Ottawa | Public Health
Santé publique

Syndromic Surveillance for Extreme Heat

Ottawa, Canada

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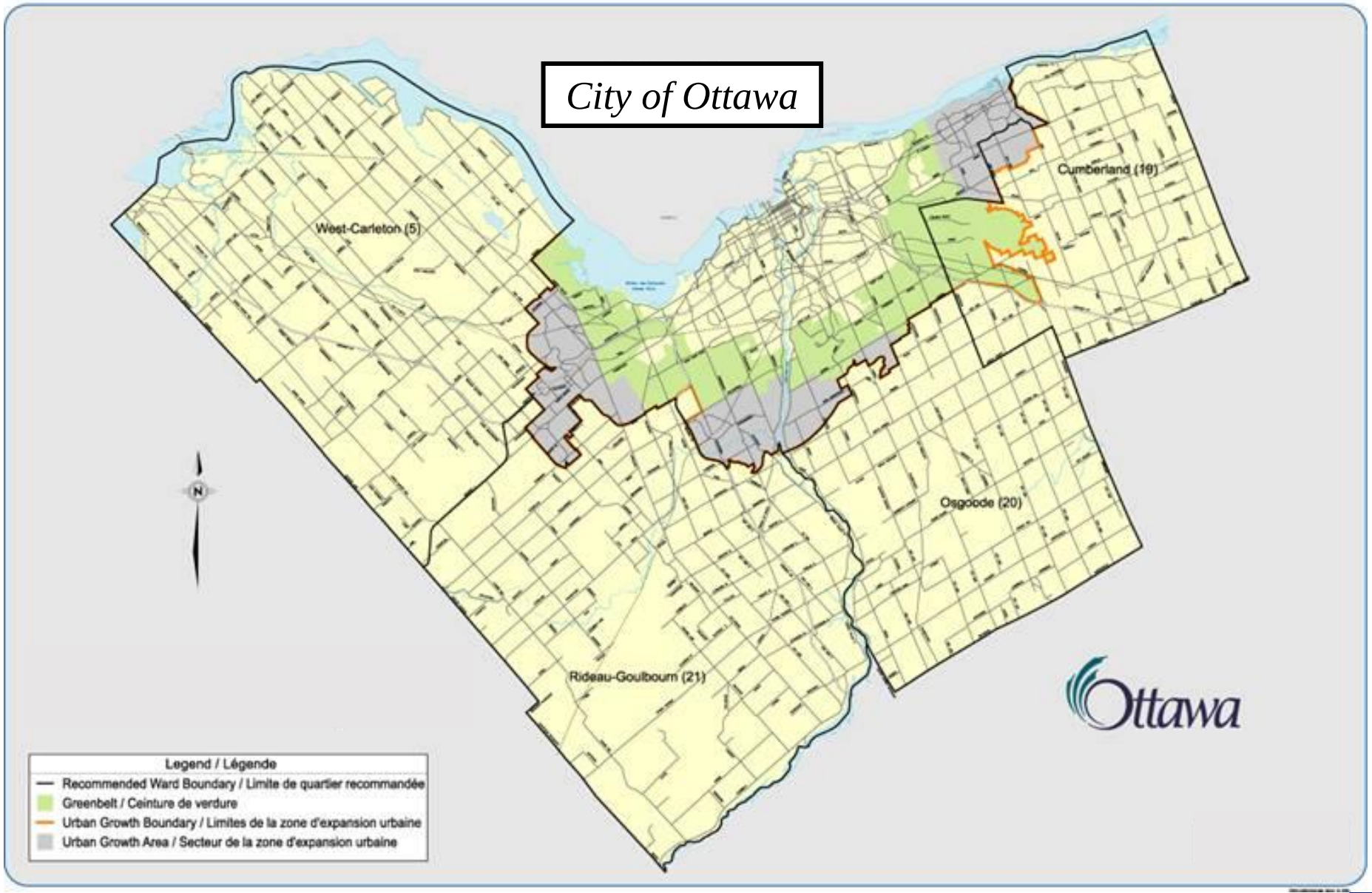
Pilot Community Presentation

