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HAZARDSCRC

Rapid Response Study 2017 NSW Heatwaves

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An Australian Government Initiative



AUSTRALIA'S TOP FIVE NATURAL HAZARD KILLERS

Hazard	Period of coverage	Fatalities	High Risk States
Extreme heat ¹	1900-2011	4,555	Vic, NSW, SA
Flood ²	1900-2015	1,859	Qld, NSW
Tropical cyclone ⁴	1900-2015	1,216	WA, NT, Qld
Bushfire ³	1900-2011	825	Vic, NSW, SA
Wind storm ⁴	1900-2015	525	NSW, Vic, Qld

¹ Coates et al., 2014

² Haynes et al., 2016

³ Bianchi et al., 2014

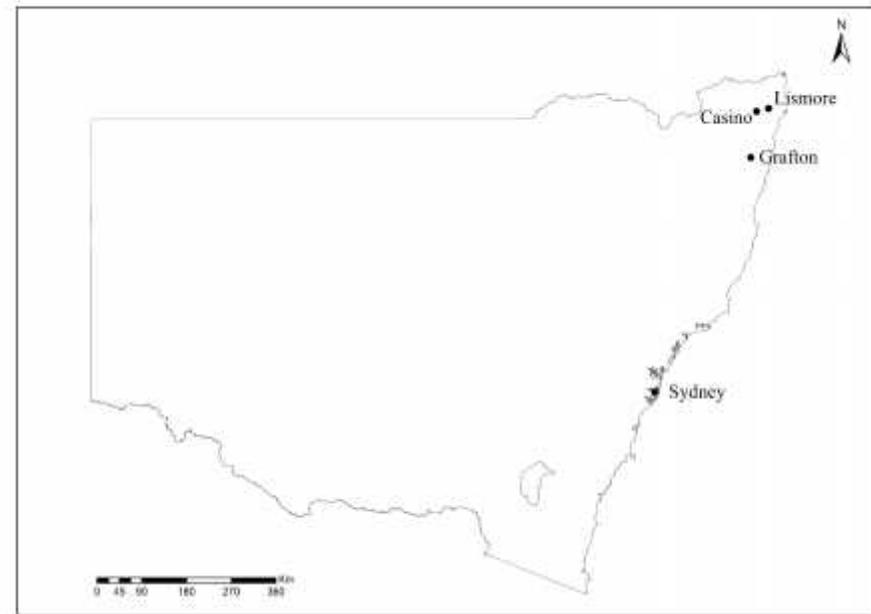
⁴ Recent updates to PerilAUS (May)

THE RESEARCH PROJECT

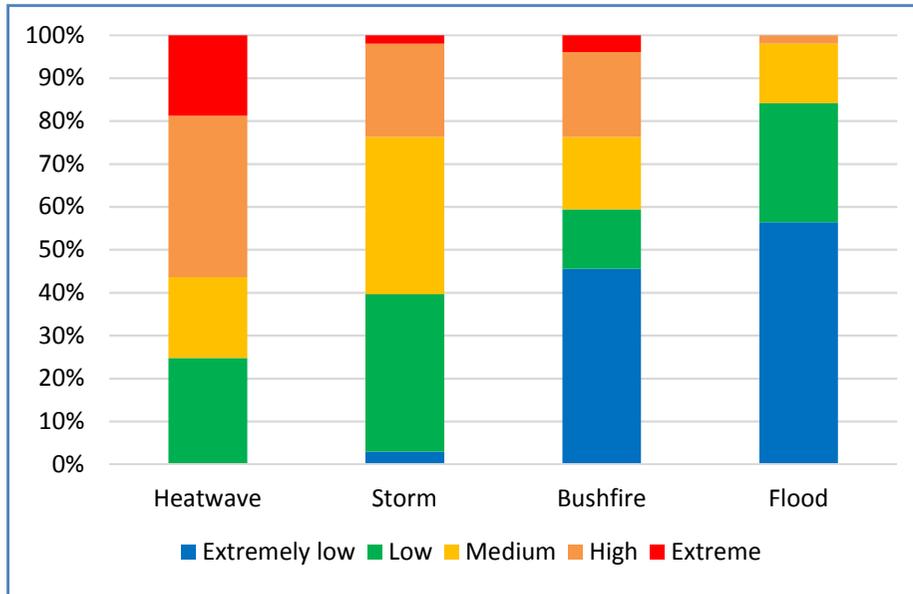
Our research:

- Identified impacts of heatwaves on households and businesses
- Responses to heatwave warnings
- Possible future adaptation to extreme heat

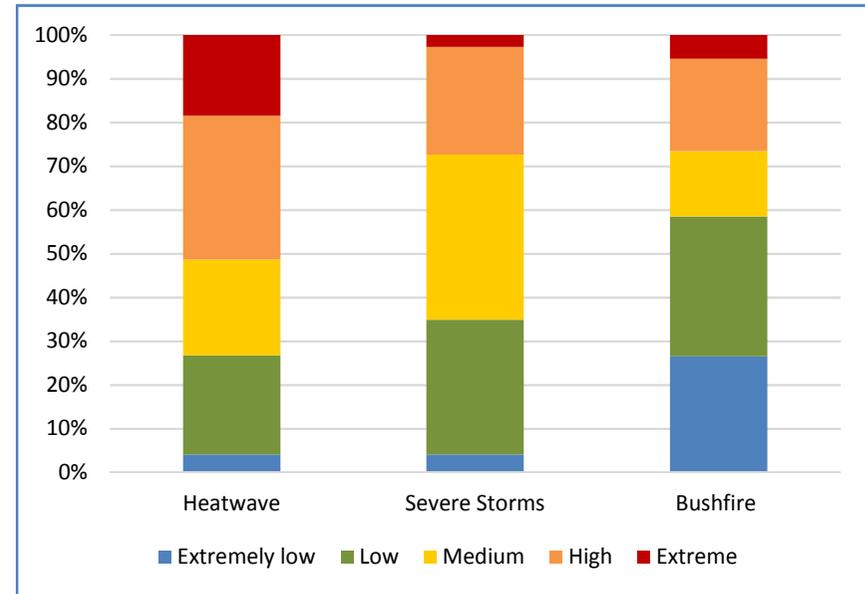
A total of 250 households and 60 businesses were surveyed by telephone. Most respondents were over 60.



