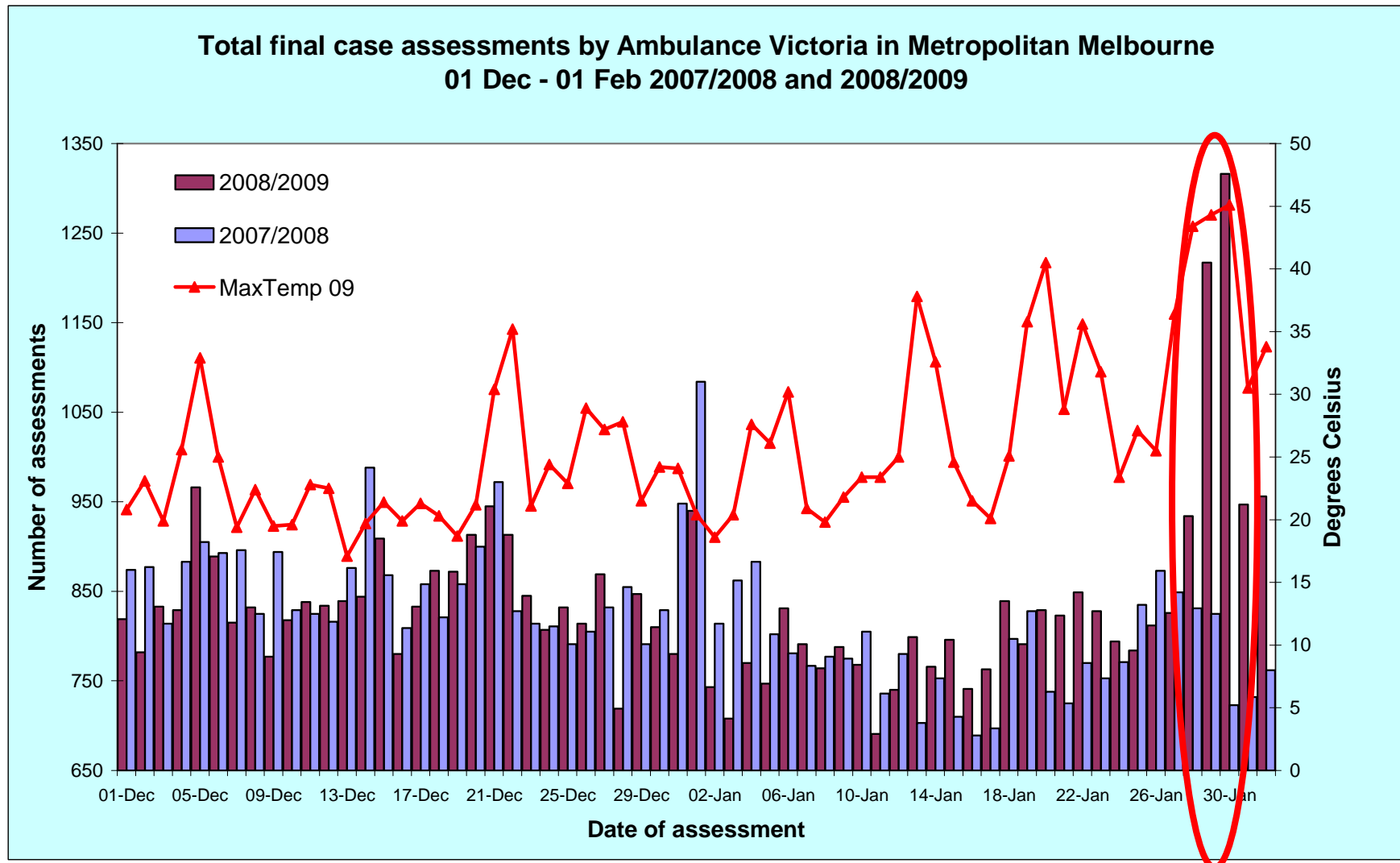
- Significant media for the Chief Health Officer in preparing the community
- Agreed health messages with Ambulance Victoria
- Nurse-on-call scripts revised
- Departmental ECC operating
- Bureau of Meteorology web site, Victorian heatwave alert visited 38,517 times
- Engagement with LGA's with Heatwave plans

