Feasibility Study

Follow-up Survey of the Respondents to the 2002 Canadian Forces Mental Health Survey

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Acknowledgements

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1. Telephone Administration of the CCHS – Mental Health Questionnaire, Statistics Canada internal report, Health Statistics Division, April 2012.


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1.0 Executive Summary

To date there is no longitudinal Canadian data to describe the impact of mental disorders on a range of outcomes among military personnel. There is a need to develop preventative and early intervention programs to mitigate the negative impact of mental disorder on military personnel. Statistics Canada was mandated by a client to study the feasibility of a survey that would aim at targeting this important gap in the literature by re-interviewing original respondents to the 2002 Canadian Community Health Survey - Mental Health and Well-being - Canadian Forces. This population-based longitudinal study of Canadian Forces (CF) personnel would be used to perform an analytical study that has three main objectives:

1. Examine the incidence, prevalence and course of common mental health problems in the Canadian military personnel.
2. Examine the pre-deployment (adverse childhood experience, previous history of mental health problems, coping styles, family history of mental health problems), deployment-related traumatic events (e.g. combat exposure, length/number of deployments, witnessing atrocities, injuries, work stress), and post-deployment factors (meaningfulness of mission, social support) in relation to mental health problems in the Canadian military personnel.
3. Examine the relationship between mental disorders, self-perceived need for mental health care, mental health service use and self-perceived barriers to mental health care in a Canadian military sample.

The survey content of approximately 75 minutes in length would be based on the 2002 survey but new questions would also be developed, some of which would be in line with other international surveys such as the Military Family Lifestyle survey and from the Netherlands Mental Health Survey and Incidence Study (NEMESIS). A wide range of health related topics are of interest. Once developed, the questionnaire would then undergo qualitative testing to ensure that, as a whole, it works as intended and that it is easy to administer and to process as well as respondent-friendly and interviewer-friendly.

Computer-assisted telephone interview (CATI) or computer-assisted personal interview (CAPI) are the two collection modes considered for this survey. Mental health being a sensible topic, CAPI is the preferred mode, but telephone interviews represent a much cheaper option. The effect of the collection mode (telephone vs. personal interviews) has also been studied and concluded that proportion of mental health disorders differed when comparing phone interviews with person interviews and that these differences were statistically significant for some specific subgroups of the population.

A major constraint is the ability to trace enough respondents from the 2002 survey. Those who have released from the Canadian Forces would be harder to trace. Even though contact information would have been updated using data from various sources, it would be impossible to trace all respondents. After removing the overlap with the Life After Service Survey and using a 68% response rate, it is expected that the survey could collect information from about 4,650 respondents. This represents around 55% of the 2002 sample size, which consisted of about 8,440 respondents. If the overlap with the 2013 Canadian Health Mental Health survey is also removed, the expected sample size goes down to about 4,230, which represents around 50% of the 2002 sample size. These numbers are estimates.

Another challenge is the collection of biological material for DNA. The two options considered are either the collection of saliva or blood samples. Various elements have to be taken into account when collecting such material among respondents: involvement of various experts in the development of procedures, use of specialized tools, additional interviewer training, storage, confidentiality and security requirements, etc.

The schedule of activities provided in the report assumes a start of the project in January 2014. Data release is therefore estimated to happen in April 2016. This estimated timing scenario does not include additional time that would be required to plan all activities related to blood or saliva samples collection.

The expected cost estimate is $1,770,000 for a telephone survey and $2,336,000 for an in-person survey. These are estimated amounts and do not include the cost incurred by collecting biological specimens.
2.0 Background and Objectives

2.1 Background

Cross-sectional studies from around the world have demonstrated that mental disorders in the military are associated with substantial morbidity and cost to the individual, military, family and society. Post-traumatic stress disorder (PTSD), depression and alcohol use disorders are the most commonly studied. These conditions can negatively affect the military personnel's capacity to complete his/her operational duties. The member may also have performance issues that could put him or herself and/or other service members at risk for injury or harm during deployments. Furthermore, mental disorders might lead to an increased likelihood of early repatriation from the mission. Post-deployment mental health problems are associated with disability, co morbidity with other mental disorders and physical illnesses as well as family problems. Mental health problems can become chronic and have long-term impact on veterans. There has been strong concern in the United States and Canada about the increased risk for suicide and mortality among service members.

Although there is a substantial emerging interest in the pre-deployment, deployment and post-deployment risk and protective factors for post-deployment mental health problems, there are no specific Canadian prospective studies that address these issues. To date there is no longitudinal Canadian data to describe the impact of mental disorders on a range of outcomes among military personnel. There is a need to develop preventative and early intervention programs to mitigate the negative impact of mental disorder on military personnel.

To address these scientific and policy questions, the aim of the survey discussed in this report would be to collect data from the respondents to the 2002 Canadian Community Health Survey - Mental Health and Well-being - Canadian Forces to conduct a population-based longitudinal study of Canadian Forces (CF) personnel.

In partnership with Statistics Canada, Canadian Forces and Veterans Affairs Canada (VAC), the proposed study would provide a unique opportunity to understand the course of mental disorders and suicidal behavior among service members. Multiple stakeholders such as the Canadian Forces, Veterans Affairs Canada, Statistics Canada, Defence Research Development Canada, the Mental Health Commission of Canada, and some university-based researchers have already been involved in the development of a proposal for this research.

2.2 Objectives

The client is in need of the data to perform an analytical study that has three main objectives:

1. Examine the incidence, prevalence and course of common mental health problems in the Canadian military personnel.

2. Examine the pre-deployment (adverse childhood experience, previous history of mental health problems, coping styles, family history of mental health problems), deployment-related traumatic events (e.g. combat exposure, length/number of deployments, witnessing atrocities, injuries, work stress), and post-deployment factors (meaningfulness of mission, social support) in relation to mental health problems in the Canadian military personnel.

3. Examine the relationship between mental disorders, self-perceived need for mental health care, mental health service use and self-perceived barriers to mental health care in a Canadian military sample.
The data collected through this survey would be used to answer the following two sets of research questions, each under a specific theme and with corresponding hypotheses:

1. **Theme A. Longitudinal course and predictors of mental disorders and suicidal behavior.**

   **Research questions**
   
   - What is the longitudinal course of mental health problems, and suicidal behavior among a sample of active military personnel?
   
   - What is the impact of baseline presence of mental disorders on quality of life, disability, family functioning, legal problems, and suicidal behavior?
   
   - What are the predictors of mental disorders and suicidal behavior follow-up?

   **Hypotheses**
   
   - Approximately 50% of people who have a past year mental disorder will continue to meet criteria for the same or comorbid disorder at follow-up.
   
   - Baseline presence of a mental disorder will increase the odds of poor quality of life, disability, family dysfunction, legal problems and suicidal behavior during the follow-up period.
   
   - Low income, female sex, avoidant coping styles, exposure to adverse childhood experiences, poor social supports, baseline mental disorders, exposure to deployment stress (combat, witnessing atrocities, purposefully killing others, being injured), will increase the risk of incident and recurrent mental disorders and suicidal behavior in Canadian military personnel.

2. **Theme B. Longitudinal course and predictors of perceived need for care and mental health service use.**

   **Research questions**
   
   - What will be the transition in self-perceived need for mental health care and mental health service use during the follow-up?
   
   - What are the predictors of self-perceived need for mental health care and mental health service use?

   **Hypotheses**
   
   - There will be an increase in past year self-perceived need for mental health care and mental health service at follow-up assessment in comparison to baseline.
   
   - There will be a decrease in unmet need for mental health services.
   
   - Female sex, avoidant coping styles, exposure to adverse childhood experiences, poor social supports, baseline mental disorders, exposure to deployment stress (combat, witnessing atrocities, purposefully killing others), will increase the risk of perceived need and mental health service use.
3.0 Project Requirements

3.1 Population

The target population for this survey would be the same as the target population for the 2002 Canadian Community Health Survey (CCHS) – Mental Health (MH) and Well-being – Canadian Forces. It includes full time regular members of the Canadian Forces, and reservists who have paraded at least once in the six months preceding the 2002 survey reference period.

Since the goal of the proposed survey would be to collect follow-up data from the 2002 survey, the study population would consist of respondents to the 2002 CCHS – MH and Well-being – Canadian Forces. At the time of the 2002 study, these were members of the Canadian Forces either as reservists or regular members. At the time of the proposed survey, some members of the sample would continue to be members of the CF, others would have been released.

The 2002 study targeted the ten Canadian provinces. Nunavut, Northwest Territories as well as Yukon Territory were excluded from the survey, given the high response burden and the high cost of conducting surveys outside the ten provinces.

3.2 Units of Analysis

For this survey, the units of analysis would be former or current Canadian Forces members. This includes members who were or would still be regular or reserve Forces members.

Many surveys use proxy response to acquire information for absent household members, or when one household member has been identified as the household reference person and designated to respond for all other eligible household members. As the proposed content for this survey is derived largely from personal experience and due to the personal and confidential nature of health information in general and mental health information in particular, no data would be collected by means of proxy.

3.3 Data Item to be Measured

3.3.1 Content

This survey would be a mixture of content that was already used in the 2002 survey and some new content. Content from the US Military Family Lifestyle survey might be used. This survey of military family members, conducted annually by Blue Star Families, is used to determine major issues facing military families. Content from the Netherlands Mental Health Survey and Incidence Study (NEMESIS), a prospective study of the prevalence, incidence and course of psychiatric disorders among non-institutionalized Dutch adults might also be used.