May 17, 2017

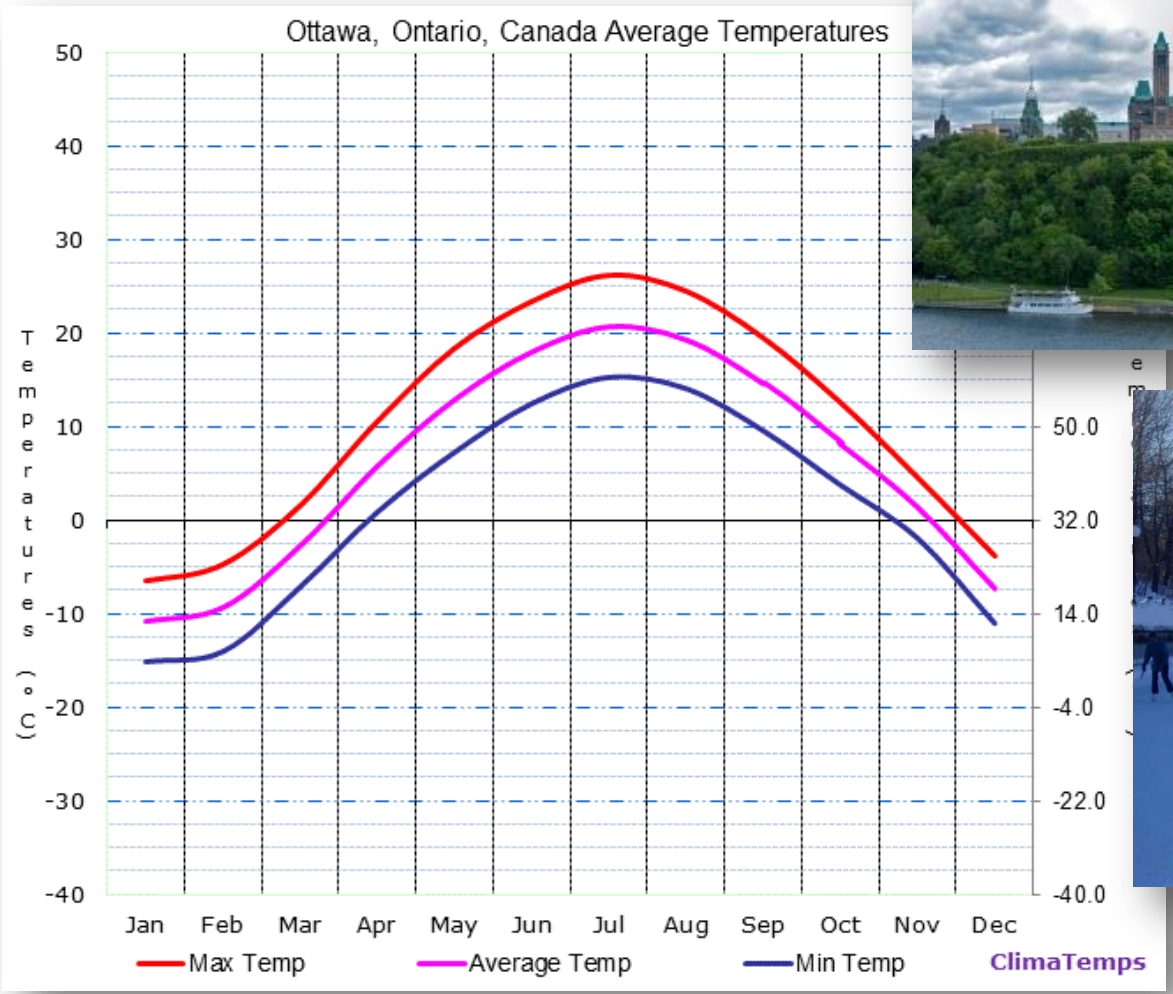
Final Workshop

Detroit

Hermosillo


City of Ottawa
West-Carleton (5)
Cumberland (19)
Osgoode (20)
Rideau-Goulbourn (21)
N
Ottawa
Legend / Légende
Recommended Ward Boundary / Limite de quartier recommandée
Greenbelt / Ceinture de verdure
Urban Growth Boundary / Limites de la zone d'expansion urbaine
Urban Growth Area / Secteur de la zone d'expansion urbaine