# Chief Health Officers Report

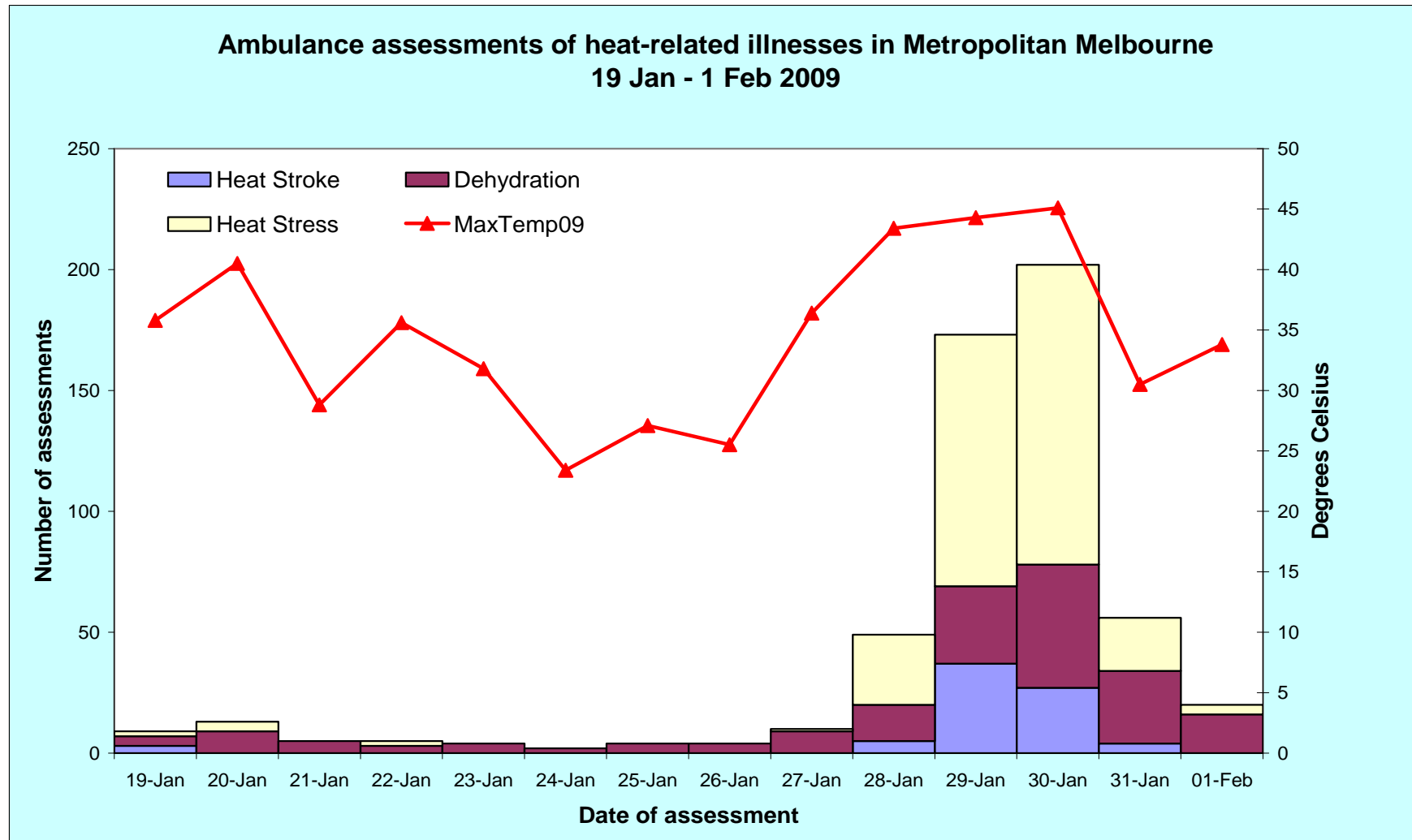
- Rapid assessment
- Range of agencies
  - State Coroners Officers
  - Registry of Birth, Deaths and Marriages
  - Melbourne Medical Deputising Service
  - Ambulance Victoria
  - Emergency Department
- 374 excess deaths identified

