

Climate Change and Health Systems: Linkages and Gaps

A CCGHR Briefing Note ¹

Climate change refers to the consequences of changing energy inputs to the earth-atmosphere system, increasing shortwave radiation. The movement of air and moisture around the globe are driven by these energy inputs. As a result, temperature and rain/snow patterns will continue to change in intensity over space and time beyond regular seasonal and inter-annual changes. Health systems are vulnerable to climate change impacts directly through natural disasters (infrastructure and supply chains) and indirectly through patient loads, staffing, and changes in local patterns of disease.

Specific linkages between climate change and health systems include:

- Damage to infrastructure as a result of floods, winds (hurricanes) or fire
- Increased trauma patient loads associated with natural disasters as a result of injuries
- Increase demand for health service in some areas due to disruption in others and migration
- Decreased access to medicines and supplies as a result of natural disasters
- Reduced staff (injury, illness, or personal loss of family/property)
- (Rapidly) changing patient loads
 - Epidemic versus endemic disease patterns
 - Disasters
- Changing balance between chronic and infectious diseases (exacerbated by changes in demographics)
- Changing face of diseases presented and impact on knowledge of healthcare providers and accuracy of diagnoses for the patient (e.g. introduction and expansion of West Nile virus in North America; Chikungunya and Zika in Latin America and the Caribbean)

Topics of concern/Gaps in knowledge:

- Linking CC, socioeconomic status and access to health care
- The extent to which weak health systems contribute to the spread and management of climate change related conditions – example: the spread of Ebola in West African countries.
- There is a need to think beyond health systems, to ecohealth systems [*See the CPHA publication on “Global Change and Public Health: Addressing the Ecological Determinants of Health” (May, 2015)*]

A Perspective from the Caribbean:

The hurricanes of 2018--Hurricane Maria and Irma have impacted numerous Caribbean countries. Stronger vector control and environmental health services are needed, at the same time as the demand on essential services for access to clean water and safe foods will increase as a result of the hurricanes.

Health services need to focus on preparedness and resilience in their design and operations so they can be critical players in responding to extreme weather events...PAHO is working in the Caribbean Region on a smart hospital initiative. These initiatives make these health facilities more resilient.

¹ This note was prepared by members of the CCGHR working group on the health impacts of climate change: Corinne Schuster-Wallace (Dundas, Ontario), Rosmond Adams (Caribbean Public Health Agency) and Vic Neufeld (CCGHR Special Advisor)