The objective of the 2002 survey was to estimate the prevalence of certain mental disorders in the Canadian Forces and record members’ utilization of mental health services. This information was intended to assist in the determination of mental health care needs in the CF and to allow Department of National Defence (DND) planners the crucial data they need to ensure adequate resources. The 2002 survey contained the following topics:

- General health
- Deployment
- Distress
- Stress
• Depression  
• Dysthymia  
• Panic disorder  
• Social phobia  
• Generalized anxiety disorder  
• Post-traumatic stress disorder (PTSD)  
• Alcohol use  
• Alcohol dependence  
• Eating troubles assessment  
• Restriction of activities  
• Disability in the past two weeks  
• Health services received  
• Medication use  
• Social support  
• Childhood and adult stressors  
• Spiritual values  
• Work stress  

The inclusion of concepts and measures in the proposed study would be determined by their importance and relevance to the study research themes traded off against the costs of assessment and burden to respondents. The proposed content for this survey includes information such as:

• Assessment of mental disorders (not PTSD)  
  o Baseline mental disorders  
  o Alcohol abuse and dependence in the respondents’ lifetime and since the 2002 survey  
  o Drug use and dependence  
  o Suicidal behavior  

• Deployment, non-deployment stressors and PTSD since last survey assessment  
  o Deployment Risk and Resilience Inventory (DRRI) (collection of relatively brief measures of factors that may be associated with the post deployment health and well-being of military)  
  o Ensure assessment of trauma during deployment  
  o Minor stressors (such as financial stress)  

• Physical health conditions  
  o Measure of all chronic conditions since the 2002 survey  
  o Traumatic Brain Injury (TBI)  
  o Pain  
  o Chronic pain  
  o Other physical health conditions  
  o Medications  

• Quality of Life, wellbeing, family and work functioning  
  o SF-36 or SF-12 (36 or 12 question survey on mental and physical functioning and overall health-related-quality of life)  
  o Kessler Psychological Distress Scale (K10)  
  o Long-term dysfunction  

Other possible topics of interest include:  
• Childhood maltreatment  
• Intimate partner violence and family violence
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- Social support
- Well-being and family well-being
- Belonging in community
- Satisfaction with care
- Big 5 personality (five broad domains or dimensions of personality that are used to describe human personality)
- Military hardiness
- Resilience
- Personality disorders
- Suicidal behaviours
- Help-seeking
- DSM-5 (Diagnostic and Statistical Manual) PTSD criteria
- Concussion and post-concussion syndrome
- Functional adaptation (e.g. family functioning, occupational functioning)
- Moral injury
- Mastery
- Injuries occurring during deployment
- Daily and chronic stressors
- Expansion of barriers to care to military specific
- Combat
- Risk-taking behavior
- Presenteeism and absenteeism
- Personal views regarding how individuals adapted to adversity and what leads to success
- Deployment experiences and history
- Release and reason for release
- Psychiatric medication use
- Attitudes toward mental health care
- Content of therapy received
- Household income and number of people in household

3.3.2 Harmonized Content at Statistics Canada

Certain questions, such as household income, country of birth and language spoken at home, are asked in a large number of surveys at Statistics Canada. In past years, issues arose when data analysts tried to compare the results of one survey to another but found that they could not because the question wording was not the same. More recently, the more common survey questions have adopted a “harmonized” approach whereby modules about a specific theme contain questions which use standard concepts, definitions, classification and wording for multiple collection modes.

During the content development phase of the proposed survey, the themes and measures identified by the client for inclusion in the questionnaire would be thoroughly reviewed to see where these harmonized modules could be adopted into the survey.

3.4 Data Quality

3.4.1 Sample Size

To be able to perform the proposed analysis and answer the research questions presented earlier, the client has estimated that a minimum of 2,500 respondents for their analytical needs would be necessary. Refer to section 4.3 for more information on expected sample sizes.
3.4.2 Minimum Detectable Differences

One question that is of interest in planning the follow-up study is to know, given the expected sample size, how big of a change between the two surveys would be required in the proportion of people reporting a past year mental disorder for this difference to be statistically significant (with a significance level of 5%). The answer to this question not only depends on the sample size for the follow-up study but also on the magnitude of the initial estimate (coming from the 2002 survey) as well as on the correlation between the answers to the two surveys. The latter is the unknown part of the equation. The correlation between the answers to the two surveys is defined as the proportion of respondents that had a condition in 2002 and still have that condition in the follow-up survey; the higher the proportion; the higher the correlation.

The sample size that was used to perform this analysis is 4,239 units (refer to section 4.3 for estimated samples sizes).

Table 1 presents the minimum detectable change for two conditions, namely any disorder (including alcohol dependence) as well as post-traumatic stress disorder (PTSD). The various columns represent the proportion of those who had the condition in 2002 that would still report it in the follow-up survey (so the correlation between the answers to the two surveys increase as you move from left to right in the table). The column in the middle assumes that half of those who reported a past-year condition in the 2002 survey would still report the same condition in the follow-up survey, which seems to be one of the hypotheses coming from the documentation provided by the client.

Table 1 – Minimum Detectable Increase for Past-year Mental Disorders

<table>
<thead>
<tr>
<th></th>
<th>2002 estimate</th>
<th>0</th>
<th>0.25</th>
<th>0.5</th>
<th>0.75</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>0</td>
<td>0.25</td>
<td>0.5</td>
<td>0.75</td>
<td>1</td>
</tr>
<tr>
<td>Everyone</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Any disorder</td>
<td>14.4%</td>
<td>2.7%</td>
<td>2.4%</td>
<td>2.0%</td>
<td>1.5%</td>
<td>0.3%</td>
</tr>
<tr>
<td>PTSD</td>
<td>2.3%</td>
<td>1.3%</td>
<td>1.1%</td>
<td>1.0%</td>
<td>0.7%</td>
<td>0.3%</td>
</tr>
<tr>
<td>Regulars</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Any disorder</td>
<td>15.1%</td>
<td>3.5%</td>
<td>3.1%</td>
<td>2.6%</td>
<td>1.9%</td>
<td>0.4%</td>
</tr>
<tr>
<td>PTSD</td>
<td>2.8%</td>
<td>1.7%</td>
<td>1.5%</td>
<td>1.3%</td>
<td>1.0%</td>
<td>0.4%</td>
</tr>
<tr>
<td>Reservists</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Any disorder</td>
<td>12.7%</td>
<td>4.3%</td>
<td>3.8%</td>
<td>3.1%</td>
<td>2.4%</td>
<td>0.8%</td>
</tr>
<tr>
<td>PTSD</td>
<td>1.2%</td>
<td>1.7%</td>
<td>1.5%</td>
<td>1.3%</td>
<td>1.1%</td>
<td>0.8%</td>
</tr>
</tbody>
</table>

The “0” column assumes that there is no overlap (correlation) between those who reported a disorder in 2002 and those who would report one in the follow-up survey while the column under “1” assumes that the 2002 group is entirely the same as would be the follow-up survey.

For example, when looking at the whole 2002 population, the proportion of people who reported at least one mental disorder in the past twelve months was 14.4%. If we assume that 50% of those people would still report a mental disorder, then the proportion coming from the follow-up survey would need to be at least 16.4% (an increase of 2%) or at most 12.4% (a decrease of 2%) for this difference to be statistically significant. For PTSD, where the proportion was 2.3% in 2002, the proportion would have to increase or
decrease by at least 1.0% for the difference to be significant. For smaller populations, the minimum detectable differences represent a larger proportion of the estimate. The regulars and reservists numbers refer to the status according to the 2002 survey, not the current status.

The bigger the correlation between the two surveys is in terms of past-year mental disorder, the greater the survey’s ability to detect small differences. The right-most column is very unlikely for a twelve-month disorder (it would mean that anyone who reported a disorder in 2002 would still report it) but it gives an indication of what can be detected for lifetime disorders. Indeed, anyone who reported a lifetime disorder should still report it in the follow-up survey. In that case, the magnitude of the original estimate is not important. All that matters is the number of new cases reported. This shows that the proportion of people who reported a lifetime condition should have increased by at least 0.3% when the whole 2002 population is considered. If only people who were regular members of the Canadian forces in 2002 were considered, then the minimum detectable increase would be 0.4% while it would be 0.8% for those who were reservists in 2002.

These detectable differences for lifetime disorders are probably too optimistic. Unfortunately, answers to repeated surveys are never 100% consistent for all respondents and even small discrepancies between the two surveys can have a significant impact on the minimum detectable difference. Let’s consider lifetime prevalence for any disorder, for the whole 2002 population. The estimate coming from the original survey was 32.5%. Even if we assume that as many as 95% of those people still report a disorder in the follow-up survey, then the minimum detectable difference increases from 0.3% (as given in the table above) to 1.0%. For PTSD lifetime (7.2% according to the 2002 survey), this minimum difference would increase from 0.3% to 0.6%.

The idea with the above analysis was to determine how big of a difference between the 2002 and the follow-up data is necessary for it to be statistically significant. If the goal of the study is to determine if rates have changed between the two surveys, it shows how important the changes should be for the difference to be significant. If the changes are expected to be at least as much as what is given in the table above, then the follow-up study should permit to detect differences without any trouble. If on the other hand, the changes are expected to be smaller than what is in this table, the follow-up study will not be able to precisely quantify them.