Ottawa Climate



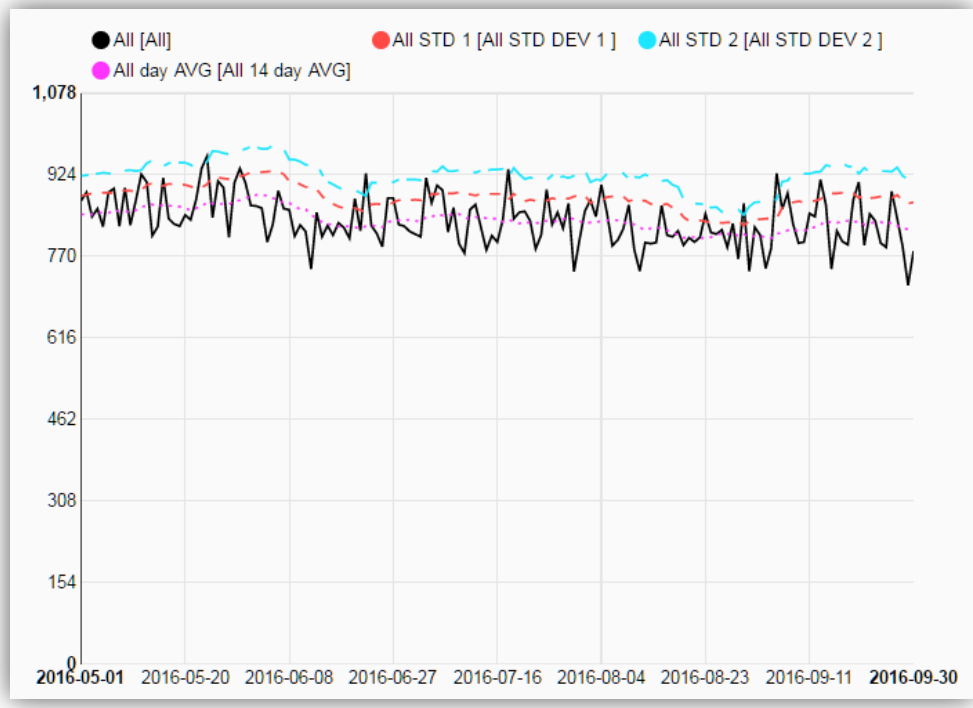
Overview of 9 Tasks in the Ottawa Pilot

1. Identify data sources and prepare data share agreements.
2. Collect historical health, climate, geospatial and census data to build the database.
3. Statistical analysis of historic data and mapping vulnerabilities.
4. Training sessions for health care providers.
5. Develop a protocol to collect and communicate real-time health and climate data.
6. Implement and test the pilot SyS.
7. Evaluate and validate the pilot SyS.
8. Analysis of data collected.

Tasks 1 and 2: Identify Data Sources and Gather Historical Data

Health Data Sources:

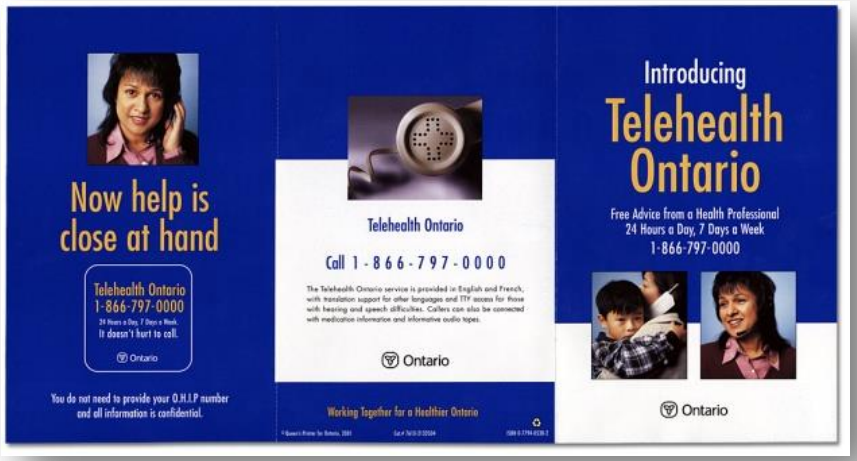
Acute Care Triage Data



- information from 5 hospitals in existing Acute Care Enhanced Surveillance (ACES)
- use existing syndrome definition for heat-related illnesses called **ENVIRO**

Health Data Sources:

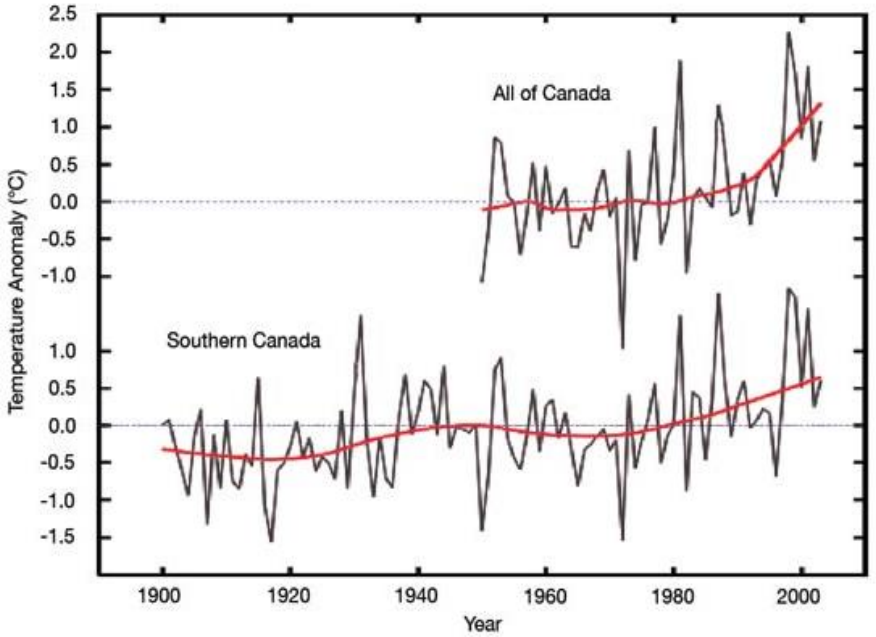
Telehealth Ontario



- free, 24-hour confidential telephone services for health advice/information from registered nurses
- this is a **new** data source, sharing current extreme temperature syndrome; details to follow
- no data share agreement was needed as a pilot project for the 2015 Pan Am/Parapan Am Games in Toronto

Climate Data Sources:

Meteorological Data



- Environment and Climate Change Canada
- historical, real-time (hourly for some weather stations), forecasted weather
- variables are temperature, precipitation volume, cloud cover, humidity, wind (direction, speed)
- derive Heat Stress Indicators (i.e., humidex)

Climate Data Sources:

Air Quality Health Index

- derived index calculated from concentrations of ground level ozone (O_3), fine particulate matter ($PM_{2.5}$), and nitrogen dioxide (NO_2)
- ECCC; weather stations and surface mapping

Climate Data Sources:

