Communicating for Heat Action

Perspectives on Communicating Risk from a Doctor

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/World Association of Family Doctors
Mild and Moderate Heat Illnesses

Heat rash
Heat edema
Heat cramps
Heat syncope
Heat Exhaustion / Heat Stroke

- **Heat Exhaustion**: giddiness, headache, nausea, shortness of breath, mental confusion
- **Heat Stroke**: body temp > 41, convulsion, unconscious, rhabdomyolysis, multiorgan failure
Who is at Risk?

- The obese
- The sick
- The elderly
- The psychiatric patients
- The children
- The socially isolated
Recommendations for the Public

Keep your home cool
Keep out of heat
Keep the body cool and hydrated
Help others
If you have a health problem...
If you or other feel unwell...
• Understand thermoregulatory and haemodynamic response to heat
• Understand heat illnesses esp heat stroke
• Initiate proper cooling and resuscitation
• Identify vulnerable groups and encourage proper education and counselling
• Beware of side effects / efficacy of medications during hot weather
• Monitor drug therapy and fluid intake
Heat Action Plan: Key Perspectives

- Accurate and timely alert system
- Heat related health information plan: what, who and when
- Particular care to vulnerable groups
- Preparedness of health and social care system
- Reduction in indoor heat exposure
- Real time surveillance and evaluation
- Agreement on a lead body
- Long term urban planning
Resurgence of Infectious Diseases

- Climate change and pathogens
- Climate change and hosts / vectors
- Climate change and transmission

Diseases: dengue, malaria, hantavirus and cholera, salmonellosis, giardiasis

Seasonal / geographical distribution
Outbreak frequency and severity
<table>
<thead>
<tr>
<th>Extreme weather events</th>
<th>Disease type</th>
<th>Authors, year</th>
<th>Main findings</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>El Nino</strong></td>
<td>Vector-borne disease</td>
<td>Epstein (1999)</td>
<td>Increasing outbreaks of emerging diseases were linked to El Nino event. Outbreaks and epidemic of malaria were positively connected with El Nino events in many regions.</td>
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<tr>
<td></td>
<td>Water-borne disease</td>
<td>Lindsay et al. (2000)</td>
<td>Strikingly less malaria were found in the El Nino year than in the preceding year in the Usambara Mountains, Tanzania.</td>
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<td></td>
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<td>Hjelle and Glass (2000)</td>
<td>Record of hantavirus cardiopulmonary syndrome has been found to be related to El Nino events in the Colorado Plateau.</td>
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<td><strong>La Nina</strong></td>
<td>Vector-borne disease</td>
<td>Chretien et al. (2007)</td>
<td>Chikungunya fever epidemic was connected with the drought incurred by La Nina.</td>
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<td></td>
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<td>Nicholas (1993)</td>
<td></td>
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<td></td>
<td>Water-borne disease</td>
<td>Bunyavirical (2003)</td>
<td></td>
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<td></td>
<td>Vector-borne disease</td>
<td>Dwight et al. (2004)</td>
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<tr>
<td><strong>Quasi-Biennial Oscillation (QBO)</strong></td>
<td>Water-borne disease</td>
<td>QBO has been found to be linked to the incidence of Ross River virus in south-eastern Queensland.</td>
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<td></td>
<td>Air-borne disease</td>
<td>Kan (2011)</td>
<td>Heatwave contributes to the increased morbidity and mortality from infectious respiratory diseases.</td>
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<td><strong>Drought</strong></td>
<td>Water-borne disease</td>
<td>Epstein (2001a)</td>
<td>Diarrheal diseases are frequent during drought especially in refugee camps.</td>
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<td></td>
<td>Vector-borne disease</td>
<td>Khasnis and Netzleman (2005)</td>
<td></td>
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<td></td>
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<td>Wang et al. (2010)</td>
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<td></td>
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<td>Shaman et al. (2002)</td>
<td></td>
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<tr>
<td><strong>Flood</strong></td>
<td>Water-borne disease</td>
<td>Chretien et al. (2007)</td>
<td>The Chikungunya fever epidemic may be associated with droughts.</td>
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<td></td>
<td>Vector-borne disease</td>
<td>Mackenzie et al. (1994)</td>
<td></td>
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<td></td>
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<td>Reacher et al. (2004)</td>
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<td>Nielsen et al. (2002)</td>
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<td>Cordova et al. (2000)</td>
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<td>Chen (1999)</td>
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<td>CDC (2000)</td>
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<td>Leal-Castellanos et al. (2003)</td>
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<td><strong>Hurricane</strong></td>
<td>Vector-borne disease</td>
<td>Epstein (2000)</td>
<td>Following the hurricane, malaria and dengue fever occurred in Honduras and in Venezuela.</td>
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<td></td>
<td>Vector-borne disease</td>
<td>Sanders et al. (1999)</td>
<td>A cyclone tends to increase the incidence of leptospirosis.</td>
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<tr>
<td></td>
<td>Water/blood-borne disease</td>
<td>Shultz et al. (2005)</td>
<td>A cyclone tends to increase the incidence of cholera.</td>
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*The table includes empirical findings published after the 1990s.*
HKJC DPRI
Hong Kong Jockey Club Disaster Preparedness and Response Institute
http://www.hkjcdpri.org.hk/
HKJC DPRI: The Hong Kong Jockey Club Disaster Preparedness and Response Institute

- setup in 2014, funded by HKJC
- capacity building on disaster preparedness and response
- participatory, collaborative
- locally, regionally and globally
- policy, research and practice

HKU, CUHK, UST, Manchester Uni, Harvard Uni

Mainland China

WHO
Hong Kong’s Emergency and Disaster Response System

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Policy Brief
October 2015

Policy Implication of Health Impacts of Climate Change in Hong Kong

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Policy Brief
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Landslide

Smart Landslide Barrier

Smart Landslide Information System

Figure 1. Global interface of LIS mobile app on smartphone
Thank You