### 3.4.3 Errors, Variability and Bias

All surveys are subject to various types of errors, variability and bias. At Statistics Canada, every effort is made to keep errors and bias to a minimum, and to measure these where possible. In keeping with Statistics Canada standards, all the estimates for the proposed survey would be provided with their corresponding coefficients of variation. In addition, upon delivery of the data set, a methodology report explaining the survey process and key issues related to the quality of the data would be produced and included in the User’s Guide. Under departmental policy, Statistics Canada must officially release any survey results.

One of the sources of bias specific to this survey is that there could be a difference between the 2002 respondents that we are able to contact and those that cannot be traced at all. Some bias of this type is unavoidable but it can be minimized by putting efforts to trace as many respondents as possible.

The quality of an estimate can be assessed using the coefficient of variation (CV). The CV of an estimate is equal to the standard error of the estimates, divided by the estimate
itself, and is usually expressed as a percentage. The lower the calculated CV, the better
the precision is of the estimate. According to Statistics Canada’s data quality guidelines,
releasable estimates can be either unqualified (an estimated CV of 16.5% or less) or
qualified (an estimated CV of more than 16.5%, but less than or equal to 33.3%). While
unqualified estimates can be considered for general unrestricted release, qualified
estimates must be accompanied by a warning that cautions users of the high sampling
variability.

The minimum proportions (min-p) that can be estimated with good precision (a CV equal
to or less than 16.5%) vary with the sample size: the larger the sample size, the smaller
the minimum proportion can be, which translates into a greater potential for meaningful
analysis.

3.5 Constraints

In this section, we discuss three constraints. The first one that is critical to this survey is the ability
to trace enough respondents to the 2002 survey. Collecting biological specimens is then
discussed and the section ends with analytical requirements about deployment history
information.

3.5.1 Tracing

A first constraint to this survey is the ability to trace enough respondents to the 2002
survey. Many years have passed since the 2002 study and while some of the
respondents would still be in the CF, many may not be anymore and may therefore be
harder to trace. Various administrative files can be used for tracing and these are
described in details in section 4.2.

To calculate estimated sample sizes provided in section 4.3, the proportion of 2002
respondents that could potentially be traced was based on two sources of information:
the 2013 Canadian Forces Mental Health (CFMH) study and the 2010 and the 2013
Survey on Transition to Civilian Life (STCL). For respondents who are still members of
the CF, tracing rate should be similar to what was observed for the 2013 CFMH study.
For the STCL, the interest is for members that have left the CF since 1998. The tracing
rate for the STCL is therefore considered a relatively good approximation of the 2002
follow-up study tracing rate for members that have left the CF since 2002. This is what
was used in the sample size calculation discussed in section 4.3.

One important assumption for tracing 2002 respondents is that contact information for
those who are still in the CF would be obtained directly from DND.

3.5.2 Collecting Biological Specimens

For this survey, the client wishes to collect DNA information from the respondents.
Considering the additional cost and burden as well as the privacy impact, the collection
of biological material should be justified by a strong data requirement and demonstration
that self-reported data are not sufficient. Note that the extra cost incurred by collecting
biological materials is not included in the cost estimate presented in section 5.8. As well,
the schedule of activities presented in section 5.7 does not include the time that would be
required to put in place the additional procedures related to collecting biological
specimens. In particular, if contracts have to be negotiated with labs, it can be a lengthy
process. If a decision is made to include collection of biological specimens as part of the
survey, schedule and budget will require review. Input from experts both within and
outside of Statistics Canada will be required to complete this review.
The two considered options for collecting DNA are through blood or saliva samples. While Statistics Canada has some experience in collecting blood samples for DNA through its Canadian Health Measures Survey (CHMS), collecting saliva samples would represent a new challenge but may be easier to collect, with fewer logistical and privacy issues. To gain a better understanding of the implications of collecting biological materials, Statistics Canada consulted with the Institut de la Statistique du Québec who have collected DNA through blood and saliva samples for one of its surveys (Étude Longitudinale du Développement des Enfants du Québec (ÉLDEQ)). Some information about collecting saliva and blood samples and some considerations to take into account are described below.

Please note that what is mentioned here about collecting biological specimens might not represent an exhaustive list of items to consider. It would be necessary to have DNA experts involved in the process to gain a better understanding of all considerations that should be taken into account.

Some Considerations about Collecting DNA through Saliva Samples

- DNA samples could be collected through saliva using the Oragene™ kit.
- Even though refrigeration of the saliva samples is not necessary with the Oragene™ kit, the effect of storage time between the saliva collection and the DNA extraction, as well as temperature on DNA yield and quality are important aspects to consider. Logistic procedures would have to be developed around these considerations.
- Apart from the Oragene™ kit itself, no other specialized tools would be required to collect the saliva samples.
- If computer-assisted personal interviews (CAPI) is the collection mode adopted for this survey:
  - The Oragene™ kit is easy to use and could be manipulated by the usual interviewers; there would be no need to hire specialized staff.
  - Agreements would need to be reached with collection staff and bargaining agents allowing regular interviewers to handle biological specimens.
  - Even though the Oragene™ kit is easy to use, additional training would still be necessary to adequately prepare the interviewers for collecting saliva among respondents.
  - Interviewers would have to mail or bring the samples to the lab or any intermediate focal point. Transport or priority mailing would be necessary and would therefore incur additional costs.
- If computer-assisted telephone interviews (CATI) is the collection mode adopted for this survey:
  - Being easy to use, the Oragene™ kit can be self-administered by the respondents. A possible option would be to mail the kit to the respondents together with a clear step by step procedure. This collection method would involve mailing cost both for sending the kit to the respondent and for the respondent to send the saliva samples back.
  - If saliva samples are collected through mail, a tracking system as well as a system to follow-up among respondents would have to be put in place. Priority mailing would also be necessary.
  - It is likely that response rates would be lower than with a personal interview.
  - Even though clear procedures would be sent with the package to the respondents, data quality could potentially be lower due to some respondents not following the procedures properly.
Some Considerations about Collecting DNA through Blood Samples

DNA samples could also be collected through blood. There are more considerations to take into account when collecting blood samples over saliva samples. Procedures are logistically more complicated. Some items to consider are provided below.

- The effects of storage time between blood collection and DNA extraction as well as temperature on DNA yield and quality are really important aspects to consider for blood samples and logistic procedures would have to be developed around these considerations.
- While the questionnaire itself could still be administered over the phone, collecting blood samples, as opposed to saliva samples, cannot be done through mail. Specialized staff would have to be hired in addition to the normal interviewers. This would represent an important increase in the survey costs and it is usually difficult to hire nurses.
- Nurses would be responsible for mailing or bringing blood samples to the lab for analysis. Transport or priority mailing would be necessary and would therefore incur additional costs.
- Collecting blood samples requires specialized tools and therefore additional cost.
- In the Canadian Health Measures Survey, prior to sending blood samples to the lab, special manipulation is required. If necessary, this is another consideration for which specific procedures would have to be developed.
- Dealing with the transportation of blood samples requires that special procedures of the *Transportation of Dangerous Goods Act* be taken into account.

Some Considerations about Collecting Biological Materials in General

- To collect biological materials, consent forms must be filled out by the respondents.
- There are also some confidentiality and security considerations:
  - To identify and track biological specimens at all time, labelling and tracking using a bar-codes system or any other system would have to be developed to ensure samples are kept anonymous. Programmers will also need to be involved in the development of the tracking system. Time for staff involved in the follow-up procedures is also to be considered.
  - Transfer of results from the lab to Statistics Canada would have to be done in a secure way (through Electronic File Transfer for example).
  - Researchers and lab staff would have to adhere to a confidentiality agreement. It would also have to be considered to have lab workers become deemed employees.
  - Since Statistics Canada data would be going to an external source (the labs), there are additional security requirements that would need to be met. For example, lab staff would need to go through security clearance procedures. Labs would also need to be configured to protect data (i.e. separate environments).
  - Extra training to the interviewers would be necessary to ensure confidentiality and physical security of specimens.
- Procedures about the specimens’ destruction (including a confirmation of destruction) according to standard lab protocols would also have to be put in place.
- There are various storage considerations such as ensuring specimens are locked in a secure location. Storage cost is also to be considered.
- Procedures to send relevant lab results back to the respondents could be developed if appropriate as an incentive for them to provide biological material.
Follow-up Survey of the Respondents to the 2002 Canadian Forces Mental Health Survey – Feasibility Study

- Procedures to ensure biological material arrive at the lab as planned should also be put in place so that investigations are initiated if they do not arrive.
- Experts from various organizations such as Health Canada, the appropriate Canada Research Ethics Board and the Office of the Privacy Commissioner of Canada will also have to get involved in the process to address privacy issues and to implement proper laboratory procedures.
- Before collection could start, a Privacy Impact Assessment would have to be approved by Statistics Canada’s Policy Committee.

As already mentioned, additional cost incurred by the collection of biological material is not included in the estimate provided in section 5.8. The following list identifies items that would affect the cost:

- Specialized staff for blood collection;
- Additional time required for the interviewers to perform special procedures related to collecting biological samples;
- Mailing cost if applicable;
- Additional material in the interviewer kit such as a specialized interviewer manual;
- Oragene™ kits or specialized tools for blood collection;
- Extra interviewer training;
- Time and travel for a specialized trainer to provide training to the interviewers.
- Bar-code readers and carrying cases;
- Labels to identify biological samples;
- Tracking system development (programmers);
- Lab contract to prepare and analyse samples;
- Storage;
- Extra time to develop procedures/methodologies related to the logistic of collecting biological materials;
- Time from experts from various areas who will have to be involved in the process;
- Additional experts time to deal with methodological considerations specific to the collection of biological samples such as assessing the bias between people who provided biological samples and those who didn't but still responded to the questionnaire;
- Additional experts time to deal with the processing of the separate file containing the biological samples data.

