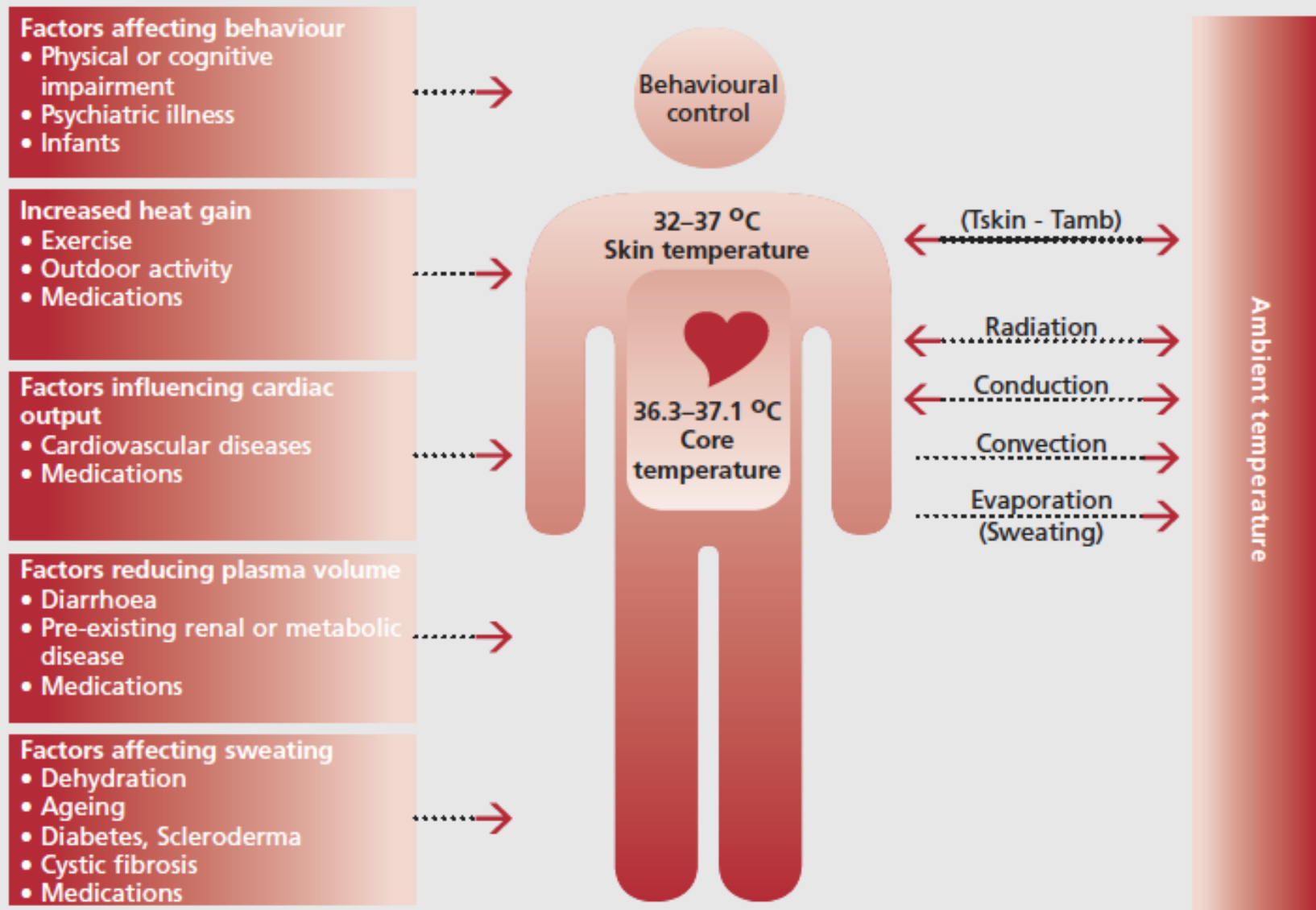


# Pacific Northwest / Canada heatwave

## Health Impacts

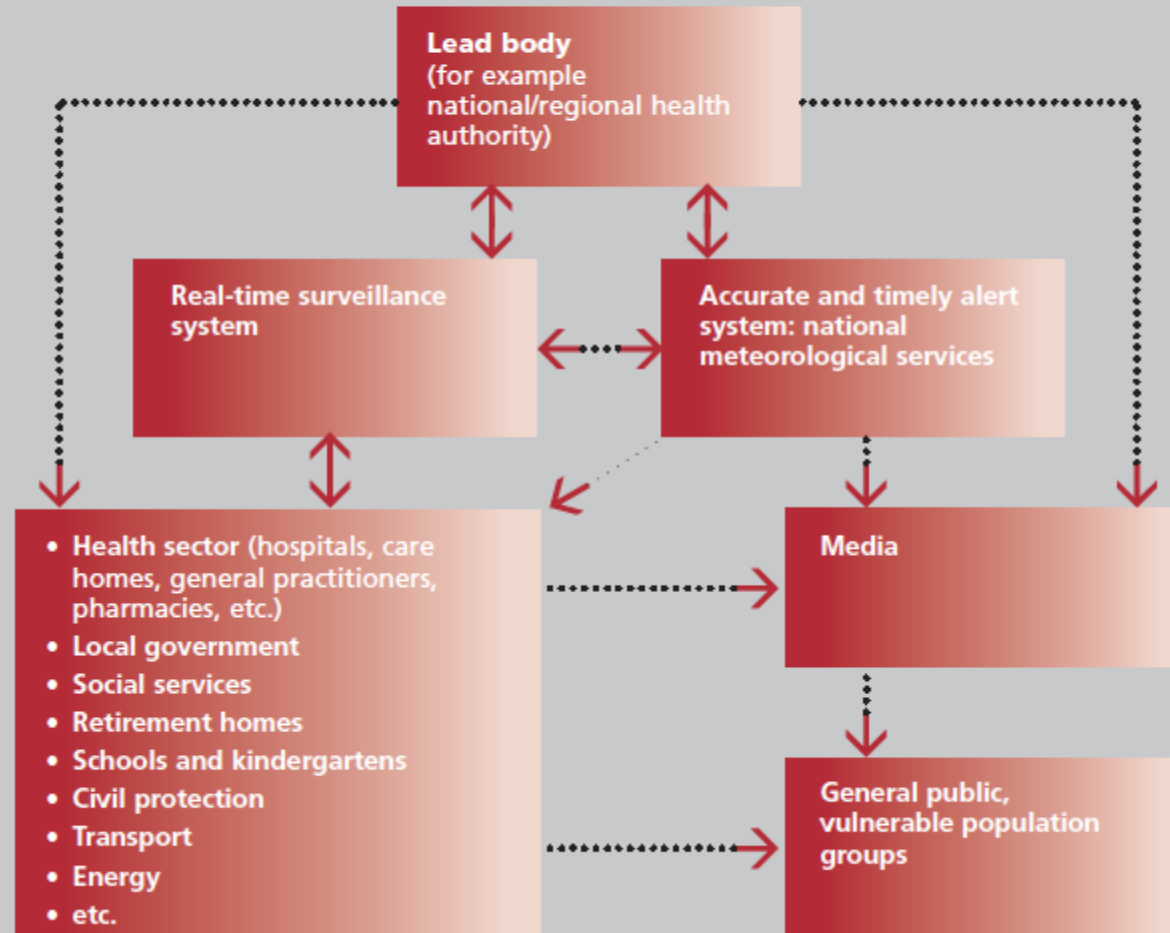
*Kristie L. Ebi, Ph.D., MPH*  