Weather Warnings

- ECCC; forecast from models, 72 hours in advance

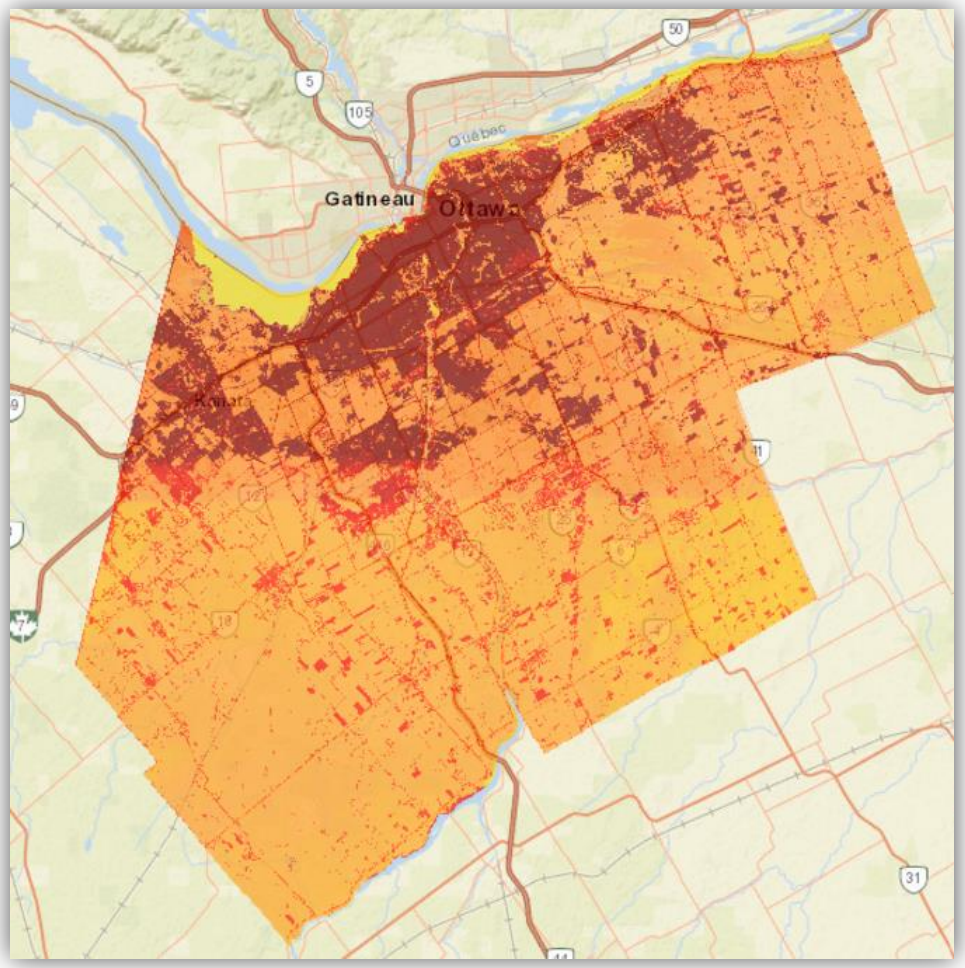
Heat Warnings from OPH

- Ottawa Public Health releases heat based on ECCC warnings specific to region and conditions

Climate Data Sources:

Satellite Imagery

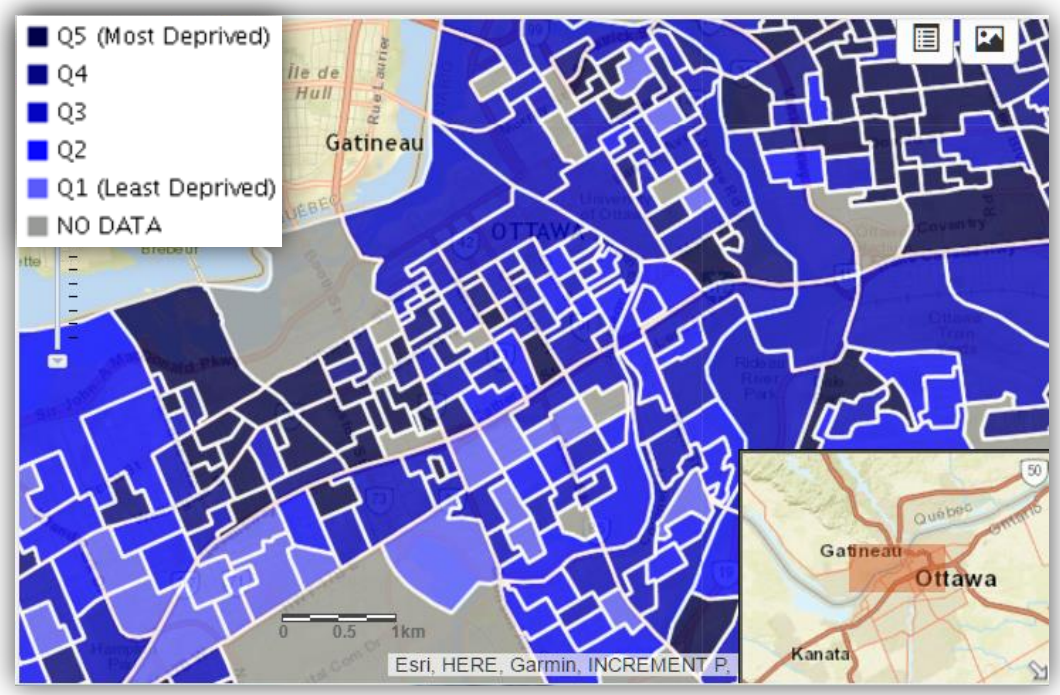
- open-source NASA satellite imagery to define areas of heat stress (e.g., urban heat island effect)