PERCEPTIONS AND CONCERNS ABOUT HEATWAVES



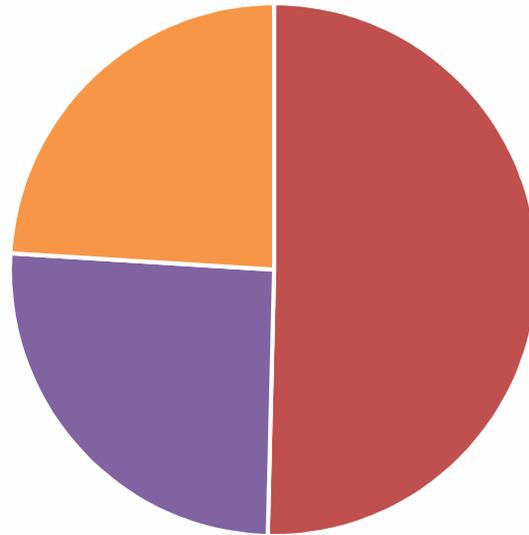
Risk perception Western Sydney



Risk perception North Coast

People perceived heatwave as a risk more significant than other hazards to personal health and safety.

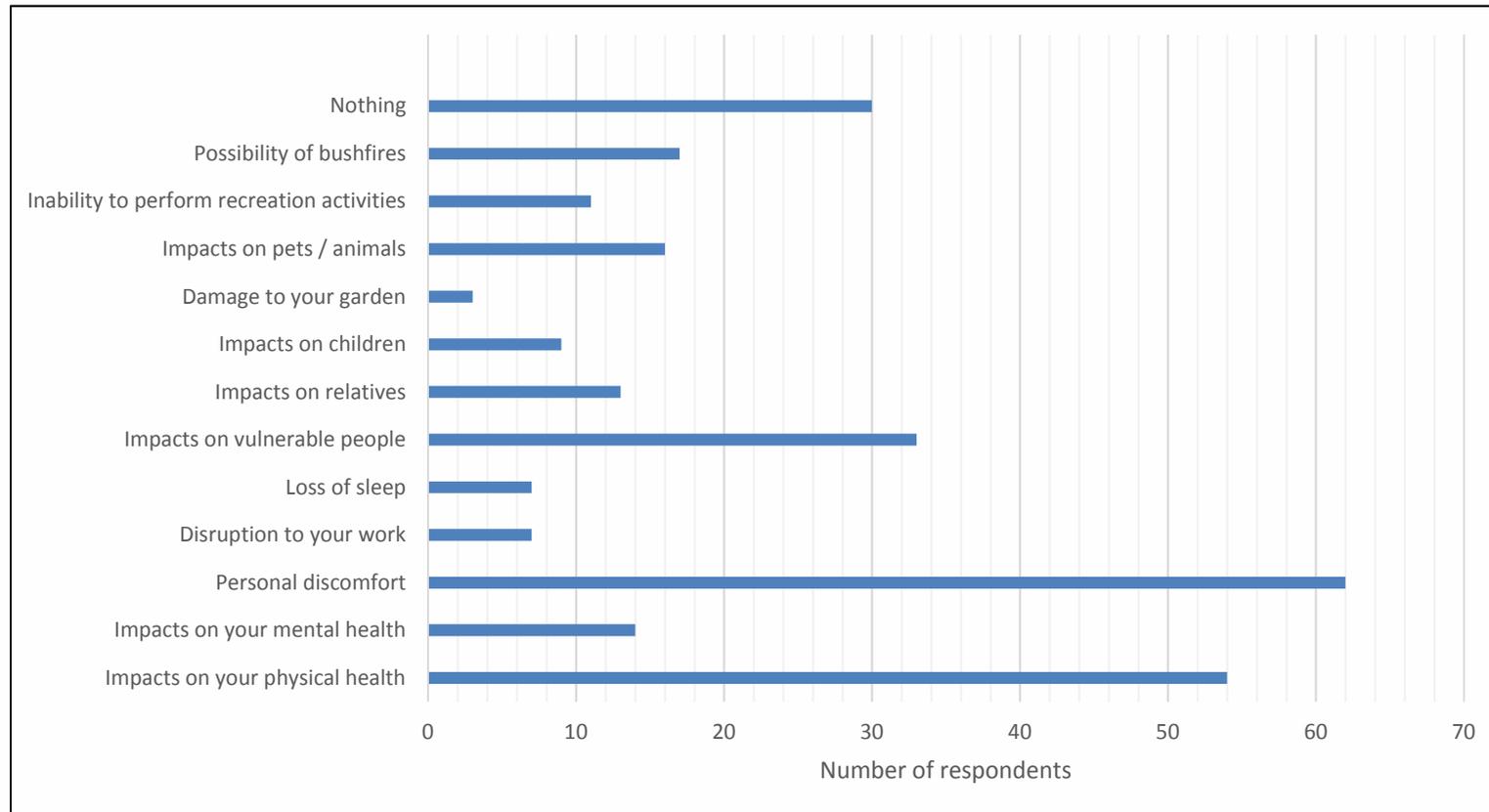
PERCEPTIONS OF ALL HOUSEHOLDS OF TEMPERATURES DURING SUMMER 2017



- Very much hotter than previous years
- Slightly hotter than previous years
- Similar to previous years