### 3.6 Analytical Requirements

Depending on the specific needs about deployment history, it might be relevant to use administrative files from DND to obtain deployment information.

The Department of National Defence’s experience in trying to get precise deployment-related information using surveys, for example those used during post-deployment screening, has shown to be very difficult. Even six months after their return from deployment, respondents have trouble to accurately identify their deployment dates. If specific timing and location of deployments are important for the study to measure, this information should be obtained from administrative data rather than be self-reported. This would require the co-operation of DND.
4.0 Survey Design

4.1 Data Collection Methodology

For the 2002 study, while some interviews were done over the phone, the vast majority were conducted face-to-face during working hours in private on-base rooms. The proposed survey would interview the 2002 respondents at their household rather than in the workplace.

For this study, the client is considering two collection modes: computer-assisted telephone interview (CATI) and computer-assisted personal interview (CAPI). Both options are discussed below in addition to presenting the other survey collection modes for information purposes. Recommendations on collection modes are then suggested and biological samples collection is also discussed in the last section.

For this survey, proxy responding would not be permitted due to the personal and confidential nature of health information in general and mental health information in particular.

4.1.1 Mail Survey

The mail survey is one of the least intrusive forms of collection as it is self-completed. A self-completed survey is suitable when the questionnaire has the same or similar items for all the respondents and limited or no restriction on the order of answering the questions. Such limitations may be accommodated, but the critical issue is the amount of information required and, consequently, the response rate. Low response rates threaten the quality of the survey estimates, as there is often a difference in characteristics between those who responded and those who did not. One option to improve these rates would be to initiate contact with respondents by telephone and offer to either mail-out the questionnaire or complete the interview with them at that time. For questionnaires that were mailed and not returned, intensive non-response follow-up could be done by telephone and achieving higher response rates could be expected.

Typically, this option is best for surveys that are supplements to an existing survey and when the questions are simple and easy to answer. This is not the case with mental health topic and this option is therefore not recommended.

4.1.2 Electronic Questionnaires

Internet application surveys, too, may be unobtrusively completed in one’s own home. They may be stand alone surveys, or offered as an alternative to paper-mail-out questionnaires. Respondents are sent an e-mail or a letter with a link to the questionnaire. If the respondent would prefer a paper questionnaire then they could contact Statistics Canada to request that one be mailed to them. On-line guidance and a toll-free help line number are available to respondents.

Advantages of this approach include convenience for respondents, economies realized in terms of field work, and better quality of responses achieved with help of a computer application that guides respondents throughout the questionnaire.

The drawbacks include difficulties accessing the questionnaire, lack of access to Internet in low income households, and no high-speed service in some areas. Additionally, unless there is a high uptake of respondents into using the Internet based survey, an alternate mode of follow-up is typically used to ensure targeted response rates are met that could lead to increased systems development and collection costs.
An electronic questionnaire is possible for this survey but would need to be supplemented by other (CATI/CAPI) data collection.

### 4.1.3 Computer-Assisted Telephone Interview (CATI)

There are two types of computer-assisted interviewing (CAI) techniques: computer-assisted personal interviewing (CAPI) and computer-assisted telephone interviewing (CATI). For these types of interviews, the interviewer reads the questions on the computer and enters the respondent’s answers in the computer. For CAPI the respondent and interviewer complete the questionnaire in person whereas for CATI the respondent completes the questionnaire by telephone. CATI is discussed here while CAPI is discussed in the next section.

Telephone interviews, particularly when conducted at a convenient time and introduced by a letter, result in relatively high response rates. The costs for telephone surveys (CATI) are lower than those relating to personal visits (CAPI) since there are no travel costs. The computer assisted surveys, both CATI and CAPI, are a reliable way of collecting data since the interviewer is guided accurately and rapidly through the questionnaire. Flows and skip patterns are also built into the application so that the interviewer asks the correct questions, in the correct order. Furthermore, consistency edits and validation edits are built into the application, allowing for errors to be corrected while the respondent is still on the line. Reference periods and pronouns are also customised automatically based on factors such as the age and sex of the respondent, the date of the interview and answers to previous questions. These efficiencies lead to higher data quality, and minimize elaborate editing during processing. The electronic questionnaire has also another advantage of elimination of the data capture step as well as printing, mailing, and data capture of the questionnaires. Finally, interviewers can be monitored to ensure that there is consistency in how they administer the survey.

Using computer-assisted telephone interview is a possible option for the proposed mental health survey.

### 4.1.4 Computer-Assisted Personal Interview (CAPI)

Personal Interviews can be very rewarding for respondents because of the rapport between interviewer and respondent that is created. For instance for surveys where children are being studied, the parent might feel more comfortable letting the child being interviewed without interfering or listening to the answers, when they meet the interviewer in person. When parts of the survey are to be self-completed in the context of a CAPI survey, the interviewer’s presence works both as a motivating and a facilitating factor. CAPI surveys are better suited to longer surveys. Mental health is a sensitive topic and having personal interviewers might also ease the collection of certain more sensible information.

On the other hand, field operations are complex to manage and costs are significantly higher than for other collection modes since interviewers must travel, sometimes more than once, to each interview. CAPI interviews can also be demanding as home visits create certain inconveniences for the respondents. Personal interviews usually provide better response rates than telephone, mail or Internet surveys.

CAPI is also a possible option for the proposed mental health survey.
4.1.5 Recommendations

Mode Effect

To study options to decrease collection costs of Statistics Canada’s 2012 CCHS – Mental Health, which is mainly conducted with face-to-face interviews (CAPI) and some phone interviews (CATI), Statistics Canada has performed a mode effect study with the 2002 CCHS Mental Health data. The objective of this study was to assess whether or not the mode of collection (by phone versus in-person) affected the proportions of mental health disorders reported in the 2002 data. The study found that there was in fact a statistically significant mode effect when looking at both life-time mental health disorders and mental health disorders in the last 12 months, proportion of respondents having the disorder being higher for personal interviews than for phone interviews. The study concluded that proportion of mental health disorders differed by over 2% when comparing phone interviews with in person interviews and that there was a significant difference between the two modes for age groups 15-24, 25-44 and 65+ as well as for females. This study was done on a small scale and targeted the general population rather than the Canadian Forces specifically, but it can still give an idea that mode effect might be present.

Section 3.4.2 discussed minimum detectable differences required in the 2002 vs. the follow-up study estimates so that statistically significant differences could be noticed. The magnitude of these differences is similar to the mode effect magnitude discussed in the preceding paragraph. The 2002 study was done primarily with personal interviews (97% personal interviews vs. 3% telephone interviews). If the follow-up interviews are done mainly over the phone, the differences between the 2002 and the follow-up estimates could therefore be masked or amplified by the mode effect. If for example, the real proportion has not changed between the two years, mode effect could cause a difference that would be detected as statistically significant when in fact there wouldn’t be any difference. If on the other hand, there is a real difference in the proportions, mode effect could also mask it and it wouldn’t be detected.

Discussion about Recommended Mode(s)

While mail and Internet surveys would not be recommended for this survey, CATI and CAPI collection modes or a combination of both would represent a possible option. The collection mode effect discussed above should also be taken into account. One option to minimize the mode effect would be to do most interviews in person as was done in 2002 and therefore keep the number of telephone interviews to a minimum.

Respondent Relations

To maximize respondent's cooperation, the survey must be perceived as a legitimate way of collecting important and useful information. A letter to respondents preparing them for an interviewer's telephone call for example, explaining the nature and goals of the survey, and encouraging participation should be part of the communication strategy.

4.1.6 Biological Samples Collection

As discussed in section 3.5.2, there are multiple considerations to take into account when collecting biological samples. Here, we propose two different options.

Note that the cost estimates as well as the schedule of activities provided in section 5 do not include the extra cost and time that would be needed for the planning and collection of biological samples among respondents. If a decision is made to include collection of
biological specimens as part of the survey, schedule and budget will require review. Input from experts both within and outside of Statistics Canada will be required to complete this review.

The first one is to have Statistics Canada responsible for the whole collection process. In addition of being responsible for administering the mental health questionnaire, Statistics Canada would also be in charge of the whole biological specimens’ collection process.

Another proposed option that could be further studied would be to have Statistics Canada responsible for the collection of the letter of consent only. These would then be transferred to the client who would in turn have the responsibility of the biological samples collection process. In this option, the only implication of Statistics Canada, apart from being in charge of the mental health questionnaire collection process, would be to collect letter of consent among the respondents. The client itself would be in charge of contacting only respondents who would have agreed to provide biological samples through the letter of consent.

4.2 Sampling Frame(s)

The sampling frame for this study would be the list of respondents to the 2002 survey. The first step to create a frame with up-to-date information would be to append contact information from respondents who are still members of the CF. It is assumed that DND would provide Statistics Canada with this information. For respondents who have been released from the CF, the resulting file would be linked to various sources of information which are described below.

List of Regulars and Reservists

The 2002 file would first be linked to an updated list of regulars and reservists provided by DND, using the service number (SN) available on the 2002 sample file, to determine which respondents are still in the CF and which are not anymore. We assume DND would be in a position to provide that file to Statistics Canada. It would be necessary to determine if SN can change over time for a given individual. If it is the case, other linking possibilities such as name or date of birth would have to be identified.

