Delivering insight through data for a better Canada

Expert Forum for Producers and Users of Disaster-related Statistics

Session 2
MANAGING HEALTH AND CLIMATE-CHANGE-RELATED HAZARDS WITH OFFICIAL STATISTICS
National Example – Canada
Yvan Clermont

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Key Principles for responding to COVID-19
Information Need

1. Be relevant and timely – speed trumps perfection

2. Use innovative methods such as AI, ML, Nowcasting, Modelling, Projections, Crowdsourcing, Panel WEB survey

3. Use Lean management and light governance – decision taken rapidly

4. Use external partnership and rethink model of collaboration

5. Act within the legislative framework and be mindful of Proportionality and Ethics
### Responding to Information Needs – Summary

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  • Several geocoded indicator based on Census, Population estimates, Health surveys |
  • Indicators and information from outside sources |
| Canadian Statistical Geospatial Explorer | **Mapping Tools Development for front-line agencies** |
| Crowdsourcing | **Localized Pressure Indicator** |
  • Sentiments of Canadians |
| Web Panel Survey | **Vaccine Forecasting Dashboard** |
| **Web Panel Survey** | **Rapid Test analysis** |

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**Canadian Statistical Geospatial Explorer**

**Crowdsourcing**

- Sentiments of Canadians

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**Web Panel Survey**

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**Modelling and Surveillance Support and Consulting**

- Epidemiological modelling support to Health Agencies
- Providing input on modelling, AI and ML
- Advice on how to model scenarios

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**Tracing Covid-19 Cases Contacts**
Contributing to front line efforts to tackle COVID-19

A few weeks into the pandemic, Statistics Canada established a repository to help manage the nation’s Personal Protective Equipment inventories (PPE).

Our expertise in epidemiological modelling and demand forecasting quickly helped decision makers make informed choices regarding the needs and distribution for gloves, gowns, respirators and masks to ensure that all Canadians in all situations have access to enough PPE.

- We are collecting data on government and non-government PPE use and needs through a survey and administrative data sources to inform decision-making on PPE procurement. (Businesses’ Demand for Personal Protective Equipment During COVID-19)
- Our contribution to the project has provided real time data and modelling to government decision makers to inform purchasing and manage ongoing supply of this important equipment. (Gearing up to restart: Businesses’ need for personal protective equipment)

Statistics Canada is working with Canada’s COVID-19 Immunity Task Force (CITF) to conduct a new study to identify how many Canadians have been previously infected with SARS-CoV-2, the virus that causes COVID-19.

Statistics Canada is offering its interviewing expertise as an additional capacity to provinces and territories to do contact tracing. As of March 7th, 2021, we marked a milestone with our incredible interviewers having made an equivalent of 899,395 15-minute calls.
A very important question...

How much personal protective equipment (PPE) do we need and will we have enough?
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Welcome | Bienvenue

Canadian PPE and Medical Supplies Monitoring
Surveillance de l’EPI et des fournitures médicales au Canada

The Government of Canada has developed a suite of data and information tools to support Canada’s coordinated response to the COVID-19 pandemic. These tools enable informed decision-making to promote public health for all Canadians.

Le gouvernement du Canada a mis au point une série d’outils de données et d’information pour appuyer la réponse coordonnée du Canada à la pandémie de COVID-19. Ces outils permettent une prise de décision éclairée pour promouvoir la santé publique pour tous les Canadiens.

Procurement and Deployment Tracking
Suivi des achats et du déploiement
(The National PPE and Medical Supplies Dashboard / Le tableau de bord national de l’EPI et des fournitures médicales)

More Information / Plus d’information

Demand and Supply Projections
Projections de la demande et de l’offre
(The Pan-Canadian Demand and Supply Model for PPE and Medical Supplies / Le modèle pan-canadien de demande et d’offre d’EPI et de fournitures médicales)

More Information / Plus d’information

English
Français

Request a demo / Demander une démo

Health Canada
Santé Canada
Statistics Canada
Statistique Canada

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The Pan-Canadian Demand and Supply Model


- **Epidemiological Modelling**
  - Epidemiological model used to project different disease progression scenarios for the next 12+ months by province/territory

- **Demand Projections Across Sectors**
  - Unconstrained demand for PPE is projected based on epidemiological scenarios, PPE usage protocols, across 60+ sectors of the economy in each province and territory, continuously refined against actual usage

- **Inventory Projections & Supply Balancing**
  - Near real time on-hand and inbound supply data is gathered and netted against the demand projections to identify supply shortages and generate time-phased purchase requirements over the next 12+ months across 60+ sectors in each province and territory

**Sector examples:**
- Hospitals
- Residential Care
- Police Services
- Fire Services
- Grocery Stores
- Public Administration
- Retail
- Hospitality
- Educational sector
- Postal services
COVID-19 Vaccine Forecasting Dashboard: National Demand Forecasting

Description: This view shows various supply scenarios (adjusted for 5% wastage) as they approach key milestones in the national vaccine rollout.

Low Adjusted Supply Scenario for National (Cumulative)

Supply Scenario Assumption: This supply scenario projects the lowest approved supply until the end of September 2021. This supply uses data available as of the latest refresh.
COVID-19 Communications Mapping Tool
Integrating data to support evidence based decision making

Where are the COVID19 hotspots?
COVID-19 case data (PHAC)
(New cases per 100,000 at Health Region level)

What are the characteristics of the populations in these hotspots?
Providing Stewardship Services Beyond our Regular Mandate – Why?

1. Relevance & because we could make a difference (Civic Duty to help)
2. We hold the expertise in data integration, modelling, analysis and data stewardship
3. We hold appropriate statistical and IT infrastructure
4. We can leverage the right network of partners
5. Have the legislative framework and are mindful of Proportionality and Ethics
Providing Stewardship Services Beyond our Regular Mandate – Any risk going forward?

1. When will be the right timing to retire, should we retire from these new activities, what are the next steps?

2. Is our involvement as a NSO in supporting surveillance work, producing near-time information for tactical purpose and providing a lesser level of precision (quality) projections a threat to the Trust of the public in NSOs?

3. Are we as an NSO, well resourced to continue this role without impacting our regular programs? Where should we draw the line?

4. What are the expectations of our partners and of the public? What is the emerging partnership model?

5. Are Mandate changes and legislative changes required to continue playing this role?
Discussion

Thank You!
ANNEX
COVID19 CONTACT TRACING

• Since July 2020, STC has provided Contact Tracing Surge capacity services to assist Provincial and Territorial Public Health Units in containing and responding to the COVID-19 pandemic.

• The types of calls vary, depending on the needs of the jurisdiction: case investigation, case monitoring, contact notification, contact follow-up, travel monitoring, new exposure notification, end of isolation and contact identification.

• To date, STC has conducted over 1,500,000 calls of 15 minutes.