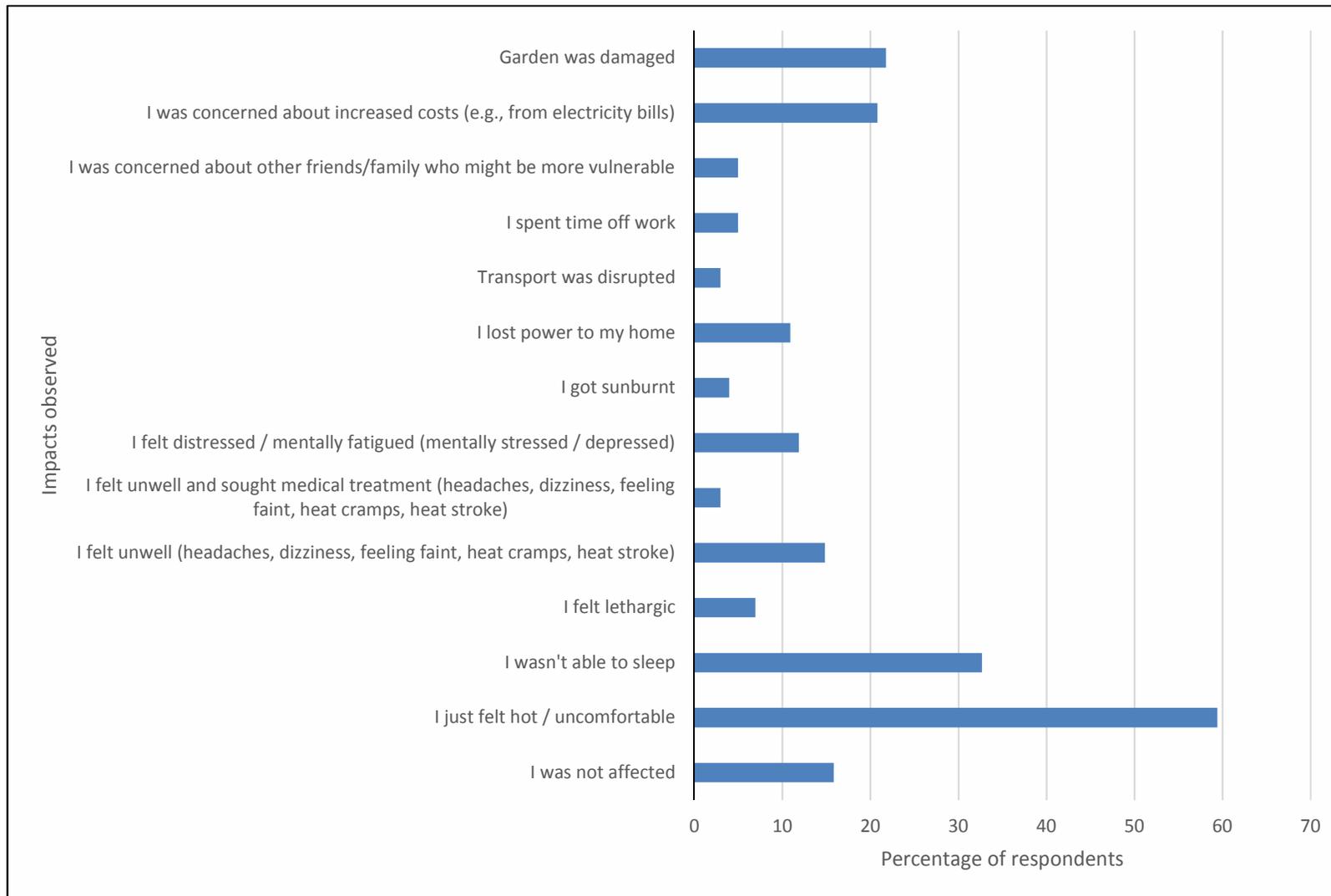
Most households thought temperatures last summer were much hotter than previous years.

