canHealthWaitR:

Exploring Healthcare Wait Times in Canada Using Web-Based Open Data

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Our motivation and background

Healthcare wait times are a persistent and widely discussed issue in Canada, frequently raised in online communities and public discourse.

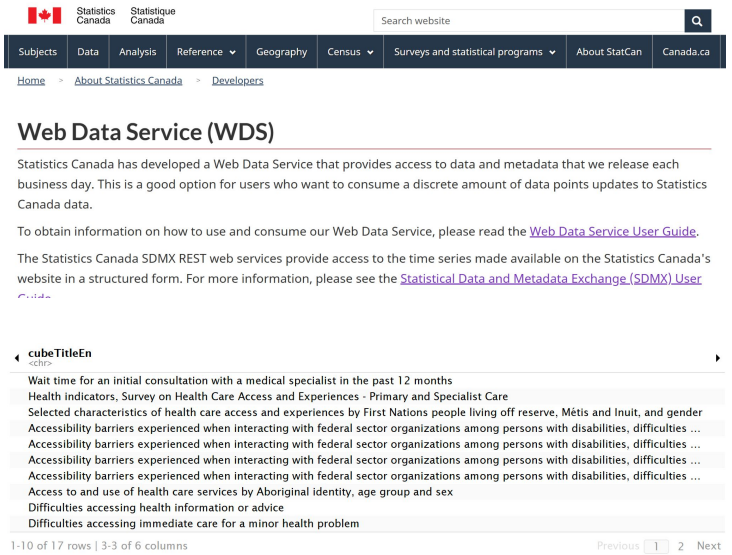
Common concerns include long emergency room waits, difficulty accessing primary care, and extended delays for specialist referrals.

Despite the prominence of this issue, healthcare wait time data is often fragmented across multiple public sources, making systematic analysis difficult for non-experts.

What API are we going to use?

Statistics Canada Web Data Service (WDS)

- focus on medical wait time / access-to-care indicators in Canada, with a vignette highlighting British Columbia.



- It is an official public RESTful API provided by Statistics Canada
- No login, no API key
- Stable and well-documented government source
- Data is already structured into consistent statistical tables (cubes)
- Supports reproducible workflows: query → tidy data → plot

Expected Functions:

A) API discovery layer (find the right tables)

- mw_list_tables()
  - → list packaged “known” wait-time/access tables (curated shortlist)
- mw_search_tables(query = "wait")
  - → search WDS cube list by keyword (returns productId + title)
- mw_table_metadata(product_id)
  - → get cube metadata (dimensions, members, vectors availability)

Expected Functions:
B) Data retrieval layer (turn tables into data)

- mw_get_data(product_id, geography = NULL, indicator = NULL, start_year = NULL, end_year = NULL)
  - → returns a tidy tibble (minimum wrangling included)
- mw_get_series(vector_id, start_year = NULL, end_year = NULL) (Optional)
  - → retrieve a specific series (vector) over time

Expected Functions:
C) Cleaning / standardization (make outputs consistent)

- mw_standardize(df)
  - → standardized column names (province, year, value, indicator, …)
- mw_filter(df, province = NULL, indicator = NULL, start_year = NULL, end_year = NULL)
  - → convenience filter

Expected Functions:
D) Plotting (REQUIRED for vignette: zero → graph)

- mw_plot_trend(df, province, indicator)
  - → line plot of trends over time
- mw_plot_compare(df, year, indicator)
  - → bar chart comparing provinces (or categories)

Thank you.