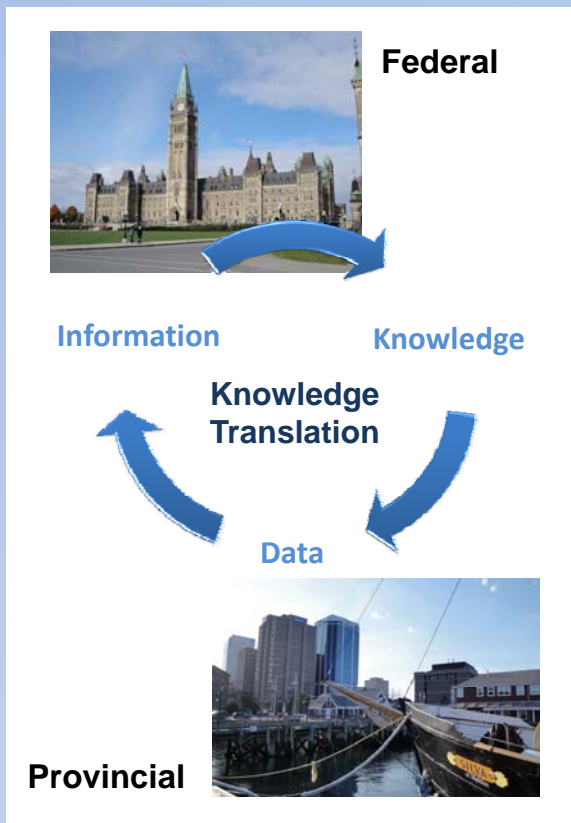


# Dynamic Capabilities and Knowledge Translation in Canada during the H1N1 Pandemic

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## Introduction

The global H1N1 pandemic outbreak created the need for rapid institutional change when there were scientific uncertainties, a lack of knowledge and inadequate channels of information. We examined how national and provincial public health structures in Canada translated and communicated knowledge in an effort to affect health policy in a timely manner. We demonstrate how public health infrastructures must have the ability to learn and readily adapt to rapidly changing conditions in order to effectively translate knowledge. The H1N1 pandemic served to test the political infrastructure's organizational capacity to respond effectively during times of crisis, and to endure into the future (dynamic capability).



## Methods

1. Through systematic document analysis and exploration of national and international news websites and press releases by vaccine companies, we studied changes in the policy infrastructure and institutional response of the Canadian government and international agency policies during the first six months of the H1N1 crisis.
2. We interviewed key personnel at the Canadian Center for Vaccinology and the Biologics and Genetic Therapies Directorate within Health Canada about evolving policies and practices related to H1N1.
3. We analyzed the data using qualitative thematic and axial coding and triangulation with grey literature.

**Dynamic Capability:** the potential for organizational capacity to increase during times of crisis, and to endure into the future

**Knowledge Translation:** a dynamic and iterative process for synthesis, dissemination, exchange and ethical application of knowledge to improve the health of Canadians, provide more effective health services and products, and to strengthen the health care system

## Findings

### 1. New infrastructures and institutions were put in place to create and utilize expert knowledge.

The PHAC/CIHR Influenza Research Network (PCIRN) for example, is a platform of vaccine researchers and clinicians across Canada which creates an efficient and effective conduit by which information is created, selected and filtered by a multidisciplinary range of experts.

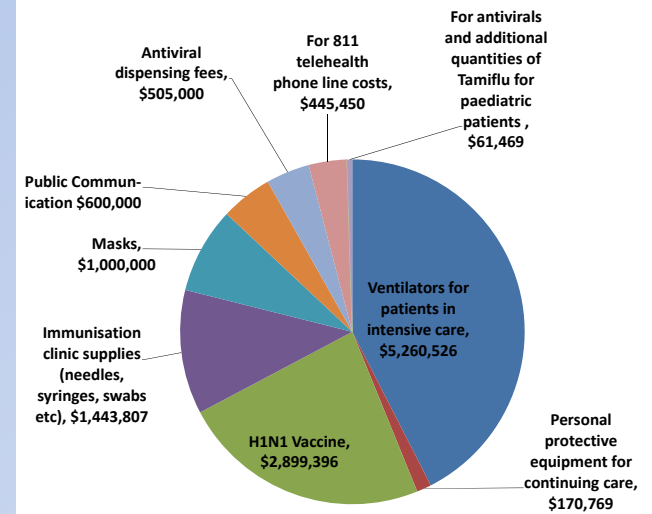
### 2. Insufficient information flow

Information needed to flow from the federal level to facilitate consistency of co-ordination and planning across provinces. Provinces and local health care providers were not given sufficient information ahead of time about quantities of vaccine being shipped, delivery dates and the actions of other provinces.

### 3. National involvement in international cooperative efforts

The World Health Organization coordinated regular meetings that enabled health authorities to compare initial data emerging from each country on clinical trials, adverse safety events, and production yields for the vaccine.

## The Cost of H1N1 in Nova Scotia



## Conclusions

- Data, information and knowledge translation are essential to policies formed in response to a crisis. Adequate channels and infrastructure that facilitate learning and adaptation, both at the time of the crisis and before, are a necessary condition
- New and existing infrastructures and institutions were put in place in response to the influenza pandemic. These new institutions demonstrate dynamic capability and successful knowledge acquisition and translation
- This dynamic capability, however, was compromised by existing fault lines and insufficient capacity to channel information and knowledge between federal, provincial, regional and local levels
- The relaying of basic information (e.g. supply and timing of the vaccine) between levels of government was problematic. More than information slipped through the gaps; the capacity for action is restricted by ongoing jurisdictional challenges
- In a pandemic scenario, institutions need key information and the capacity to facilitate knowledge translation across levels. Technical and applied interests need to be aligned between actors and organizations involved in the transmission and translation of knowledge across provinces and across the federal-provincial divide