The estimated sample sizes provided in this document assume that DND would provide Statistics Canada with personal rather than work-related contact information for respondents that are still members of the CF. If DND contact information is work-related, the proportion of traceable respondents would be much lower and expected sample sizes would decrease significantly.

T1 Tax Files

The T1 tax files can be used to help improve the contact information by linking the file by Social Insurance Number (SIN). With a link to T1 tax files, it should be possible to look up phone numbers on the Address Register, the Statistics Canada’s civic address frame.

Public Work Government Services Canada (PWGSC) Address File

This file contains contact information for former CF members who receive benefits such as pension disability or retirement benefits. PWGSC administrative files would be used to help improve the contact information by linking with the service number.

Canadian Child Tax Benefits (CCTB) File

The CCTB file is a list of all Canadian citizens or permanent residents who fill tax returns, who have applied to receive the CCTB and are currently primarily responsible for the care and
upbringing of at least one child under the age of 18 living with them. The Canadian data is typically compiled as an annual file, running from July of one calendar year to June of the following year, although monthly files are also available. The SIN is available on this file and would therefore be used to do the linkage.

Veteran Affairs Canada (VAC) File

This file contains contact information for VAC clients. Since only a small proportion of the sample would be VAC clients, this file is deemed the lowest quality of the sources. It could still be used for getting current contact information that couldn’t be obtained from the previous sources.

Vital Statistics Death Registry

Linking with vital statistics would allow removal of respondents who have died since the 2002 study. Death being a relevant outcome, these individuals could still be included in the analysis; they would simply not be sent to data collection.

4.3 Sampling Design

Many years have passed since the 2002 survey and the biggest challenge would therefore be to get up to date contact information for all those respondents to the 2002 survey. For the purpose of this feasibility study, an analysis was performed to determine expected proportions of respondents who could or could not be traced and who would be identified as in-scope or out-of-scope units. Results are presented in Table 2 and Table 3 below broken down by respondents who were regular or reserve members of the Canadian Forces (CF) at the time of the 2002 survey.

Here are some items to note on the sample sizes provided in Table 2 and Table 3 below:

- The analysis was done by breaking down the 2002 respondents into two different groups: those who would still be in the CF at the time of the study and those who would not be anymore. Different proportions of traceable and out-of-scope units were applied to these two groups. As well, different response rates were also used. The proportions of the 2002 respondents who would no longer be in the CF were estimated to 62% for regular members and 89% for reservists. These proportions are averages based on two sources of information: a report by Veterans Affairs Canada (Estimated Veterans: Follow-up of 2002 Canadian Forces Mental Health Survey) as well as from the 2013 Canadian Forces Mental Health (CFMH) study.

- The response rates used for the analysis were calculated based on the 2002 survey response rate and on the Survey of Transition to Civilian Life response rate.

- The percentage of traceable and untraceable units that was used for this analysis was based on what was observed for the 2013 CFMH study as well as on past and current experience with the Survey on Transition to Civilian Life. Refer to section 3.5.1 for more details on tracing 2002 respondents.

- The out-of-scope proportions used for the analysis were calculated based on the Statistics Canada Survey of Transition to Civilian Life (STCL) as well as from the 2013 CFMH. For logistic and cost purposes, the 2002 respondents who would now be posted outside the ten Canadian provinces, would be considered out-of-scope and would therefore be excluded from the follow-up survey.

- Two previous Statistics Canada surveys also targeted Canadian Forces members: the Life After Service Survey (LASS) and the 2013 CFMH. Respondents to the LASS who
overlap with the 2002 survey would have to be removed from the sample to reduce burden on respondents and therefore avoiding causing any problems to the LASS longitudinal study. To remove or not the overlap with the 2013 CFMH would be the client’s decision. If the overlap is not removed, data quality for these units could be impacted. Respondents who also answered the 2013 CFMH could be annoyed by being contacted again for another mental health survey and the quality of their answers could therefore be lower. When removing an overlap, there is a risk of introducing bias. To study this risk, it would be possible to identify in advance individuals overlapping the two surveys and therefore study their 2002 characteristics to determine if they are in fact different than the other respondents.

- Before collection, the Statistics Canada methodology team would link the 2002 respondents to the most current administrative files available (refer to section 4.2 for more information). These linkages would allow removal of untraceable and out-of-scope respondents from the sample before sending it to the data collection team. It would most likely be impossible to identify all out-of-scope respondents before data collection and we therefore expect that more units would be identified as out-of-scope during collection.

- The estimated sample sizes provided here assume that DND would provide Statistics Canada with personal rather than work-related contact information for respondents that are still members of the CF. If DND contact information is work-related, the proportion of traceable respondents would be much lower and expected sample sizes would decrease significantly.

Here are the estimates of the expected sample sizes. It is important to understand that these numbers are estimates only.

Table 2 – Expected Number of Respondents if Remove Overlap with LASS Only

<table>
<thead>
<tr>
<th></th>
<th>Regulars</th>
<th>Reservists</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002 respondents</td>
<td>5,155</td>
<td>3,286</td>
<td>8,441</td>
</tr>
<tr>
<td>Expected overlap with LASS</td>
<td>182</td>
<td>191</td>
<td>373</td>
</tr>
<tr>
<td>Expected out-of-scope and untraceable units</td>
<td>590</td>
<td>446</td>
<td>1036</td>
</tr>
<tr>
<td>Expected units sent to collection after removing out-of-scope, untraceable units &amp; overlap units</td>
<td>4,383</td>
<td>2,649</td>
<td>7,032</td>
</tr>
<tr>
<td>Expected units after removing additional out-of-scope units determined during collection</td>
<td>4,283</td>
<td>2,574</td>
<td>6,857</td>
</tr>
<tr>
<td>Expected weighted response rate</td>
<td>69.92%</td>
<td>64.54%</td>
<td>67.91%</td>
</tr>
<tr>
<td>Expected number of respondents if we remove overlap with LASS only</td>
<td>2,995</td>
<td>1,661</td>
<td>4,657</td>
</tr>
</tbody>
</table>
Table 3 – Expected Number of Respondents if Remove Overlap with LASS and CFMH

<table>
<thead>
<tr>
<th></th>
<th>Regulars</th>
<th>Reservists</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002 respondents</td>
<td>5,155</td>
<td>3,286</td>
<td>8,441</td>
</tr>
<tr>
<td>Expected overlap with LASS</td>
<td>182</td>
<td>191</td>
<td>373</td>
</tr>
<tr>
<td>Expected overlap with 2013 CFMH</td>
<td>408</td>
<td>175</td>
<td>583</td>
</tr>
<tr>
<td>Expected out-of-scope and untraceable units</td>
<td>562</td>
<td>437</td>
<td>999</td>
</tr>
<tr>
<td>Expected units sent to collection after removing</td>
<td>4,003</td>
<td>2,483</td>
<td>6,486</td>
</tr>
<tr>
<td>out-of-scope, untraceable &amp; overlap units</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expected units after removing additional out-of-</td>
<td>3,903</td>
<td>2,408</td>
<td>6,311</td>
</tr>
<tr>
<td>scope units determined during collection</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expected weighted response rate</td>
<td>69.24%</td>
<td>63.82%</td>
<td>67.17%</td>
</tr>
<tr>
<td>Expected number of respondents if we remove</td>
<td>2,702</td>
<td>1,537</td>
<td>4,239</td>
</tr>
<tr>
<td>overlap with both surveys</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

These tables show that the expected yield is enough to meet client’s stated needs of 2,500 respondents.
5.0 Survey Activities

5.1 Questionnaire Design

As discussed previously, this survey would be a mixture of content that was already used in the 2002 survey and some new content. Content from the US Military Family Lifestyle survey (annually conducted by Blue Star Families) and from the Netherlands Mental Health Survey and Incidence Study (NEMESIS) might also be used to have international comparability. The client and Statistics Canada would work together to develop survey-specific content. The total survey content would be approximately 75 minutes in length. Once the testing version of the English questionnaire would have been developed, Statistics Canada would have it translated to French.

Statistics Canada in collaboration with the client would also develop a consent form that would have to be signed by each respondent agreeing to provide biological samples.

5.2 Survey Testing

Questionnaires play a central role in the data collection process. They have a major impact on data quality, particularly response accuracy, and on the image that Statistics Canada projects to the public. A well-designed questionnaire should minimize the response burden for respondents and collect data efficiently with a minimum number of response and non-response errors. Moreover, well-designed questionnaires should lead to an overall reduction in the cost and time associated with data collection and processing.

Every new survey instrument, even if composed of reused or standard reliable questions, has to be tested to ensure that, as a whole, it works as intended and that it is easy to administer, easy to process, respondent-friendly and interviewer-friendly. Additionally, the testing helps with preparation of relevant materials for respondents and interviewers. The Statistics Canada policy on the review and testing of questionnaires concerns all aspects of questionnaire design that may influence data quality, respondent behavior and interviewer performance. This Policy also supports the use of standard formulations of commonly asked questions across surveys, where appropriate, as a means of using well-tested questions and promoting coherence. Testing the questionnaire works as described below.

First, after the client and Statistics Canada have elaborated and thoroughly reviewed the questionnaire, a review committee composed of Statistics Canada’s specialists meets to discuss the content to suggest improvements. The new version of the questionnaire that is created following this revision undergoes qualitative testing. The survey instrument would be tested in English and in French, with current and former members of the CF. These one-on-one sessions allow testing of the respondents’ understanding of the questions, ability and willingness to provide answers, overall impression of the survey, and ability to respond to a computer assisted questionnaire. The survey team usually have the opportunity to observe these testing interviews.

