

---

# Evaluation of the Rapid Risk Factor Surveillance System (RRFSS) Provincial Sample Pilot Project

---

## Executive Summary

November 2012





## Author

This evaluation report was prepared by Susan J. Snelling, PhD, Social Research Consulting.

## Acknowledgements

The evaluation was directed and supported by the RRFSS Provincial Sample Pilot Project (PSPP) Evaluation Project Team:

- Karen Moynagh (Halton Region Health Department), RRFSS PSPP Evaluation Sub-group Chair
- Renee Elsbett-Koeppen (Institute for Social Research, York University)
- Bryn Greer-Wootten (Institute for Social Research, York University)
- Anne Marie Holt (Haliburton, Kawartha, Pine Ridge District Health Unit)
- Michael King (Sudbury & District Health Unit)
- David Northrup (Institute for Social Research, York University)
- Janet Phillips (Durham Region Health Department)
- Lynne Russell (Rapid Risk Factor Surveillance System (RRFSS) Coordinator)

Special appreciation goes to:

Janet Phillips and the Durham Region Health Department, the Locally Driven Collaborative Projects (LDCP) Lead Applicant and Lead Health Unit;

Jennifer Skinner (Haliburton, Kawartha, Pine Ridge District Health Unit) and Christian Keresztes (Durham Region Health Department, Temporary Research Associate), who contributed to developing the funding proposal, including contributing to the evaluation design;

Janet Phillips (Durham Region Health Department), Bryn Greer-Wootten (Institute for Social Research), Sheng Jiang (Durham Region Health Department, Temporary Program Assistant), and Mirka Ondrack (Institute for Social Research, York University), who conducted the comparative assessment of the provincial estimates and developed the related sections of this report;

Karen Moynagh (Halton Region Health Department) and Naeema Tharani (Halton Region Health Department, MPH student placement), who analyzed the local and provincial data and produced the health indicator reports; and

Laurie Gagnon, Sudbury & District Health Unit, who formatted this report.

Thanks are due to the health unit participants who completed the online survey. Thanks are also due to the key informants from the following organizations and agencies who were interviewed for this evaluation:

- Brant County Health Unit
- Grey Bruce Health Unit
- Haldimand-Norfolk Health Unit
- Haliburton, Kawartha, Pine Ridge District Health Unit
- Huron County Health Unit

- Kingston, Frontenac and Lennox & Addington Public Health
- North Bay Parry Sound District Health Unit
- Thunder Bay District Health Unit
- Windsor-Essex County Health Unit
- RRFSS Steering Group
- Institute for Social Research, York University
- Association of Public Health Epidemiologists in Ontario
- Cancer Care Ontario
- Ontario Ministry of Health and Long-Term Care
- Ontario Tobacco Research Unit
- Public Health Agency of Canada
- Public Health Ontario
- University of Toronto, Dalla Lana School of Public Health

The evaluation of the RRFSS Provincial Sample Pilot Project was supported by Locally Driven Collaborative Projects (LDCP) funding through Public Health Ontario. The opinions expressed in this evaluation are in no way intended to reflect the views of Public Health Ontario.

### Recommended Citation

Snelling, S.J. (2012). *Evaluation of the Rapid Risk Factor Surveillance System Provincial Sample Pilot Project*. Ontario: Rapid Risk Factor Surveillance System (RRFSS).