January 2009 Heatwave in Victoria:  
an Assessment of Health Impacts

# Metro Ambulance activity

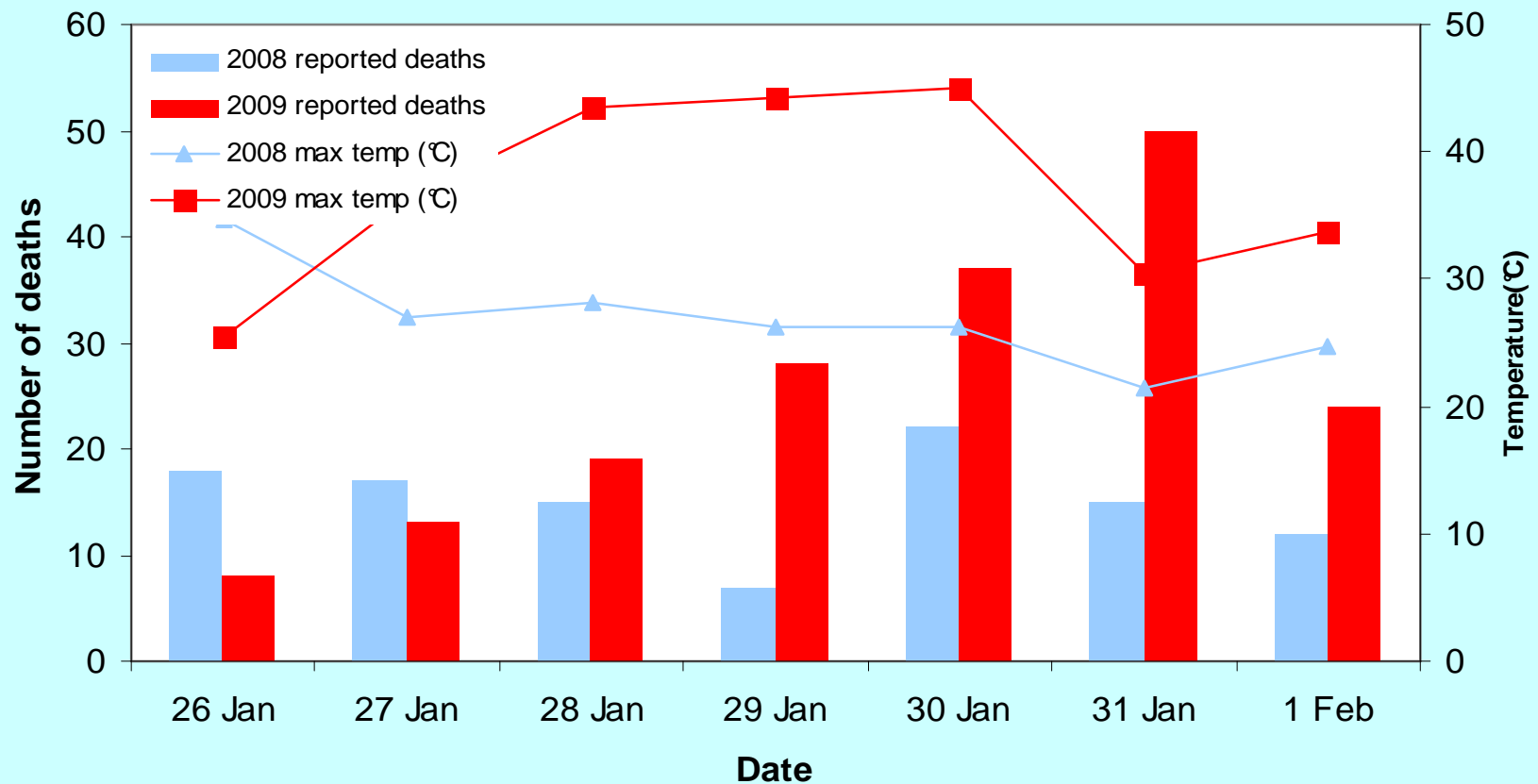


# Ambulance assessments of heat-related illnesses in Metropolitan Melbourne 19 Jan – 1 Feb 2009



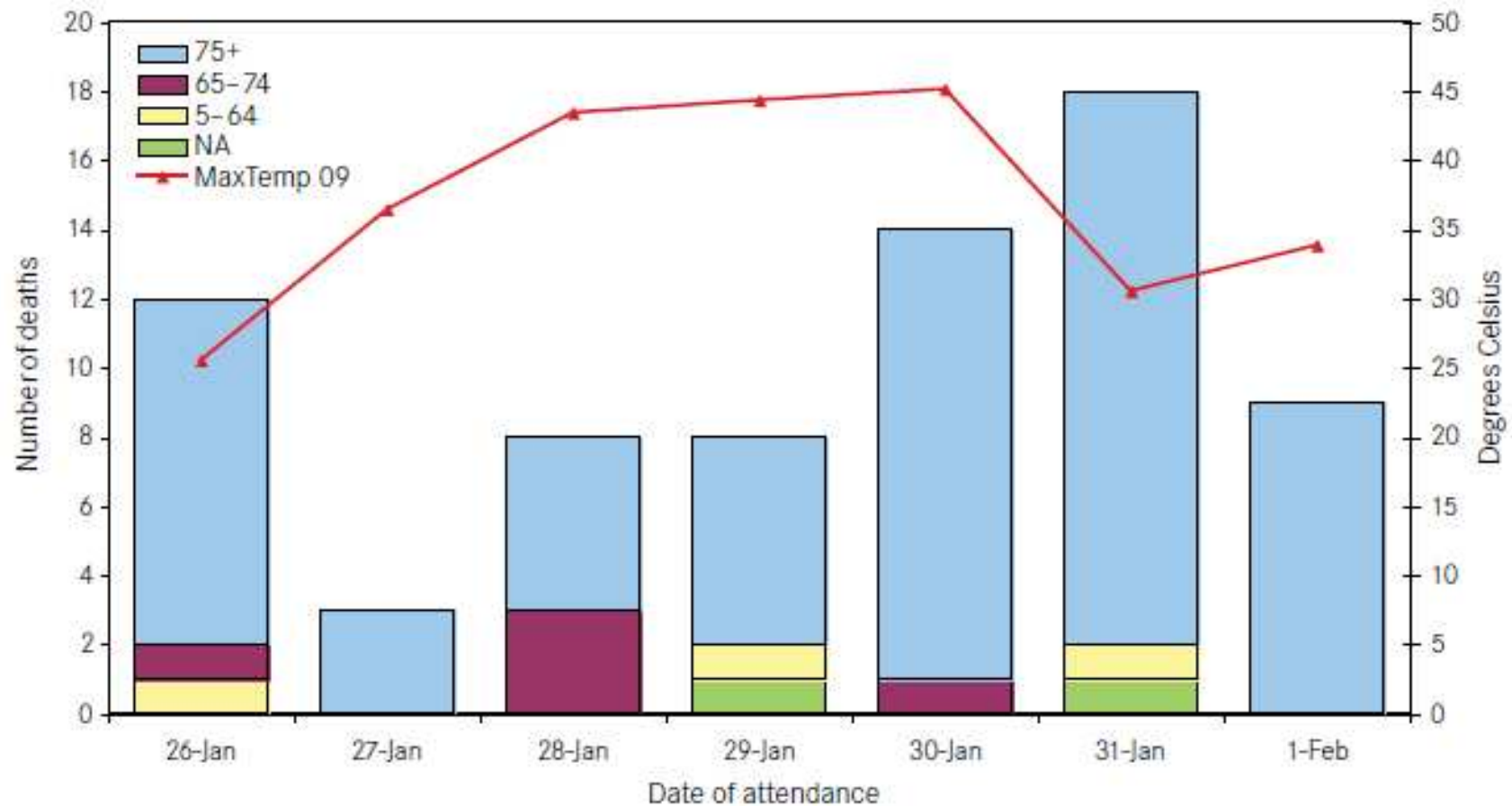
