Public Health Ontario | Santé publique Ontario

Small Area Analysis project

APHEO GIS Working Group
January 18, 2018

Background

- Prior attempts to define SAA guidelines and analyses
  - APHEO working group
  - Within PHUs
- Interest in field for SAA
  - Submission of two Locally Driven Collaborative Projects (LDCP) during the 2016 funding cycle
- Proposed that PHO take the lead on exploring SAA

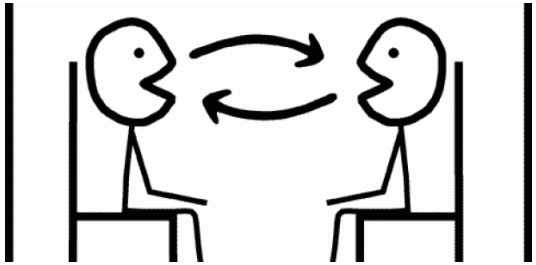
Approach

Environmental Scan

SAA Resource

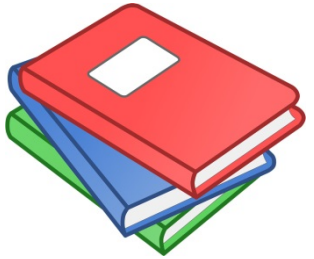
Environmental scan

Organization Interviews



Online PHU Survey

Brief Literature Scan

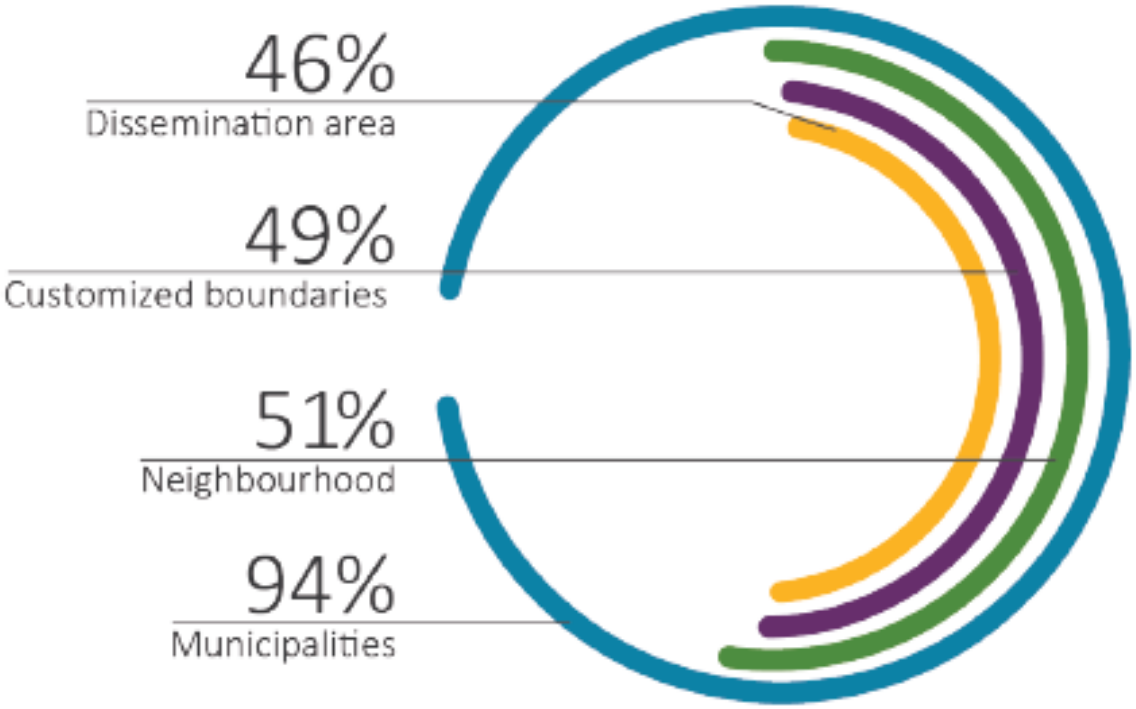


SAA??