## Key Messages

---

- In 2011, The Rapid Risk Factor Surveillance System (RRFSS) implemented a pilot project to collect a provincial sample that included data from all 36 health unit areas in Ontario. An evaluation of the Provincial Sample Pilot Project (PSPP) was undertaken, supported by Locally Driven Collaborative Project funding through Public Health Ontario. The objectives of the evaluation were to describe the costs of the RRFSS provincial sample, to determine if the RRFSS provincial sample provides comparable provincial estimates to other sources of provincial data, to evaluate the implementation and impact of the pilot, and to determine the potential for implementing the provincial sample as an ongoing part of RRFSS.
- The cost of the pilot was \$46,950, which includes the cost of collecting the data and the set-up of the survey by ISR, but not the cost of administering the project by RRFSS, analyzing the data, or any other costs.
- The provincial sample pilot project was implemented smoothly and successfully collected a provincial sample focusing on several behaviour and risk indicators. Challenges involved the fit of the pilot in the broader provincial surveillance context and communication around the intention of the pilot.
- Funding is the key challenge for implementing a provincial sample as part of RRFSS, both to cover the costs of collecting the provincial sample, and also for resourcing to support the administration of a provincial sample and to support a central analysis function. The value of an ongoing provincial sample was acknowledged by the vast majority of those consulted, particularly if the sample would be used to generate estimates for which there is no other source. Many non-RRFSS-participating health units agreed that a provincial sample would enhance the value of RRFSS, perhaps influencing their decisions about becoming RRFSS-participating health units.
- The results of a comparative assessment between PSPP and CCHS showed that for the colorectal screening and self-perceived general health indicators, the estimates from the two surveys were not significantly different. For the Body Mass Index, fruit and vegetable consumption and tobacco use indicators, the estimates from the PSPP were significantly different from the CCHS estimates. The statistically significant differences between the PSPP and CCHS estimates do not necessarily have substantial impact on the utility of the PSPP estimates for program planning and evaluation. The differences do point to the need for a provincial RRFSS comparator for RRFSS local data.

- The broader context of surveillance in Ontario, both currently and in future, should be brought to bear on decisions about future steps toward provincial surveillance.
- Recommendations were made with respect to fully developing the options for funding a provincial sample as part of RRFSS, including the costs of analysis and administration; preparing a strategy and communication plan to link the potential provincial sample to other initiatives; considering other sampling strategies, such as collecting data for the non-RRFSS-participating health unit areas to put together with existing data from participating health units; and exploring changes and improvements to the RRFSS methodology.

# Executive Summary

---

The Rapid Risk Factor Surveillance System (RRFSS) is an ongoing telephone survey that has been used by many Ontario public health units to gather surveillance data on key public health indicators, to monitor public opinion on public health issues and to collect information on emerging issues of importance to public health. RRFSS-participating health units and other groups have consistently identified the lack of a provincially-representative RRFSS sample as a key limitation of RRFSS. Accordingly, in 2011, RRFSS implemented a pilot project to collect a provincial sample that included data from all 36 health unit areas in Ontario, using surplus funds from the RRFSS partnership, and with a small one-time contribution from each of 19 RRFSS-participating health units. Data were collected by the Institute for Social Research (ISR, York University), the organization that collects RRFSS local data, using the same telephone-based interview method employed for RRFSS.

In order to take the opportunity to learn from the pilot experience, and to guide further decision-making related to a provincial sample as part of RRFSS, an evaluation of the Provincial Sample Pilot Project (PSPP) was undertaken, supported by Locally-Driven Collaborative Project funding through Public Health Ontario. The evaluation proposal was reviewed by the Durham Region Health Department in accordance with their Research and Ethics Review process. Ethical approval was obtained in June 2012.

The objectives of the evaluation were to describe the costs of the RRFSS provincial sample, to identify what enabled or challenged the implementation of the PSPP, to describe and measure the impact of the provincial sample pilot project, to determine if the RRFSS provincial sample provides comparable provincial estimates through comparisons with other sources of provincial data, and to determine the potential for, and interest in, implementing the provincial sample as an ongoing part of RRFSS.

## Components of the Evaluation

The evaluation used a mixed method design with four types of data: financial cost data for the provincial sample; an online survey of all public health units in Ontario; in-depth qualitative key informant interviews with stakeholders; and a comparative assessment of the 2011 RRFSS provincial estimates with 2011 Census values, estimates from the Canadian Community Health Survey (CCHS) and pseudo-provincial estimates generated from the 2010 and 2011 RRFSS local data.