# Reportable deaths to the Coroner

All SCO reported deaths by temperature and day,  
Victoria 2008 and 2009

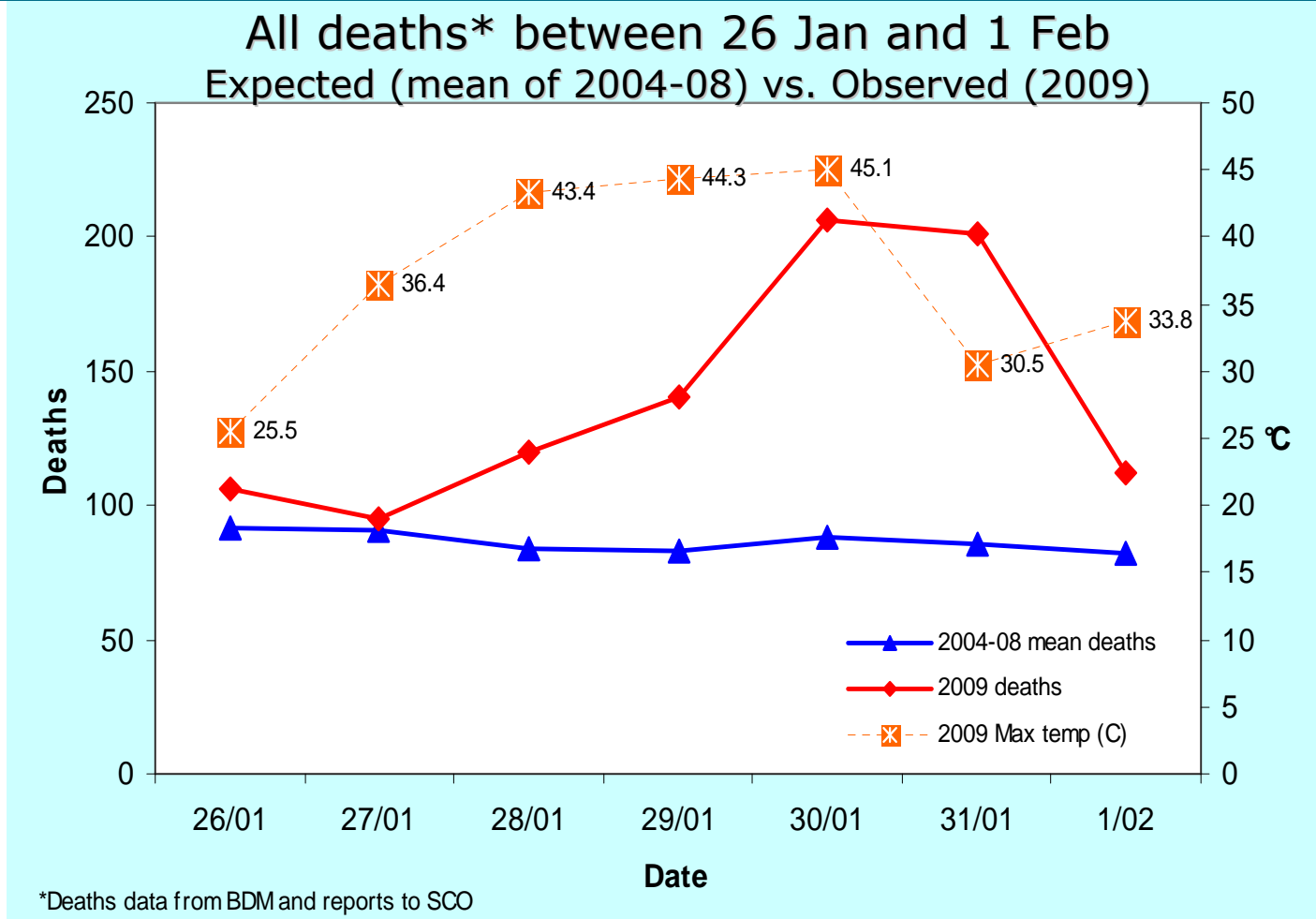


# MMDS – attendances to deaths

MMDS locum attendances to deaths in metropolitan Melbourne 26 Jan–01 Feb 2009

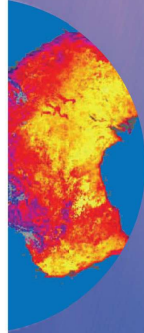


# Heatwave Mortality



Total all cause mortality is ~374 excess deaths (above expected)

# Heatwave Planning Guide



## Development of heatwave plans in local councils in Victoria