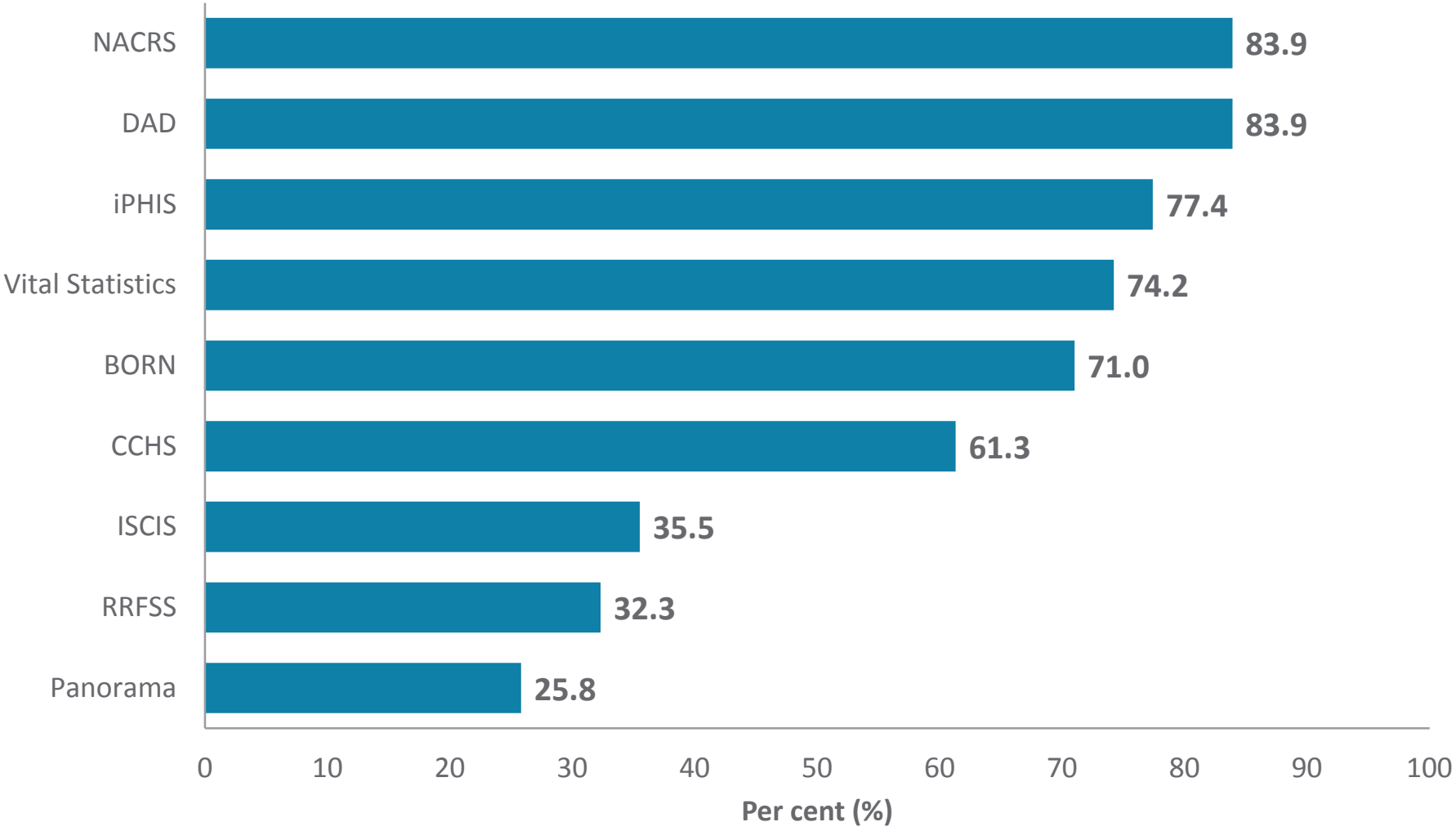
PHU survey results

- 100% response rate (36/36 PHUs)
- Most PHUs (86.1%) present/analyze data for small areas, and almost all PHUs (91.7%) routinely or occasionally look at information below the health unit level