WHAT CONCERNS PEOPLE MOST



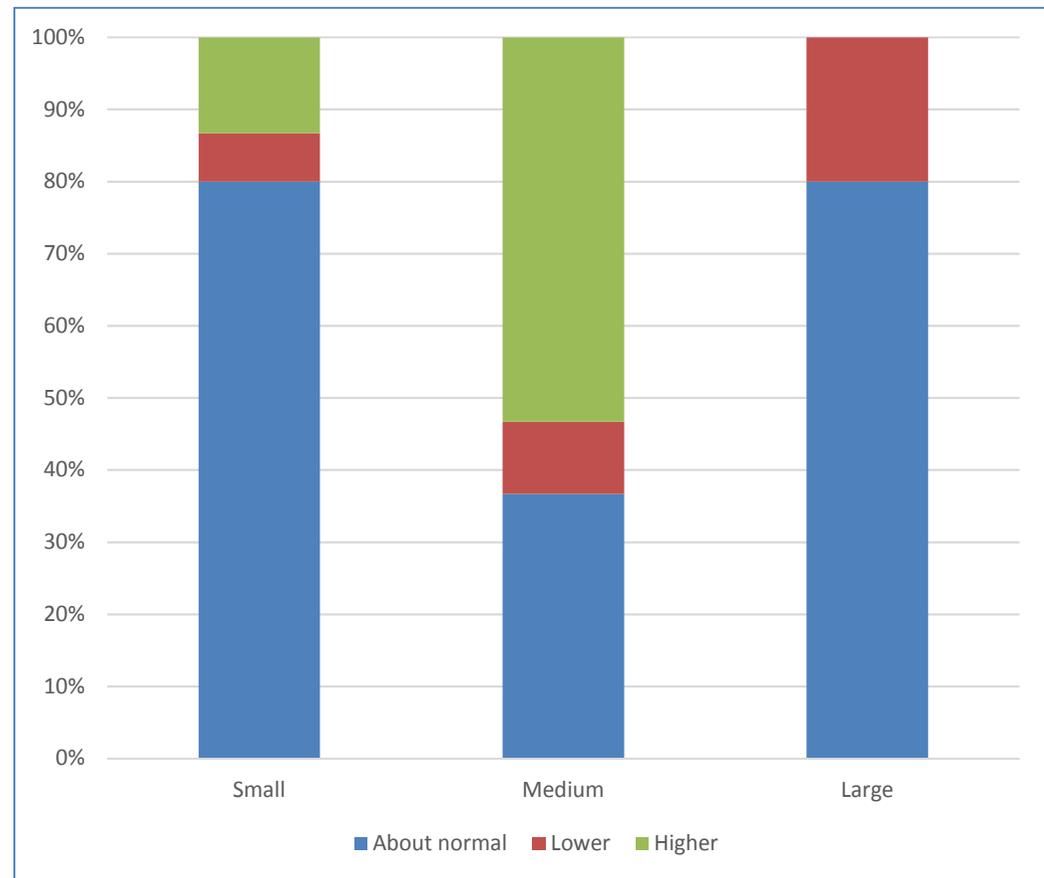
Impacts on physical health and discomfort were the most prevalent concerns.