*University of Washington*

## Factors affecting human thermoregulation and the risk of heat illness



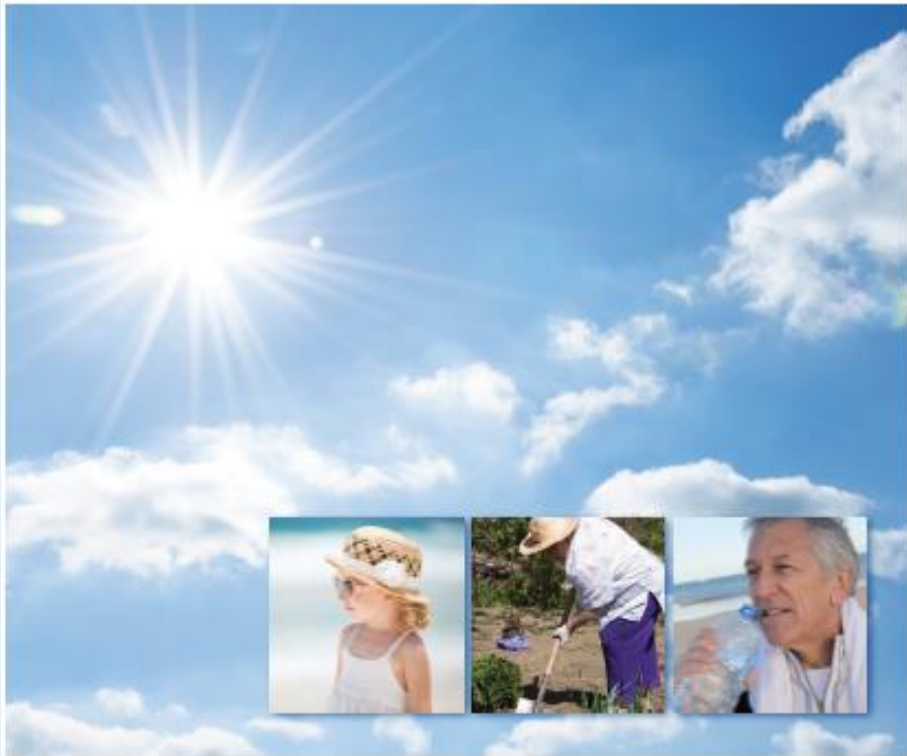
Source: WHO Regional Office for Europe, in press.

