

Chapter 61

Are Climate Change Adaptation Policies a Game Changer? A Case Study of Perspectives from Public Health Officials in Ontario, Canada

Chris G. Buse

University of Northern British Columbia, Canada

ABSTRACT

The health impacts of climate change have received significant attention in the international scholarly literature. Despite this, there is an absence of research evaluating existing policies aimed at promoting and protecting population health. This chapter provides an implementation analysis of the Ontario Public Health Standards (OPHS), 2008/2014--the provincial policy statement that governs mandatory public health activities in the province which includes taking action on climate change. This chapter responds to two specific questions: First, how are Ontario's 36 regional health units interpreting and implementing this policy statement; and second, how are those interpretations translated into practice. Using a web-scan and in-depth interviews with practitioners from twenty Ontario health units, this paper presents four interpretations of the OPHS, a typology of best practices related to regional adaptation, and policy recommendations to bolster domestic and international adaptive capacity to emerging infectious diseases associated with climate change, and a variety of other health-related climate impacts.

INTRODUCTION

Climate change is rapidly affecting human health around the globe and posing new challenges for public health infrastructure and systems (McMichael, 2013). This paper analyzes the degree to which existing public health policies are successful in bolstering adaptation to climate change in the public health sector, and whether the implementations of those policies create activities capable of responding to the emergence of new infectious diseases and a host of other climate-related health impacts. Specifically, this paper uses Ontario, Canada as a case study for examining how public health policies (i.e. the *Ontario Public Health Standards, 2008/2014*) are interpreted and made actionable by front-line practitioners.

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Are Climate Change Adaptation Policies a Game Changer?

The paper begins with an overview of climate change and its health impacts across Ontario before describing the methods and presenting a typology of policy interpretations that speak to the strengths and weaknesses of a relatively broad policy mandate. More specifically, the paper seeks to understand how practitioners made climate change actionable in their work before and after the enactment of the *Ontario Public Health Standards*, and to what degree policy elicits adaptive programming and interventions. In doing so, the paper provides guidance for government officials and public health practitioners in other nations attempting to understand whether their policy infrastructure is robust enough to respond to climate-related health impacts.

BACKGROUND: CLIMATE CHANGE IN ONTARIO, CANADA

Canada's climate is rapidly changing, and as a result, so too are the health risks posed to Canadians (Séguin, 2008). While global average temperatures are projected to increase by between two and four degrees Celsius by the end of the twenty-first century, Canada will experience more rapid temperature increases (IPCC, 2013). Between 1948 and 2006, southern Ontario has already experienced a 1.3 degrees Celsius increase, and projections for the province indicate that it will experience a two to four degree Celsius increase by 2050 (Feltmate & Thistlewaite, 2012).

Climate change has been called the greatest public health threat of the twenty-first century (Costello et al., 2009). Accordingly, the Canadian experience of climate change will mirror that occurring in other democratic countries with a well-established public health sector. Primary risks include the direct biological consequences of extreme weather events (i.e., heat, cold, violent weather), temperature-enhanced air pollutants in urban areas, and increased exposure to UV radiation; secondary risks include risks mediated by biophysical or ecological processes including food security/foodborne disease, water scarcity/waterborne disease, and changes in disease vectors as previously inhospitable climates become warmer. For Ontario, Canada, there are significant concerns about emerging vectors contaminating drinking water and recreational water sources and food contamination, with increased risk of *E. coli*, *Cryptosporidium*, *Giardia*, and *S. typhi* all being linked to warmer temperatures (Health Canada, 2008). Changes in the ecology of various disease-carrying insects also pose significant concerns for the spread of mosquito borne vectors including the West Nile Virus (Paz, 2015) and Eastern Equine Encephalitis (Parham et al., 2015). There is also cause for concern surrounding the spread of Lyme disease spread by tick populations (Ostfeld et al., 2015) and the possible emergence of new diseases and those previously eradicated across the country (Cambell-Lendrum et al., 2015). Tertiary risks include a host of mental health issues, displacement and migration, and the exacerbation of existing health inequalities (Friel et al., 2011; McMichael, 2013; Séguin, 2008).

Climate change will also pose significant economic implications, particularly for major urban areas. For example, the cumulative cost of premature mortality risk attributable to heat and air quality impacts from climate change in Toronto between 2010 and 2100 is estimated at between \$65 and \$96 billion, and the healthcare costs attributable to air quality impacts from climate change alone in the same time period are estimated to be between \$72 and \$285 million (NRTEE, 2011). These estimates do not factor in the rising cost of extreme weather. Indeed, the July 2013 storm that struck much of southwestern Ontario has proven to be the province's costliest "natural" disaster with estimated damages totalling upwards of \$850 million.

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