## Cost of the Provincial Sample Pilot Project

The cost of the pilot was \$46,950, which includes the cost of collecting the data and the set-up of the survey by ISR, but not the cost of administering the project by RRFSS, analyzing the data, or any other costs. The pilot costs were paid partly from surplus funds with the remainder coming from health unit contributions and an in-kind contribution from ISR. The cost of collecting a pilot in future is estimated to be similar, although the surplus funds are exhausted and, thus, the full cost of the provincial sample would have to be found from other sources. Funding or in-kind contributions to analyze the data centrally would also need to be considered as part of the cost.

## Process and Impact of the Provincial Sample Pilot Project

An online census survey of all 36 health units in Ontario was conducted using FluidSurveys. Thirty-two responses were received, a response rate of 89%. Twenty-five key informants were interviewed for the evaluation.

The provincial sample pilot project was implemented smoothly and successfully collected a provincial sample focusing on several behaviour and risk indicators. Enablers included the long history of RRFSS working together as a partnership, the dedication of the RRFSS Steering Group, and the pre-existing relationship RRFSS has with ISR. Challenges involved the fit of the pilot in the broader provincial surveillance context and communication around the intention of the pilot.

Having a provincial comparator and estimates related to emerging issues were valuable components of the pilot and will be well used. These estimates have greatest value for RRFSS-participating health units, who are able to make direct comparisons to their local data when it is available. In addition, the pilot acts as a 'proof of concept', showing that a provincial sample as part of RRFSS can be collected without inordinate cost and as a part of the established RRFSS system.

## Support for an Ongoing Provincial Sample

The value of an ongoing provincial sample is acknowledged by the vast majority of those consulted, particularly if the sample would be used to generate estimates for which there is no other source (e.g., emerging issues). Many non-RRFSS-participating health units agreed that a provincial sample would enhance the value of RRFSS, perhaps even to the point of converting some of them into RRFSS-participating health units. The majority of respondents consider that a provincial sample would add value to RRFSS. With this level of support, it seems clear that some further steps should be taken to explore options for implementing a provincial sample as part of RRFSS. Funding is the key challenge, both to cover the costs of collecting the provincial sample, and also for resourcing to support the administration of a provincial sample and to support a central analysis function.

Provincial and research partners in interviews expressed some interest in the potential of a provincial sample as part of RRFSS and the option of contributing questions to the survey on topics of relevance for them. However, this is, at present, a very soft potential source of revenue, since many technicalities would have to be worked out before non-health unit partners could be included as contributors to the RRFSS survey. Several informants commented that this was not a good time economically for their agencies to be looking for 'new money' for any initiatives.

An alternate approach to derive a provincial sample data collection was suggested by several surveillance experts: combining existing RRFSS data with a separate process to collect data from non-participating health unit areas to 'fill the gaps' left by incomplete coverage of the province. However, this approach would mean that non-RRFSS-participating health units would have data for their areas at no cost, whereas participating health units would be paying for their data. Such an obviously inequitable system would be unlikely to succeed, as it creates a strong disincentive for RRFSS-participating health units to continue to participate.

Although it is a challenge associated with RRFSS overall and not only the provincial sample, there are limitations associated with using a telephone, landline survey methodology. Advances in survey approaches are emerging, and although new approaches may not be needed for the existing function of RRFSS, the future direction and possible expansion of RRFSS requires that methodological considerations be raised.

## Comparative Assessment of Provincial Estimates

A comparative assessment was carried out to determine if the RRFSS provincial sample provided comparable provincial estimates through comparisons with other sources of provincial data including the 2011 Census values, estimates from the Canadian Community Health Survey (CCHS) and pseudo-provincial estimates generated from the 2010 and 2011 RRFSS local data.

Comparison of the age and sex distribution of the PSPP with the 2011 Census for age 18+ revealed significant differences, with the PSPP under-representing males and the younger adult population and conversely over-representing females and older adults and seniors. The unweighted CCHS estimates were also significantly different from the Census, under-representing the same demographic groups as the PSPP. However, the weighted CCHS estimates were much closer to the Census values. This is not surprising as the CCHS weighting included post-stratification calibration to match Census-derived population projection counts by age and sex. No such adjustment was applied to the PSPP sample.