Fig. 2. Possible flow of information between lead agency and other actors in heat-health action plans



# Heatwave plan for England

Protecting health and reducing harm from  
severe heat and heatwaves



## Core elements:

- Strategic planning
- Alert system
- Heatwave and summer preparedness
- Communication plan
- Working with service providers
- Engaging the community
- Monitoring, evaluation, and learning

Figure 2.4: Typical cascade of heatwave alerts

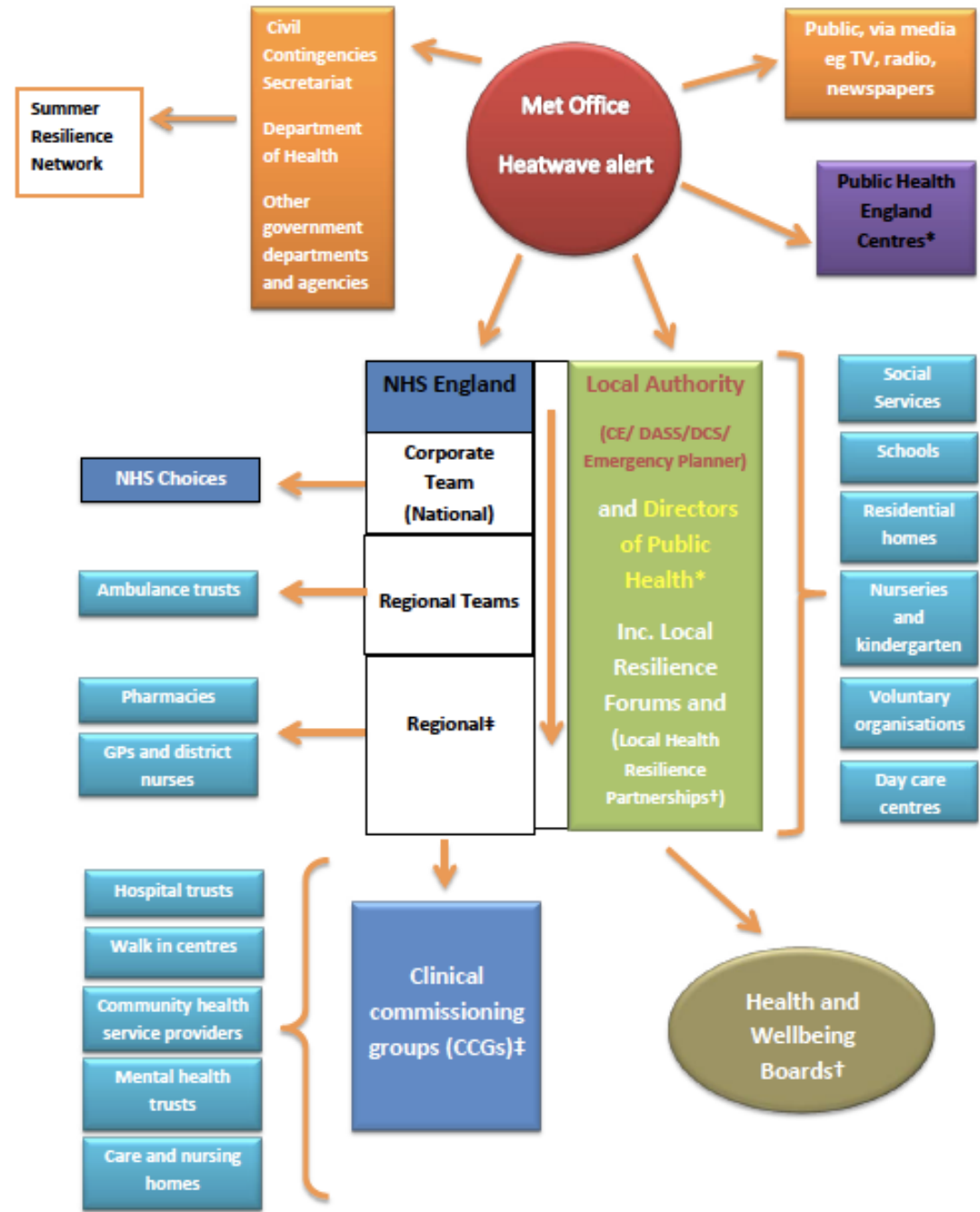


Figure 2.1: Heatwave Alert levels

Level 0	Long-term planning - All year
Level 1	Heatwave and Summer preparedness programme - 1 June – 15 September
Level 2	Heatwave is forecast – Alert and readiness - 60% risk of heatwave in the next 2 to 3 days
Level 3	Heatwave Action - temperature reached in one or more Met Office National Severe Weather Warning Service regions
Level 4	Major incident – Emergency response - central government will declare a Level 4 alert in the event of severe or prolonged heatwave affecting sectors other than health

**Figure 3.1: Commissioners of health and social care (all settings) and local authority Directors of Public Health**

Level 0	Level 1	Level 2	Level 3	Level 4
<p><b>Long-term planning</b> All year See accompanying document 'Making the Case' for more detail</p>	<p><b>Heatwave and summer preparedness programme</b> 1 June to 15 September</p>	<p><b>Heatwave is forecast – alert and readiness</b> 60% risk of heatwave in the next 2 to 3 days</p>	<p><b>Heatwave action</b> Temperature reached in one or more Met Office National Severe Weather Warning Service regions</p>	<p><b>Major incident – emergency response</b> Central Government will declare a Level 4 alert in the event of severe or prolonged heatwave affecting sectors other than health</p>
<p>Working with partner agencies, incorporate into JSNA's/HWS's long term plans to prepare for, and mitigate, the impact of heatwaves, including:</p> <ul style="list-style-type: none"> <li>• how to identify and improve the resilience of those individuals and communities most at risk</li> <li>• ensuring that a local, joined-up programme is in place covering:</li> <li>• housing (inc loft and wall insulation and other plans to reduce internal energy use and heat production)</li> <li>• environmental action: (eg increase trees and green spaces; external shading; reflective paint; water features)</li> <li>• other infrastructure changes (eg porous pavements)</li> <li>• engaging the community and voluntary sector to support development of local community emergency plans</li> <li>• making progress on relevant Public Health Outcomes Framework indicators</li> </ul>	<ul style="list-style-type: none"> <li>• work with