PERSONAL IMPACTS WESTERN SYDNEY

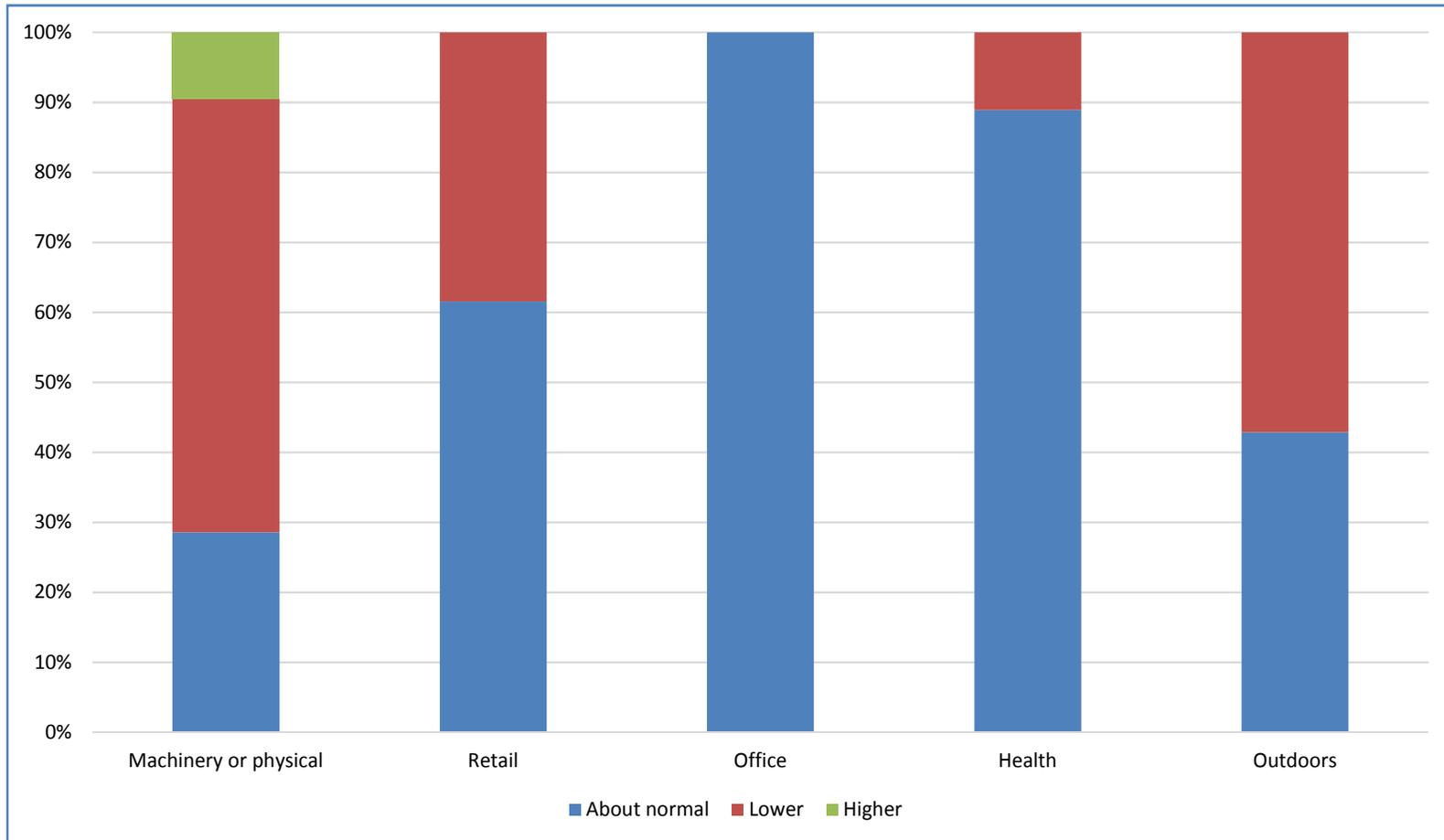


PERCEIVED WORKPLACE ABSENTEEISM

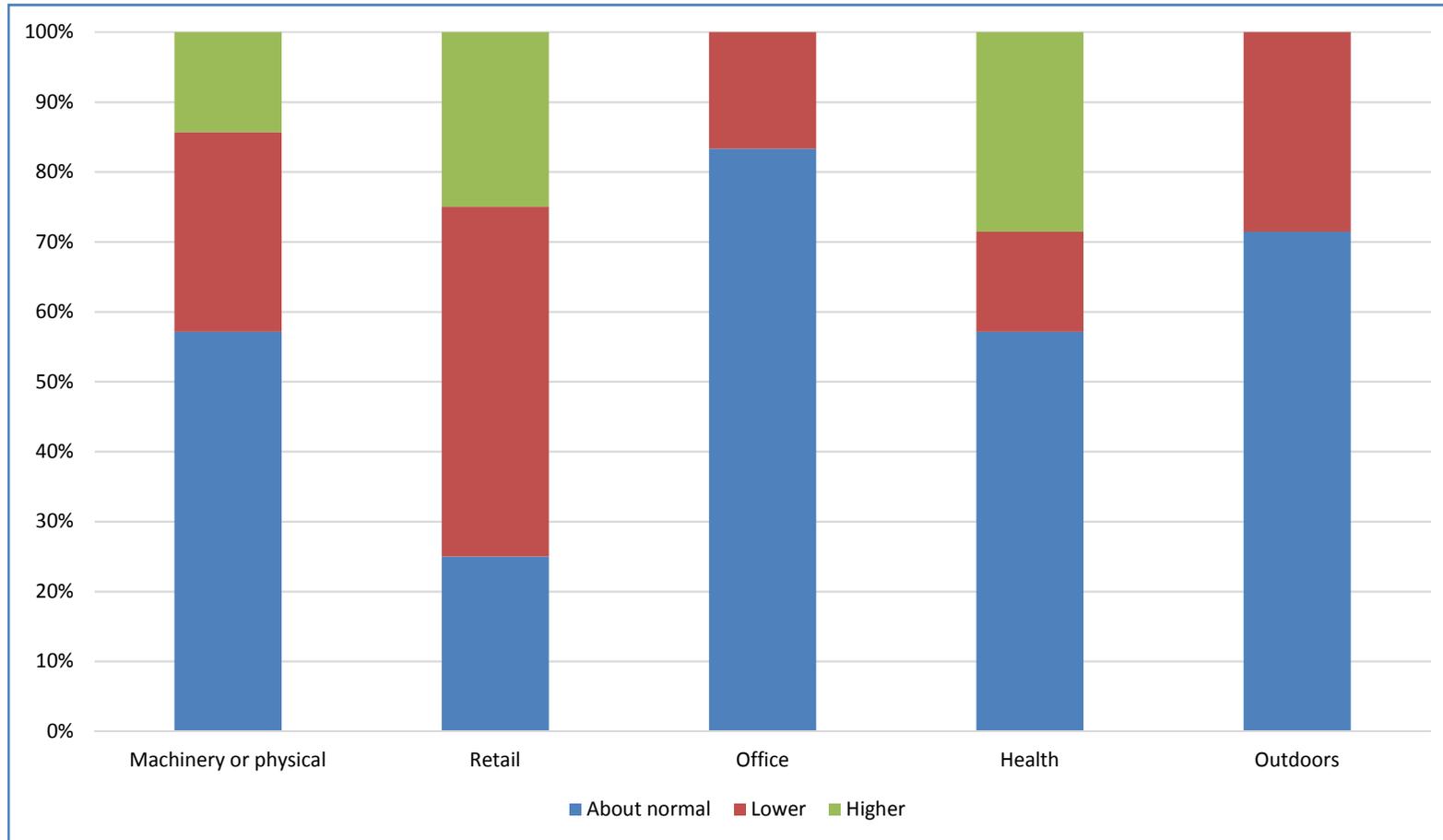
- Workplace absenteeism affected small to medium size firms.
- 38% of businesses that use machinery or require physical labour reported higher absenteeism, as did 35% of businesses in the retail and dining sector.



