Environmental health surveillance in Canada now

Current situation at the federal level

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Outline

• Health and environment tracking
• Health surveillance systems
• Environmental monitoring
• Concluding remarks
Health and Environment tracking at the federal level

- **Canadian Health Measures Survey**
  - Nationally representative information on diseases, health conditions and environmental exposures (chemical, physical and biological agents)

- **Canadian Community Health Survey**
  - Self reporting of diseases, health conditions and life style characteristics (Annual)
  - Built environment characteristics information measured in 2011 and ongoing discussions to incorporate these measures in upcoming surveys
  - Provide reliable estimates at the national, provincial and health region level

- **C-EnterNet**
  - Administered by the Public Health Agency of Canada
  - Investigation of food-borne and waterborne enteric diseases and exposure through sentinel sites
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Health surveillance systems at the federal level

- Collected by provinces and territories and collated centrally by the Canadian Institute of Health Information (CIHI) or Statistics Canada
  - Canadian Mortality Database
  - Hospital Morbidity Database
  - National Ambulatory Care Reporting System (ER visits)
  - National Birth Registry
  - Canadian Cancer Registry
  - Hospital Mental Health Database
- Health surveillance data that can be used at:
  - Different geographical scales (e.g. national, provincial, health region, etc.)
  - Across time (trends)
  - Specific descriptive measures (prevalence, incidence rates adjusted for age and sex)
Health surveillance systems at the federal level

- Surveillance systems at the Public Health Agency of Canada (PHAC)
  - Enteric, food and waterborne diseases
  - Vector borne and zoonotic diseases
  - Diseases transmitted by respiratory routes
  - Antimicrobial resistant pathogens
  - Prion diseases
  - Paediatric chronic diseases / health conditions
    - Autism surveillance system commencing in 2012-2013
  - Adult chronic diseases / health conditions
    - Ex: Canadian Cancer Surveillance (PHAC)
      - Specific information by type and ongoing discussion to include stage at diagnosis
      - Cancer incidence data (age-standardized)
      - Provide geographical variation (Provincial, health region)
      - Time trends
Environmental monitoring

• A variety of data collected by Environment Canada (Examples)
  » Air quality data (Fixed sites and satellite data)
  » Climate data
  » National Pollutant Release Inventory (NPRI)
  » Water Quality Monitoring Networks
  » Canadian Radiological Monitoring Network
  » Northern Contaminants Program

• Surveys at Statistics Canada
  » Census of population (some surrogate measures of built environments)
  » Household and Environment Survey (Representation of Census Metropolitan Areas)

• Survey at Health Canada
  » Total Diet Study
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Concluding remarks

• Many health surveillance systems and environmental monitoring systems currently exist in Canada

• Gaps and challenges
  » Mostly separated systems developed by different organizations
  » Lack of data integration and linkages (i.e. linking health and environmental data)
  » Lack of common standards on how data are collected (i.e. frequency of data collection, characteristics collected and data formats)
Thank you for your attention

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