The survey instrument is then improved in light of the test and based on recommendations from the questionnaire design specialists. If necessary, the changes are tested again, on a smaller scale. Statistics Canada and the client then give their final approval on the content.

With the final questionnaire ready, Statistics Canada programmers then develop the computer application which undergoes a thorough three-stage testing process. This process ensures that the instrument works as intended and that all collected information returns to the head office.

5.3 Data Collection

Two viable collection modes have been identified. The first one is the computer-assisted telephone interviews (CATI). In this case, respondents would be contacted and would respond to
Follow-up Survey of the Respondents to the 2002 Canadian Forces Mental Health Survey – Feasibility Study

the survey over the phone. The second option is to use computer-assisted personal interviews (CAPI) in which case, the interview would be done in person.

For either option (CATI or CAPI), Statistics Canada interviewers receive classroom training to become familiar with the survey content and the collection procedures. They then practice the use of the computer-assisted interview applications. During the field work, senior interviewers support them. In case of respondents’ refusal to answer the survey, the interviewers and senior interviewers attempt to convince the respondents to change their mind and to participate.

To obtain respondents’ full cooperation, a survey must be perceived as a legitimate study with important, useful objectives and it must not be overly demanding. To this end, an introductory letter to respondents should be prepared that explains the nature and goals of the survey and the important contribution that participants would be making in terms of informing developmental research and policy formulation.

Data collection would take about six months to be completed (excluding the collection of biological samples) and the progress would be monitored. After completion of data collection, interviewers usually participate in debriefing sessions to produce a report that is used to evaluate the quality of survey data. These reports are also very helpful to address issues with future training, collection, and refinement of the questionnaire as well as for improving similar surveys that could potentially be put in place in the future.

5.4 Data Processing

Data processing includes editing of question flows, data imputation if applicable, editing data for consistency, creation of derived variables, and calculation of scores for the scales.

The survey weights are also produced and added to the file. For this survey, the sampling weights would be the 2002 survey final weights, which would then be adjusted for non-response to produce final survey weights. Then, the master file containing all the survey information without personal identifiers of respondents is created and survey documentation is prepared.

5.5 Client Inputs

The survey client would be expected to participate in the development of the questionnaire and at the stage of creation of derived variables. During the entire survey process the client would be kept informed about progress and consulted, if need arises.

5.6 Deliverables

A Master file would be produced for use on Statistics Canada premises (i.e. Statistics Canada’s Research Data Centers) by researchers considered “deemed employees”. The file would comprise data from all survey respondents but would be stripped of respondents’ identifying information. It would also include variables extracted from linked data files in cases where Statistics Canada’s Policy Committee provides approval. To obtain access to the file, a research proposal must be completed and approved by Statistics Canada, an enhanced reliability check carried out, and a research contract signed. Researchers can then be sworn-in under the Statistics Act and provided access to the file.

The Master file is produced as an ASCII text file, although Statistics Canada can provide the file in other formats on request. Statistics Canada has provided data to clients in such formats as SAS files, SPSS files and .DBF databases. If the format requested is not one we are familiar with, there may be a cost associated with doing the conversion.
A number of documents would also be included in the file package:

- A Microdata User’s Guide, which describes the purpose of the survey, the survey design and collection methodology, the data collection, data processing and weighting strategies; it also includes a guide to tabulations and data quality, including response rates;
- The survey questionnaire;
- A codebook, which describes all the variables on the master file, including the values they can have and frequency counts for each value;
- SAS and SPSS cards, which include the input statements to read the file from ASCII text, label statements to describe each variable on the file, and format statements to describe the values associated with each variable.

Before releasing information into the public domain, it would be necessary to develop a communications strategy. The communication strategy would be developed jointly by Statistics Canada and the client. Statistics Canada file releases into the public domain are always indicated in the Statistics Canada Daily, on the day of the file’s release.

### 5.7 Schedule of Activities

Since the collection team at Statistics Canada cannot commit interviewers until confirmation that a survey will go ahead, the schedule below must be considered tentative and will need to be revised if there is a significant period of time between the delivery of this feasibility study and the decision to proceed with a survey. All survey work is pivotal around the collection period and collection availability would need to be negotiated with other Statistics Canada surveys that are being considered for collection during the same time period.

Funding for this project is to be obtained from a grant for which the submission would take place in September 2013. Decision about obtaining money from the grant or not is expected in January 2014. If the grant is obtained, funding is to officially start in April 2014. For illustrative purposes, the dates provided in the below schedule are based on a start date for collection in April 2015.

These dates will be adjusted once confirmation is received that the survey will proceed. In Table 4, SC=Statistics Canada. The tasks are separated by Statistics Canada reference year (April 1st to March 31st) in which they would potentially take place. Please note that even though activities are identified in a given fiscal year, some of them might overlap different fiscal years.

It is also important to note that the proposed dates do not include the extra time that would be needed to plan all activities related to the collection of biological samples. In particular, if contracts have to be negotiated with labs, it can be lengthy process. To provide a better estimate of the schedule, experts would have to be involved in helping us determining a realistic scenario.

### Table 4 – Potential Schedule of Activities

<table>
<thead>
<tr>
<th>Activity</th>
<th>Description</th>
<th>Dates</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2013-2014</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project Development</td>
<td></td>
<td>Jan. – Mar. 2014</td>
<td></td>
</tr>
<tr>
<td>Development work</td>
<td>Prepare Letter of Agreement, administrative work, notify Policy Committee of linkage intention</td>
<td>Jan. – Mar. 2014</td>
<td>SC &amp; client</td>
</tr>
<tr>
<td><strong>2014-2015</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Questionnaire Content</td>
<td></td>
<td>Apr. – Sep. 2014</td>
<td></td>
</tr>
<tr>
<td>Activity</td>
<td>Description</td>
<td>Dates</td>
<td>Responsibility</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>------------------------------------------------------------------------------</td>
<td>------------------</td>
<td>----------------</td>
</tr>
<tr>
<td>Survey content development</td>
<td>Develop survey instruments, do qualitative review and primary testing</td>
<td>Apr. – Aug. 2014</td>
<td>SC &amp; client</td>
</tr>
<tr>
<td>Translation</td>
<td>Translate survey instruments into French</td>
<td>Aug. 2014</td>
<td>SC</td>
</tr>
<tr>
<td>Qualitative testing</td>
<td>Perform in-depth qualitative testing</td>
<td>Sep. 2014</td>
<td>SC &amp; client</td>
</tr>
<tr>
<td>Questionnaire Application</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAI application</td>
<td>Create specifications, program and test the application</td>
<td>Oct. 2014 – Mar. 2015</td>
<td>SC</td>
</tr>
<tr>
<td>Consent forms design and printing</td>
<td>Develop consent forms to collect biological samples</td>
<td>Mar. 2015</td>
<td>SC</td>
</tr>
<tr>
<td>Methodology</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frame creation and sample selection</td>
<td>Create sample file from 2002 survey and other admin files for tracing respondents</td>
<td>Nov. 2014 – Jan. 2015</td>
<td>SC</td>
</tr>
<tr>
<td>Collection Planning</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interviewer training material</td>
<td>Prepare, translate and print interviewer &amp; training manual, prepare training</td>
<td>Nov. 2014 – Jan. 2015</td>
<td>SC &amp; client</td>
</tr>
<tr>
<td>Communications material</td>
<td>Prepare and translate brochure (if applicable) and introductory letter</td>
<td>Nov. – Dec. 2014</td>
<td>SC &amp; client</td>
</tr>
<tr>
<td>Collection planning</td>
<td>Hire interviewers, plan assignments, mail introductory letter to respondents</td>
<td>Dec. 2014 – Jan. 2015</td>
<td>SC</td>
</tr>
<tr>
<td>Interviewer training</td>
<td>Train interviewers in head offices and regional offices</td>
<td>Feb. – Mar. 2015</td>
<td>SC</td>
</tr>
<tr>
<td>Collection</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Collection activities</td>
<td>Collect data</td>
<td>Apr. – Sep. 2015</td>
<td>SC</td>
</tr>
<tr>
<td>Processing &amp; file production</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Imputation, creation of weights</td>
<td>Impute data and create weights by the methodology team</td>
<td>Jul. – Nov. 2015</td>
<td>SC</td>
</tr>
<tr>
<td>Final processing file</td>
<td>Create final processing file</td>
<td>Dec. 2015</td>
<td>SC</td>
</tr>
<tr>
<td>Documentation</td>
<td>Prepare codebooks and micro data user guide</td>
<td>Jan. – Mar. 2016</td>
<td>SC</td>
</tr>
<tr>
<td>Release</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Master file to Research Data Centers</td>
<td>Announce in Statistics Canada Daily that data are available</td>
<td>Apr. 2016</td>
<td>SC</td>
</tr>
</tbody>
</table>
5.8 Cost Estimates

We have provided two cost estimates, one for a computer-assisted telephone interview (CATI) and another one for a computer-assisted personal interview (CAPI). It is important to note that these cost estimates do not include extra cost that would be incurred from collecting saliva or blood samples. If a decision is made to include collection of biological specimens as part of the survey, budget will require review. Input from experts both within and outside of Statistics Canada will be required to complete this review. Each cost estimate is broken down by activity and by Statistics Canada fiscal year (April 1st to March 31st). Please note that even though activities are identified in a given fiscal year, some of them might overlap different periods.

The following cost estimates are based on various assumptions stated below. Any changes to the assumptions would affect the cost. These estimates should be considered preliminary until final decisions have been made about the survey design.