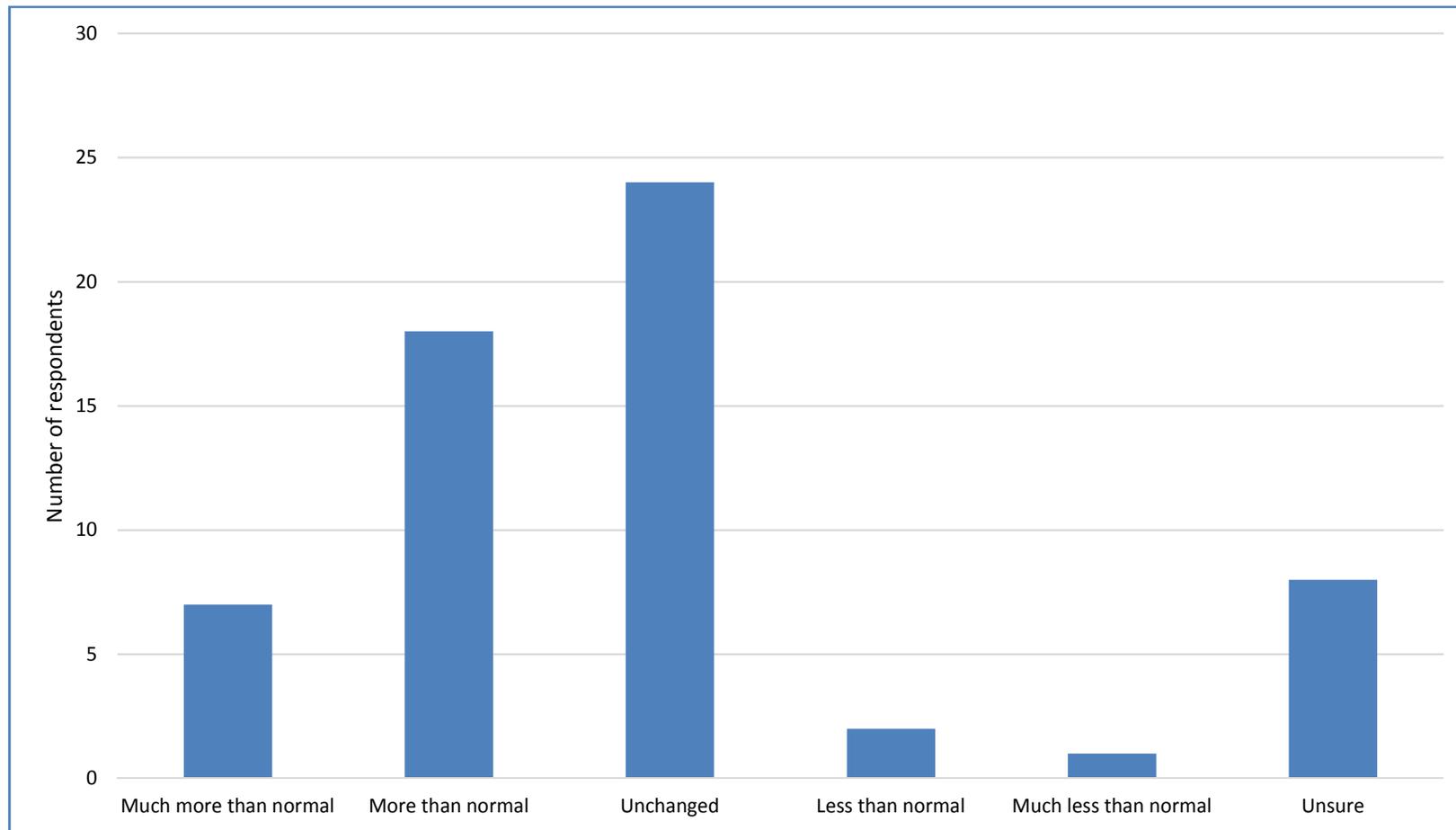
PERCEIVED LEVEL OF BUSINESS PRODUCTIVITY DURING HEATWAVE



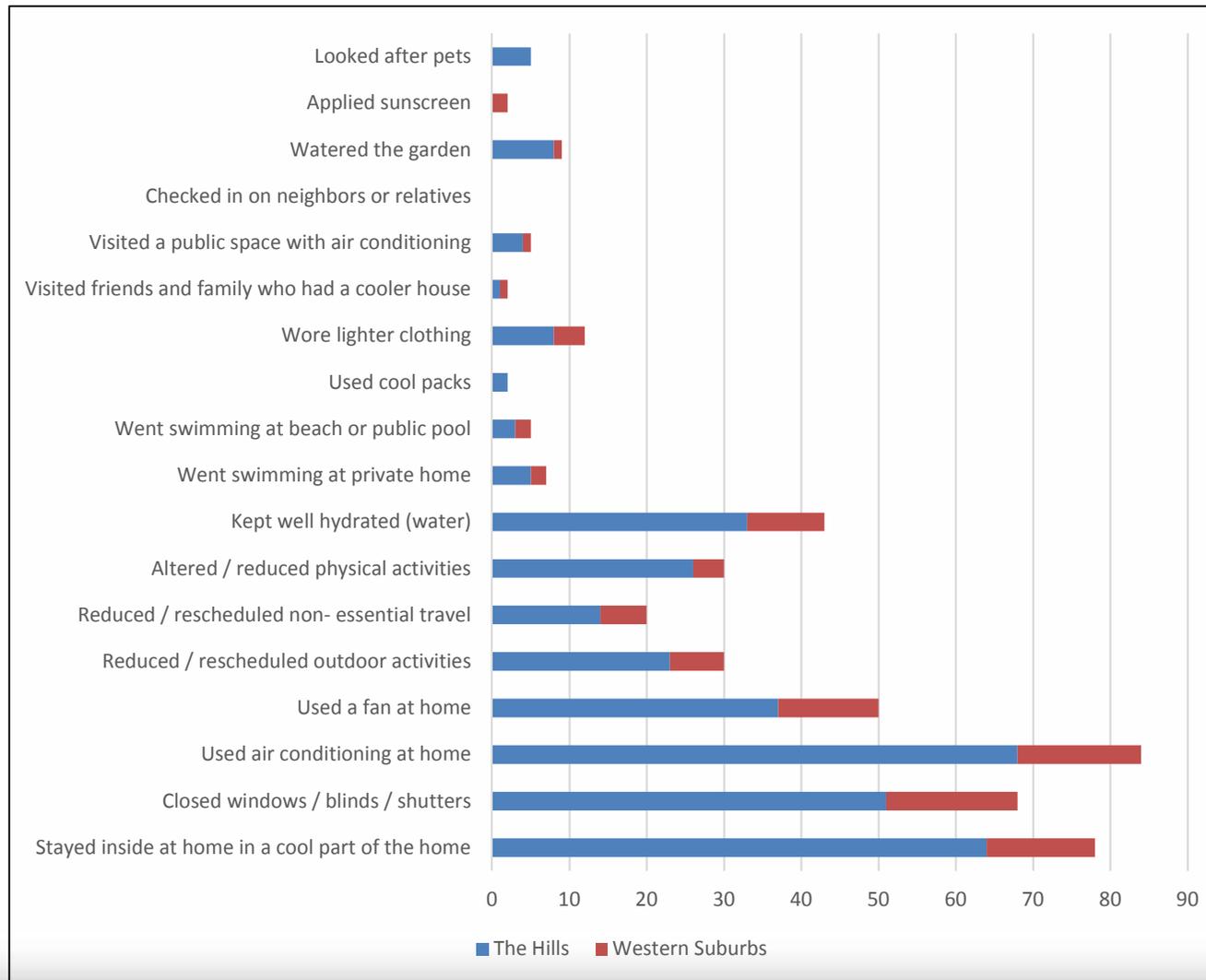
PERCEIVED LEVEL OF BUSINESS TURNOVER DURING HEATWAVE



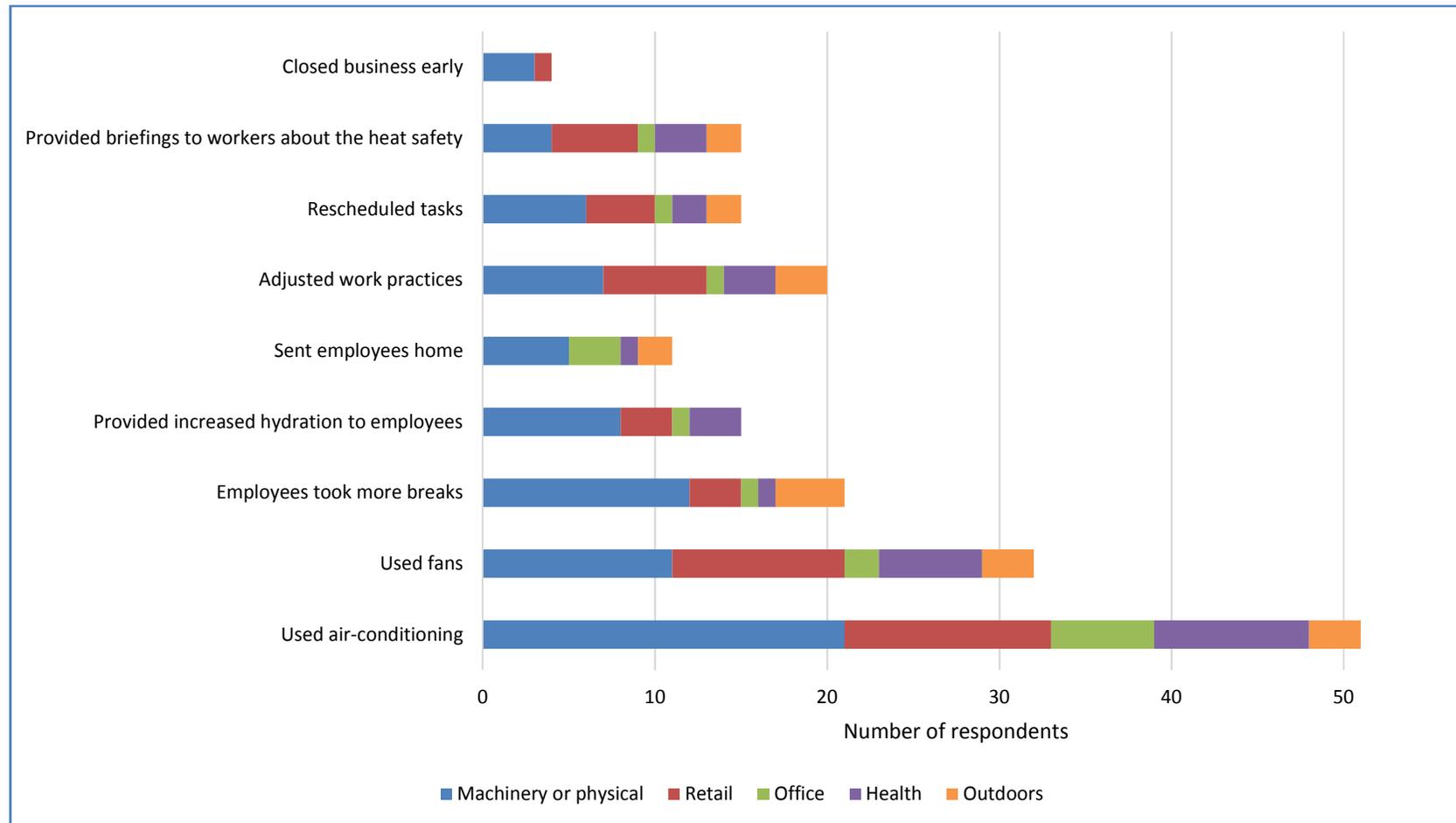
USE OF ELECTRICITY BY BUSINESSES



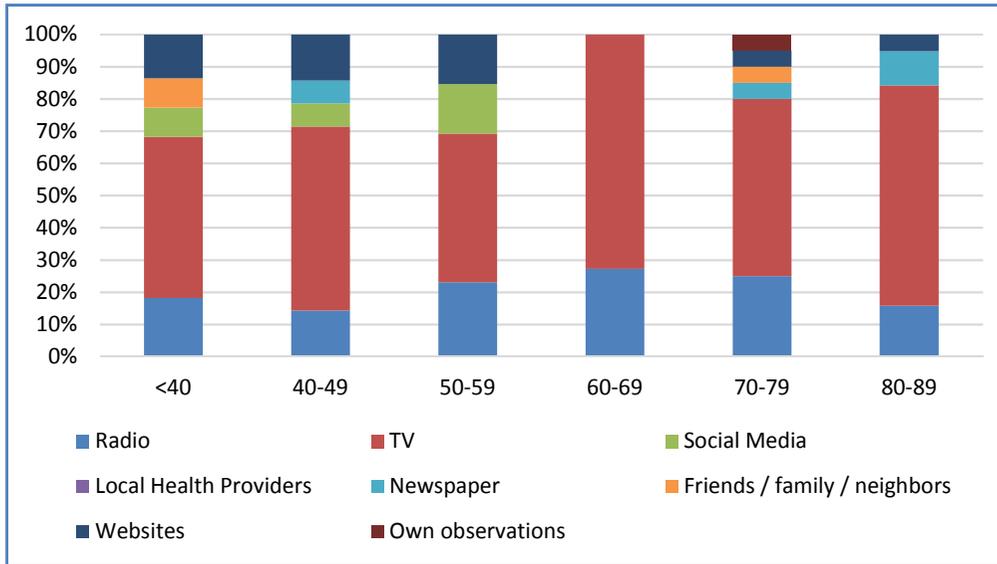
HOUSEHOLD PROTECTIVE ACTIONS WESTERN SYDNEY



BUSINESS PROTECTIVE ACTIONS WESTERN SYDNEY



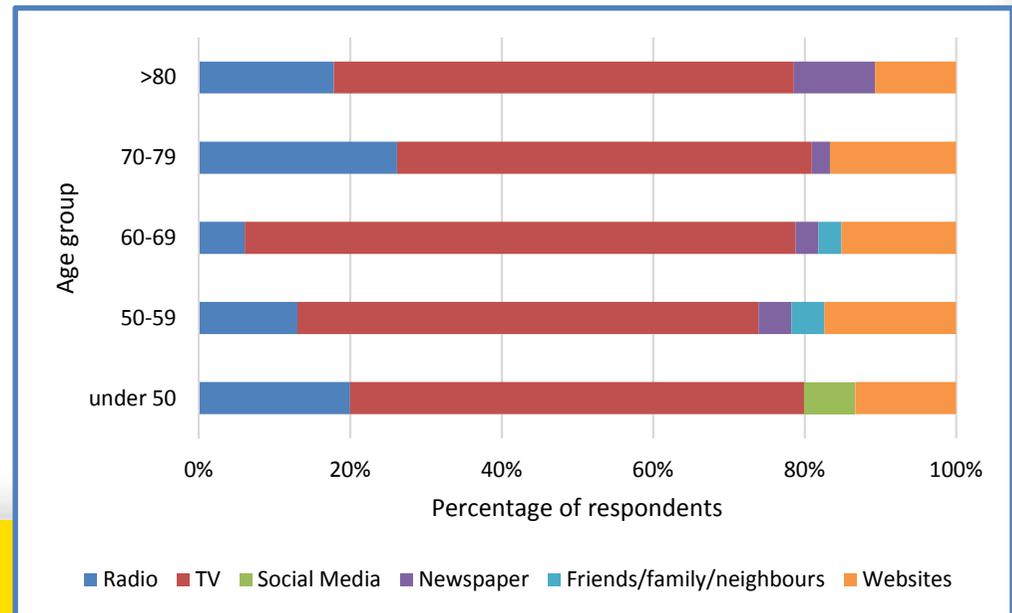
MODE FOR RECEIVING WARNINGS



70% of all households received a warning.
78% of businesses.

Western Sydney

TV most popular mode to receive warnings. Social media may not reach the most vulnerable.



PREPAREDNESS ACTIONS TAKEN

- Of those households that received a heatwave warning 64% in Western Sydney and 45% of those on the North Coast undertook actions to prepare.