partner agencies, providers and businesses to coordinate heatwave plans, ensuring vulnerable and marginalised groups are appropriately supported</li> <li>• work with partners and staff on risk reduction awareness (eg key public health messages – box 1), using a variety of methods to maximise dissemination</li> <li>• ensure care homes and hospitals are aware of the heatwave plan and are engaged in preparing for heatwaves</li> <li>• continue to engage the community and voluntary sector to support communities to help those most at risk</li> <li>• ensure other institutional establishments (eg prisons, schools) are aware of heatwave guidance</li> <li>• ensure organisers of large events take account of possible heat risks</li> </ul>	<ul style="list-style-type: none"> <li>• communicate public media messages – especially to 'hard to reach' vulnerable groups</li> <li>• communicate alerts to staff and make sure that they are aware of heatwave plans</li> <li>• implement business continuity</li> <li>• increase advice to health and social care workers working in community, care homes and hospitals</li> </ul>	<ul style="list-style-type: none"> <li>• media alerts about keeping cool</li> <li>• support organisations to reduce unnecessary travel</li> <li>• review safety of public events</li> <li>• mobilise community and voluntary support</li> </ul>	<p><b>National emergency</b> Continue actions as per Level 3 unless advised to the contrary</p> <p>Central government will declare a Level 4 alert in the event of severe or prolonged heatwave affecting sectors other than health and if requiring coordinated multi-agency</p>

**High-risk groups**  
**Community:** over 75, female, living on own and isolated, severe physical or mental illness; urban areas, south-facing top flat; alcohol and/or drug dependency, homeless, babies and young children, multiple medications and over-exertion  
**Care home or hospital:** over 75, female, frail, severe physical or mental illness; multiple medications; babies and young children (hospitals).

# Heat is an all-of-society problem



## PEOPLE

### Heat exacerbates risks of:

Social inequity,  
Illness and death

### Requiring action from:

Public health;  
labour; social  
sectors; physiology;  
medicine; sports;  
etc.



## ENVIRONMENT

### Heat exacerbates risks of:

Fires; poor air quality;  
water scarcity and  
drought; cyclones;  
UV radiation

### Requiring action from:

Environment;  
meteorology;  
climatology; etc.



## INFRASTRUCTURE

### Heat exacerbates risks of:

Urban heat islands;  
emergency and power  
service disruptions;  
poor quality housing

### Requiring action from:

Architecture,  
engineering,  
urban planning; etc.



**Thank you**