- A sample size of 7,032 individuals.
- A targeted response rate of 68%.
- An interview of about 75 minutes in length.
- The 2013/2014 salary rates (subject to change in subsequent years, projected 1.5% salary increase for 2014/2015, 2.25% for 2015/2016 and 3.38% for 2016/2017).

Table 5 – CATI Survey Cost Estimate

<table>
<thead>
<tr>
<th>Activity</th>
<th>Estimated cost</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2014-2015</strong></td>
<td></td>
</tr>
<tr>
<td>Project Development</td>
<td></td>
</tr>
<tr>
<td>Development work</td>
<td>$ 16,000</td>
</tr>
<tr>
<td>Project Management</td>
<td>$ 205,000</td>
</tr>
<tr>
<td>Questionnaire Content</td>
<td></td>
</tr>
<tr>
<td>Survey content development</td>
<td>$ 60,000</td>
</tr>
<tr>
<td>Translation</td>
<td>$ 4,000</td>
</tr>
<tr>
<td>Qualitative testing</td>
<td>$ 35,000</td>
</tr>
<tr>
<td>Questionnaire Application</td>
<td></td>
</tr>
<tr>
<td>CAI application</td>
<td>$ 185,000</td>
</tr>
<tr>
<td>Consent forms design and printing</td>
<td>$ 1,000</td>
</tr>
<tr>
<td>Methodology</td>
<td></td>
</tr>
<tr>
<td>Frame creation and sample selection</td>
<td>$ 25,000</td>
</tr>
<tr>
<td>Collection Planning</td>
<td></td>
</tr>
<tr>
<td>Communications and interviewer training material</td>
<td>$ 5,000</td>
</tr>
<tr>
<td>Collection planning</td>
<td>$ 115,000</td>
</tr>
<tr>
<td>Interviewer training</td>
<td>$ 13,000</td>
</tr>
<tr>
<td><strong>2015-2016</strong></td>
<td>$ 1,059,000</td>
</tr>
<tr>
<td>Project Management</td>
<td>$ 135,000</td>
</tr>
<tr>
<td>Collection</td>
<td></td>
</tr>
<tr>
<td>Collect data</td>
<td>$ 675,000</td>
</tr>
<tr>
<td>Processing and file production</td>
<td></td>
</tr>
<tr>
<td>Imputation, creation of weights</td>
<td>$ 125,000</td>
</tr>
<tr>
<td>Final processing file</td>
<td>$ 112,000</td>
</tr>
<tr>
<td>Documentation</td>
<td>$ 12,000</td>
</tr>
<tr>
<td><strong>2016-2017</strong></td>
<td>$ 47,000</td>
</tr>
<tr>
<td>Project Management</td>
<td>$ 29,000</td>
</tr>
<tr>
<td>Release</td>
<td></td>
</tr>
<tr>
<td>Master file to Research Data Centers</td>
<td>$ 18,000</td>
</tr>
<tr>
<td><strong>GRAND TOTAL</strong></td>
<td>$ 1,770,000</td>
</tr>
</tbody>
</table>
### Table 6 – CAPI Survey Cost Estimate

<table>
<thead>
<tr>
<th>Activity</th>
<th>Estimated cost</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2014-2015</strong></td>
<td></td>
</tr>
<tr>
<td>Project Development</td>
<td></td>
</tr>
<tr>
<td>Development work</td>
<td>$16,000</td>
</tr>
<tr>
<td>Project Management</td>
<td>$205,000</td>
</tr>
<tr>
<td>Questionnaire Content</td>
<td></td>
</tr>
<tr>
<td>Survey content development</td>
<td>$60,000</td>
</tr>
<tr>
<td>Translation</td>
<td>$4,000</td>
</tr>
<tr>
<td>Qualitative testing</td>
<td>$35,000</td>
</tr>
<tr>
<td>Questionnaire Application</td>
<td></td>
</tr>
<tr>
<td>CAI application</td>
<td>$185,000</td>
</tr>
<tr>
<td>Consent forms design and printing</td>
<td>$1,000</td>
</tr>
<tr>
<td>Methodology</td>
<td></td>
</tr>
<tr>
<td>Frame creation and sample selection</td>
<td>$25,000</td>
</tr>
<tr>
<td>Collection Planning</td>
<td></td>
</tr>
<tr>
<td>Communications and interviewer training material</td>
<td>$9,000</td>
</tr>
<tr>
<td>Collection planning</td>
<td>$130,000</td>
</tr>
<tr>
<td>Interviewer training</td>
<td>$16,000</td>
</tr>
<tr>
<td><strong>2015-2016</strong></td>
<td>$1,624,000</td>
</tr>
<tr>
<td>Project Management</td>
<td>$135,000</td>
</tr>
<tr>
<td>Collection</td>
<td></td>
</tr>
<tr>
<td>Collect data</td>
<td>$1,240,000</td>
</tr>
<tr>
<td>Processing and file production</td>
<td></td>
</tr>
<tr>
<td>Imputation, creation of weights</td>
<td>$125,000</td>
</tr>
<tr>
<td>Final processing file</td>
<td>$112,000</td>
</tr>
<tr>
<td>Documentation</td>
<td>$12,000</td>
</tr>
<tr>
<td><strong>2016-2017</strong></td>
<td>$50,000</td>
</tr>
<tr>
<td>Project Management</td>
<td>$29,000</td>
</tr>
<tr>
<td>Release</td>
<td></td>
</tr>
<tr>
<td>Master file to Research Data Centers</td>
<td>$21,000</td>
</tr>
<tr>
<td><strong>GRAND TOTAL</strong></td>
<td>$2,360,000</td>
</tr>
</tbody>
</table>
6.0 *The Statistics Canada Approach*

If statistics Canada is chosen to design and/or implement the proposed study, there are a number of conditions that clients should fully appreciate prior to sponsoring a study.

6.1 *The Project Team Approach*

Projects managed by the Special Surveys Division are normally designed and implemented by an inter-disciplinary project team. Apart from the sponsoring agency, this team includes representatives from Statistics Canada field operations, survey methodology, survey management, data processing and analysis divisions. This approach requires a considerable “in-person” input on the part of the sponsoring agency at a sufficiently high level to make decisions concerning questionnaire content, wording and other aspects of study.

6.2 *The Steering Committee*

The day to day work of the Project Team is guided by a Steering Committee of line managers from Statistics Canada and senior representatives from the sponsoring agencies. Apart from meeting periodically to approve survey schedule, cost estimates and design details, the Steering Committee is responsible for ensuring Statistics Canada’s credibility and image as Canada’s national statistical agency.

Where the survey is to be conducted as a supplement to another survey, the Steering Committee is also responsible for ensuring that the response rates and data quality of the “mother” survey are not unduly affected. The Steering Committee reserves the right to limit the number of questions asked and to veto questions which it considers to be overly sensitive.

6.3 *Contracts*

All externally sponsored surveys are governed by Statistics Canada’s cost recovery policies and procedures. A copy of the conditions which would apply to the contract for this survey is attached in Appendix A.

6.4 *Access to Data*

All Statistics Canada surveys are collected under the authority of the Statistics Act. Official release of all Statistics Canada data must take place through an announcement in Statistics Canada’s publication, The Daily. Sponsors of a cost-recovered survey may be granted access to work in progress and to final survey results for a reasonable period prior to official release, but official release through The Daily of the results of cost-recovered surveys is mandatory. Each cost-recovered contract will have provisions that:

1. restrain the sponsor from disseminating survey results until officially released by Statistics Canada; and
2. specify a maximum delay between providing final data to the sponsor and their official release by Statistics Canada.

Once data from a survey have been officially released, they are publicly available. Any user can access the date for the costs of producing the particular data product of interest (e.g. publication, data file, special tabulations).

A number of alternatives are open to sponsors of special surveys with respect to data access. The most common of these are outlined below.
6.5 Access to Screened Microdata (PUMF)

Statistics Canada is obliged under the Statistics Act to ensure that no data are released that identify any individual, business, or organization. As a result, microdata from surveys (i.e. files containing the detailed responses of individual respondents) can be released to the public only after screening to ensure that no individuals can be identified, either directly or indirectly. Currently, Statistics Canada discharges this obligation through the Microdata Release Committee (MRC).

All microdata files must be reviewed and approved by the MRC prior to release of the data. Variables which directly identify a respondent, such as name, address, and telephone number, are suppressed on all files. Other variables, such as demographics, labour force activity, or language, must be reviewed to ensure that unique combinations or rare characteristics will not directly or indirectly identify any individual. By removing or collapsing selected variables on the data set, the MRC ensures that no particular individual can be identified. The most problematic variables in terms of data confidentiality are geographic identifiers and socio-demographic variables. Very often trade-offs are required between variables on the amount of detail that can be provided – increased detail for one variable results in a need for reduced detail on another. For example, providing sub-provincial geographic identifiers such as CMAs may require reducing the amount of detail available on some socio-demographic variables.

It should be noted that the protection of confidentiality includes not only the identification of individual respondents, but also of any particular individual, business, or organization named by the respondent. Hence, responses which directly or indirectly identify particular businesses or organizations (e.g. the name of the respondent's school, employer, brand of vehicle, etc.) cannot be released without permission of the third party being named.

Once approved and released, the screened microdata file is considered to be in the public domain, and is available to all users for the cost of reproduction of the file.

6.6 Access to Unscreened Microdata (Share File)

If the suppressions imposed by the MRC would likely constraint certain analyses proposed by users, two options are available for gaining access to unscreened microdata as described in sections 6.7 and 6.8.

