The creation of a web tool for visualizing nutrition surveillance data

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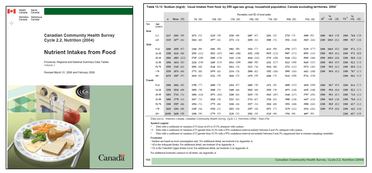
Background

- Nutrition surveillance data are collected through various survey programs. These data are critical for Health Canada activities and are used by broad external audiences.
- Data have generally been presented in large, cumbersome tables.

  Example: Usual nutrient intakes from food for the 2004 Canadian Community Health Survey – Nutrition (CCHS – Nutrition) were published in three volumes containing >500 data tables. Limited number of print copies and CDs were available upon request.



Snapshots from the of Compendium of Usual Nutrient Intakes from Food for the 2004 Canadian Community Health Survey – Nutrition.

Objectives

Overall objective: To develop an innovative, user-friendly and interactive approach to visualize nutrition surveillance data in an accessible way.

Specific objective: To develop visualizations of usual intakes from food from the 2015 CCHS – Nutrition.

Description

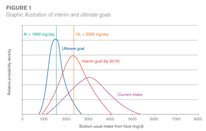
Three key questions guided this project:

What stories do the data tell?

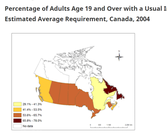
- What do the distributions of nutrient intakes look like for Canadians? Where do intakes fall relative to Dietary Reference Intakes (DRIs)?
- What percentage of Canadians consume inadequate or excess amount of nutrients of public health concern? Does this differ across the provinces?

How have these stories been told previously?

- We reviewed government websites and reports for examples to guide us as we developed our visualizations. Two key examples included:



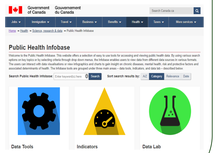
Health Canada, Sodium Reduction Strategy for Canada, July 2010



Health Canada, Canada's Nutrition and Health Atlas

How can we make this happen?

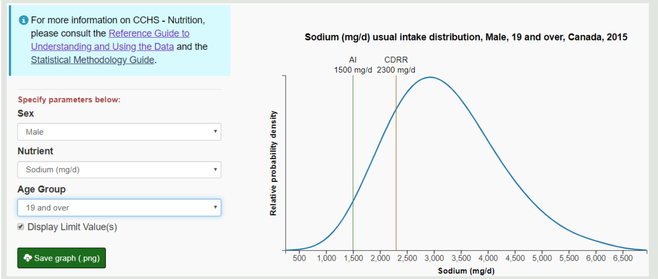
- The capacity to develop interactive data tools existed within the BFSSI; however, BFSSI lacked IT infrastructure to host the visualizations.
- The PHAC Public Health Infobase was identified as the ideal location for hosting.
- In collaboration with the Centre for Surveillance and Applied Research at PHAC, a Nutrition Surveillance Data Tool will be created on the Health Infobase. The tool will include the visualizations generated at the BFSSI using the JavaScript framework D3.js.



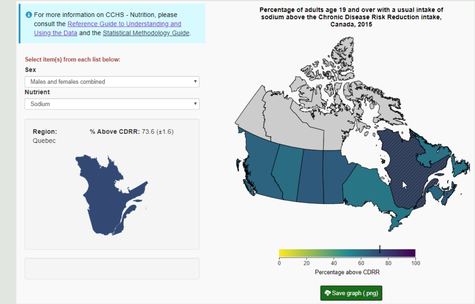
Output

Two visualizations were developed to tell the main "stories" in the data. Summary data tables and notes to support interpretation are included below each of the visualizations. A description and screenshots are provided below:

1) Usual intake distribution curves: Enables users to display population distribution curves for nutrients with a DRI and/or included in the Nutrition Facts Table. Users can select which DRI age-sex group to display and whether or not to display the DRIs. Data are presented for Canada, excluding the territories.



2) Geographical comparison: Enables users to see whether the percentage of Canadians consuming inadequate or excessive amounts of nutrients of public health concern differs across the provinces. Data are presented for Canadians 19 year and older.



hotjar The Hotjar software suite is incorporated into the PHAC Health Infobase. These tools will collect quantitative and qualitative information on how users are interacting with the data tool.

Impact & Next Steps

- The web visualizations enable users within and outside the government to access the CCHS – Nutrition usual intake data in an interactive and easily-interpretable manner. This type of data visualization is recognized as an important tool to gain new insights in the Data Strategy Roadmap for the Federal Public Service.
- The Nutrition Surveillance Data Tool will be available on the PHAC Health Infobase in early 2020.

❖ For additional information or to provide comments on the Nutrition Surveillance Data Tool, contact us at: **HC.Nutrition.Surveillance-Nutritionelle.SC@canada.ca**

❖ For additional information on the PHAC Health Infobase, contact us at: **PHAC.infobase.aspc@canada.ca**

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