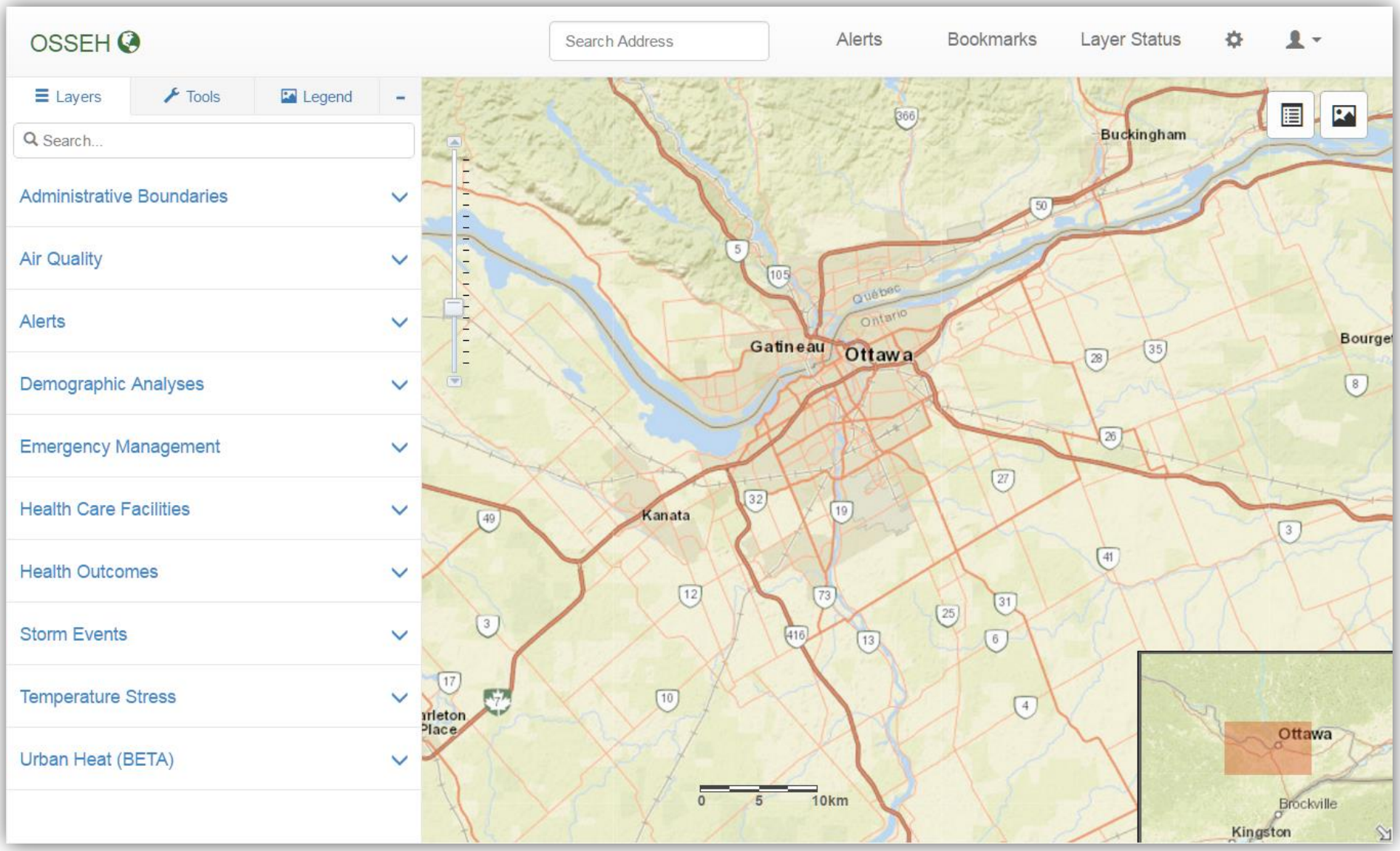


Demographic Data Sources:

Vulnerability Indices

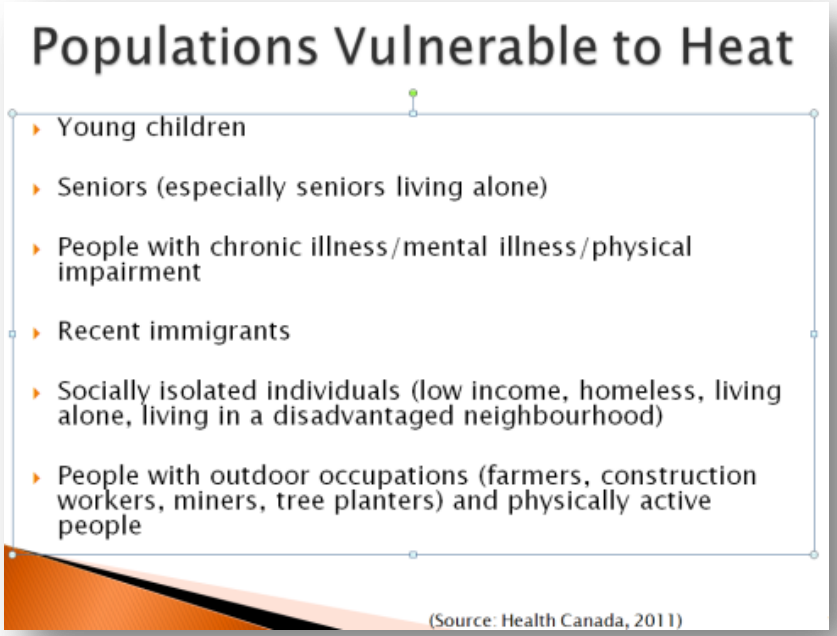
- source = Statistics Canada
- use census-derived variables to define each postal code area on relative social and material vulnerability scale
- data from 2006 census (updated as 2016 census data becomes available)




OSSEH
Search Address
Alerts
Bookmarks
Layer Status
Layers
Tools
Legend
Search...
Administrative Boundaries
Air Quality
Alerts
Demographic Analyses
Emergency Management
Health Care Facilities
Health Outcomes
Storm Events
Temperature Stress
Urban Heat (BETA)
Buckingham
Québec
Ontario
Gatineau
Ottawa
Kanata
0
5
10km
Ottawa
Brockville
Kingston

Task 4: Education Sessions for Health Care Providers

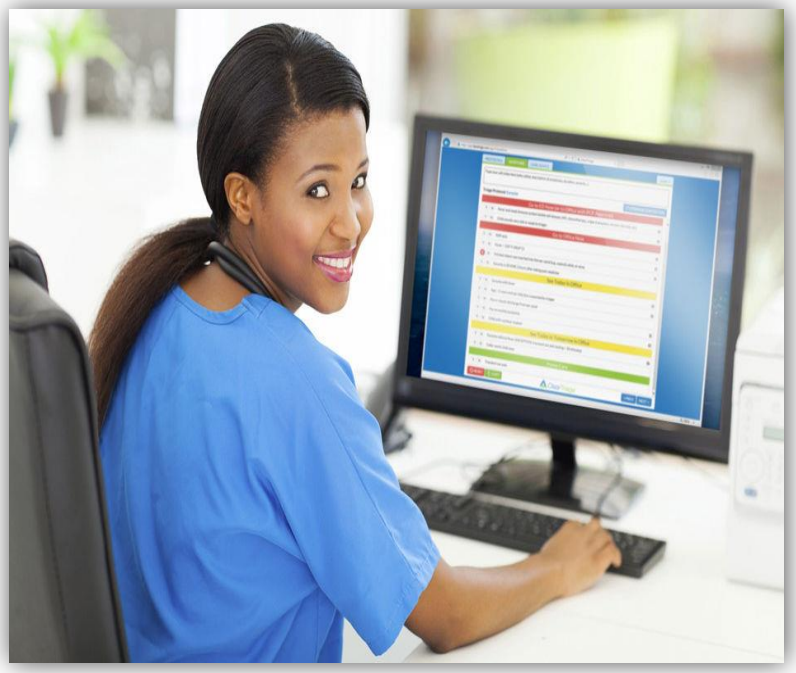
- **Who:** Telehealth Ontario nurses, 211 intake staff, Paramedic EMS staff, and Triage staff in Ottawa hospitals



- **Purpose**: Raise awareness about the increasing risk of heat illnesses in light of climate change, and our need to plan with good health signals so we can advocating for effective mitigation strategies.

Training Sessions

- **What:**
  - training webinar
  - available as a recorded training webinar
  - emphasize the need to consider environmental factors when documenting patient symptoms



  - improve reporting, data quality to encourage recorders to use words that can link health issues to the extreme heat event

Questions?