- Motivations were high temperatures, common sense and frequency of warnings.
- People who didn't prepare did not think it was necessary, or that there was little that could be done apart from using air-conditioning.
- Most popular actions:
 - 1) Rescheduling outdoor activities
 - 2) Developing plan for the day
 - 3) Looking after pets
 - 4) Watering plants

FUTURE HOUSEHOLD PREPARATION

- Most said they did not need to undertake further preparation for future events.
- Some would consider installing air-conditioning or buying a fan.
- Of interest some would consider permanently moving to a cooler location:
 - 10% in Western Sydney
 - 8% in Northern Rivers.

HOW COULD GOVERNMENT ASSIST?

Respondents nominated:

- Subsidies for low income earners to install air-conditioning and solar power.
- Subsidies for low income earners for running air-conditioning.
- Support for energy efficient homes.
- Improvements to the resilience of the energy grid.

Others nominated that there was nothing Government could do or should do, and accepted personal responsibility.

CONCLUSION AND DISCUSSION

- Impacts of heatwaves are significant and more needs to be done to understand costs of heatwave events.
- Communities have significant concerns about heatwaves.
- Need to evaluate some existing heatwave management strategies for example encouraging vulnerable people to attend cooler places.
- Warnings and advice appear to be largely heard but not all respond proactively.
- Energy security and heatwave response by the community is linked.