PSPP and CCHS were compared for age, sex, marital status, education, employment, children living in the household and immigration status. With the exception of education, all variables showed significant differences between the PSPP and CCHS.

PSPP and CCHS were compared for indicators of BMI, colorectal screening, fruit and vegetable (F&V) consumption, self-perceived general health and tobacco use. For the colorectal screening and self-perceived general health indicators, the estimates from the two surveys were not significantly different. For the BMI, F&V consumption and tobacco use indicators, the estimates from the PSPP were significantly different from the CCHS estimates.

Although the pseudo-provincial estimates based on the combined RRFSS local data appear to have similar comparability to the CCHS as the PSPP, the pseudo-provincial sample will change every year depending on RRFSS participation so cannot provide provincial estimates that are comparable over time.

Regression analysis was carried out to explore the relationship between the differences in the estimates obtained using CCHS and PSPP data for fruit and vegetable consumption and tobacco use and the differences in the distribution of socio-demographic factors between respondents in the two surveys. The major effects of important socio-demographic variables were strong and consistent across both source surveys, so inferences made with respect to these effects using either data set would be largely equivalent.

The statistically significant differences between the PSPP and CCHS estimates do not necessarily have substantial impact on the utility of the estimates for program planning and evaluation. Overall, the estimates are in the same order of magnitude and the effects of most socio-demographic variables are consistent across the two surveys. The precision of the point estimates is less crucial than the ability to use the estimates to track changes over time and have a provincial RRFSS comparator for local RRFSS results. However, as identified by some key informants, having different estimates for the same indicators can lead to confusion when reporting the results. Though more research may be required to determine why these differences exist, the differences do themselves point to the need for a provincial RRFSS comparator for RRFSS local data.

## Perceived Opportunities, Challenges, and Next Steps

RRFSS is intended to be, first and foremost, a *local* health unit surveillance system and to provide “pretty good data, pretty quick”. RRFSS has been good enough for this purpose and has proven its value over more than 10 years to health units who participate. Beyond having local estimates, health units would welcome provincial comparators, and they also need to ensure the ongoing sustainability of RRFSS. There is recognition that, in order to sustain RRFSS, and potentially to grow the system in valuable ways, more revenue will be needed. But it must be noted that health units, both participating and not, are also looking for cost reductions that would make RRFSS participation sustainable for them over the longer term.

Many interviewees suggested that provincial estimates would be valuable as accountability agreement indicators in a performance management context. However, a way to fund a system that included provincial estimates and local estimates for *all* health units would need to be found before the relevance of the pilot to accountability agreements would be seen.

It was suggested by several key informants that future development would need to occur in partnership. The broader context of surveillance in Ontario, both currently and in future, should be brought to bear on decisions about future steps toward provincial surveillance. Interviewees suggested that there may be newly developing surveillance initiatives in the province that would be focusing on behaviour and risk factor surveillance, and that RRFSS should be proactive about being involved in these developments so that the potential of RRFSS is considered as these initiatives move forward.

## Recommendations

1. Given that there is perceived value in a provincial sample, and given that the pilot has demonstrated the feasibility of collecting such a sample as part of RRFSS, and given that RRFSS provincial estimates provide the best comparator for RRFSS local data, the RRFSS partnership should more fully develop the options for funding a provincial sample as part of RRFSS, including the costs of analysis and administration.
2. The RRFSS partnership should prepare a strategy and communication plan to link the potential provincial sample to other initiatives going on now or emerging in the province.
3. The RRFSS partnership should consider other sampling strategies, such as collecting data for the non-RRFSS-participating health unit areas to put together with existing data from participating health units, as a way of generating a provincial sample, with particular reference to the cost implications and utility of this approach versus the sampling approach used in the pilot.
4. RRFSS should continue to explore changes and improvements to its methodology. Any improvements would increase the value of RRFSS and thereby potentially contribute to its sustainability.