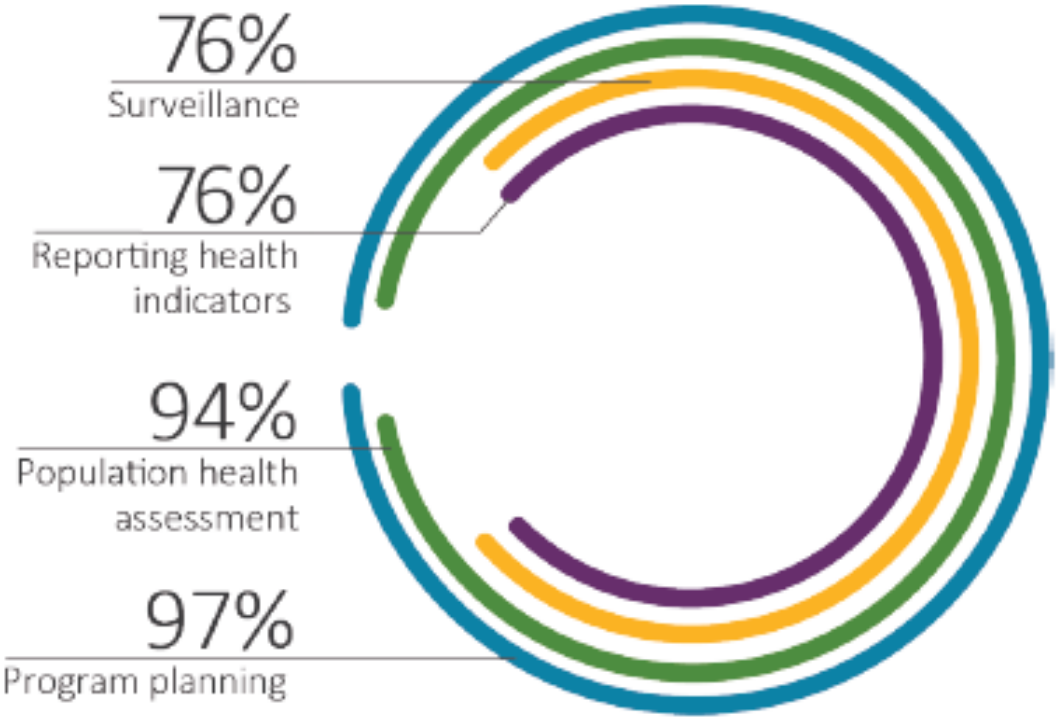
Geographies used to report information



Data sources used for SAA



Reason for using small area information



Challenges

- Lack of available data
- Geographies/boundaries
- Privacy concerns with small numbers and when to suppress data
- Lack of training/expertise or resources to complete SAA

Organizations interviewed

University of Manitoba

CCO Cancer Care Ontario

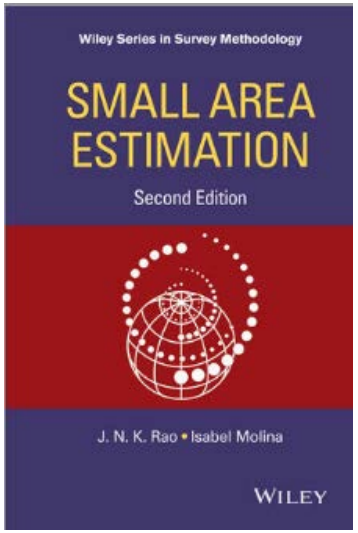
Statistics Canada / Statistique Canada

Alberta Health

Ontario
MINISTRY OF HEALTH AND LONG-TERM CARE

Interview results

- SAA methods used can range from simple to complex
- A variety of methods are being used to create small are estimates within each organization
- The approach will vary depending on the question
- Small Area Estimation*



*Rao JNK, Molina I. Small area estimation. 2nd ed. 2015

Literature scan

- Methods range in complexity from simpler techniques such as pooling or aggregating datasets to increase sample size to complex model building
- SAA methods
  - Pooling data
  - Synthetic estimation
  - Small area models (small area estimates)

Resource Document

- Considerations for SAA
- Defining Geographic Areas
- Types of Small Area Methods
- Decision Aid Framework
- Case Studies

Timelines and next steps