6.7 Collection under Section 12 of the Statistics Act

Section 12 of the Statistics Act allows for the sharing of unscreened microdata with secondary users given that:

1. the secondary users enter into an agreement with STC and agree to protect individual confidentiality, to refrain from any third party release of the data and not to publish before Statistics Canada's official release,
2. the respondent is notified of the intention to share with the specified secondary users, and
3. the respondent is allowed the option to deny any sharing of his/her information.

Analysis by users not party to the Section 12 agreement would be restricted to that which could be performed using the screened public microdata file. It would be impossible for these analysts to replicate much of the analysis which could be generated from the unscreened file.

The conduct of a national survey with data sharing agreements under Section 12 of the Statistics Act may, however, have some impact on the response rate. Some respondents may refuse to participate in the survey or may not agree to share information with the sponsoring departments and, therefore reduce the survey respondent base.
6.8 **Written Consent of Respondent**

Paragraph 17(2)(b) of the Statistics Act allows for access to or release of unscreened microdata with the written consent of the respondent. The release of information with the written consent of the respondent also requires a disclosure order signed by the Chief Statistician.

The written consent would have to specify exactly what information was to be released and to whom. Release to third parties who were not named in the written consent would not be allowed. Obtaining written consent would be expected to require additional follow-up time to achieve the required response rates, and would hence increase the overall costs of collection for the survey.

6.9 **Other Access**

Users can also meet specialized data requirements by requesting custom tabulations to be generated by Statistics Canada from the detailed microdata. Users can specify any tabulation, as long as it does not allow the identification of individual respondents; the price charged for such tabulations will be the cost incurred to produce the tables.

6.10 **Record Linkage**

Record linkage is defined as the combining of two or more micro-records to form a composite record containing information about the same individual respondent or unit of observation. Record linkage may be done during survey processing as a way to increase the statistical scope of the study and, at the same time, decrease collection costs and respondent burden by reducing the number of questions that need to be asked. Record linkage activities are strictly monitored by Statistics Canada, to ensure that it will not be used for purposes that can be detrimental to the individuals involved, that the benefits to be derived from such a linkage are clearly in the public interest; and that the record linkage activity is judged not to jeopardize the future conduct of Statistics Canada’s programs. All record linkages to be conducted by Statistics Canada must follow a prescribed review and approval process.

Record linkage is being increasingly recognized as an important technique in the development, production, analysis and evaluation of statistical data. But while the value of linking data records is undisputed, Statistics Canada strives to maintain a balance between permitting record linkages for research and statistical purposes and the need to protect the privacy of individuals whose information is being used.

This means that record linkage activity is strictly monitored by Statistics Canada. All record linkages to be conducted by Statistics Canada must follow a prescribed review and approval process. Respondents must be notified at the time of collection of any planned or known linkages of their survey responses to other data files, where linkage is for other than internal methodological purposes. Planned or known linkages are those that are an integral part of the survey and are envisaged as the methodology is being developed. Internal methodological linkages would include such activities as the maintenance, validation, evaluation or re-design of ongoing data collections or research related to the design of new surveys.

Statistics Canada will undertake record linkage only if all of the following conditions are satisfied:

- The purpose of the linkage is statistical/research and is consistent with the mandate of Statistics Canada;
- The output from the linkage meets the confidentiality provisions of the Statistics Act and any requirements of the Privacy Act;
- The linkage activity has cost and respondent burden savings over other alternatives or is the only feasible option;
- The information will not be used for any purposes that can be detrimental to the individuals or groups involved and the benefits to be derived from the linkage far outweigh any invasion of privacy; and
- The activity will not jeopardize or interfere with the future conduct of Statistics Canada’s programs.

Every record linkage proposal is evaluated and approved by the Statistics Canada Policy Committee and must thoroughly address each of the conditions outlined above. The record linkage files can be used only for the studies and purposes that were described in the submission approved by Policy Committee.

6.11 **Release Policy**

To ensure that users match estimates published by Statistics Canada and generate estimates in a consistent manner, they are required to apply these guidelines before undertaking any publication or other release of the data derived from the study. The guidelines fall into four sections – timing of release, sampling variability policy, rounding policy and weighting policy.

6.12 **Timing of Release**

Statistics Canada policy is to make the certified survey results available to all users at the same time. Because of this principle, “availability to one, availability to all”, it is suggested that the release of the highlights and of the public microdata be simultaneous. Users who wish to obtain tabulations of the data prior to its release for the purpose of preparing analytical reports and/or media releases should negotiate a separate “communication and release” strategy.

6.13 **Sampling Variability Policy**

The quality of any estimate derived from the survey will be governed by the coefficient of variation (CV) of the estimate. **Table 7** summarizes the quality guidelines for LFS supplements. The same guidelines should be followed regardless of the survey design.

<table>
<thead>
<tr>
<th>Quality Level of Estimate</th>
<th>Guidelines</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Acceptable</strong></td>
<td>Estimates have a sample size of 30 or more, and low coefficients of variation in the range of 0.0% to 16.5%. No warning is required.</td>
</tr>
<tr>
<td><strong>Marginal</strong></td>
<td>Estimates have a sample size of 30 or more, and high coefficients of variation in the range of 16.6% to 33.3%. Estimates should be accompanied by a warning to caution subsequent users about the high levels of error associated with the estimates.</td>
</tr>
<tr>
<td><strong>Unacceptable</strong></td>
<td>Estimates have a sample size of less than 30, or very high coefficients of variation in excess of 33.3%. Statistics Canada recommends not to release estimates of unacceptable quality. However, if the user chooses to do so then estimates should be accompanied by the following warning: “Please be warned that these estimates do not meet Statistics Canada’s quality standards. Conclusions based on these data will be unreliable, and most likely invalid.”</td>
</tr>
</tbody>
</table>
6.14 **Rounding Policy**

All published estimates or other data for release should be rounded to the nearest thousand units using the normal rounding approach. Marginal subtotals and totals are to be derived from their corresponding unrounded components and then are to be rounded themselves to the nearest thousand units.

6.15 **Weighting Policy**

In order for estimates and analyses to be free from bias, survey weights need to be applied. The survey weights account for components of complex survey design such as stratification, multiple stages of selection or unequal probabilities of selection of respondents. Users are cautioned against releasing any unweighted tables or any analysis based on unweighted survey results as they will be misleading.

Corresponding to any estimate produced is a measure of its precision, known as the coefficient of variation. For qualitative variables, simple estimates such as totals, proportions and ratios will have their coefficients of variation provided in the microdata documentation accompanying the microdata file.

Coefficients of variation for estimates other than those mentioned above will require specific methods to be calculated. Although some of these methods will be outlined in the Microdata Documentation, the Project Manager should be contacted if it is required that these coefficients of variation be calculated by Statistics Canada.
7.0 Appendix A – Statistics Canada Cost Recovery Policies & Procedures for Externally Sponsored Surveys

General Terms and Conditions

The following terms and conditions arise from Statistics Canada’s character as a public institution that must operate transparently and in conformity with the provisions of federal legislation, notably, but not exclusively, the Statistics Act, the Privacy Act, the Access to Information Act and the Communications Policy of the Government of Canada. In addition, Statistics Canada operates transparently and in conformity with its internal management framework, notably, but not exclusively, Statistics Canada’s Quality Assurance Framework and Standards of Service to the Public. Statistics Canada’s principal objective is to increase the range and depth of statistical information on Canada’s population, society and economy available to the Canadian public.

1. Definitions
   - A survey sponsor is an organization external to Statistics Canada contributing 50% or more of total survey costs for a survey being conducted in the framework of a cost-recoverable project.
   - A survey contributor is an organization external to Statistics Canada contributing less than 50% of total survey costs for a survey being conducted in the framework of a cost-recoverable project in order to increase sample sizes in specific domains or add questions to a survey instrument.
   - A sponsored survey is any survey being conducted in the framework of a cost-recoverable project where either a survey sponsor or a survey contributor has contributed financially to defraying its cost.

   Information means any data files, data bases, tables, graphs, maps and text for which Statistics Canada is the owner or a licensee of all intellectual property rights and made available to you in accordance with this agreement, at cost or no cost, either on the Statistics Canada website or by other means as a result of a contract for goods or services.

2. Rights ceded to the sponsor and contributors
   - The survey sponsors and contributors have the unlimited right to re-disseminate any information produced in the development, execution and dissemination of a sponsored survey, except as otherwise noted in this schedule. Use of the information is governed by the Statistics Canada Open Licence Agreement.

   Survey sponsors and contributors hold exclusive rights to any product or service derived from such documents produced through the sponsor’s or contributor’s own efforts.

3. Rights reserved to Statistics Canada
   - Statistics Canada reserves the right to disseminate, in any form, results of any sponsored surveys it conducts. This reservation extends to analysis based on results of sponsored surveys.

   Statistics Canada retains its intellectual property rights to all information produced in the development, execution and dissemination of a sponsored survey, survey feasibility study or survey planning report. Statistics Canada may make any use of such documents as it sees fit.

4. Reciprocal recognition
   - Statistics Canada and the survey sponsor and contributors undertake to recognize, in significant public communications, each other’s contribution to any sponsored survey.

5. Data confidential under the Statistics Act
   - Unless otherwise stipulated in a separate agreement under data-sharing provisions of the Statistics Act, all questionnaires, unscreened microdata files and all other information identifying or potentially identifying respondents and their individual information remain the property of Statistics Canada and will not be divulged to the survey sponsor or contributors. In general, no information that is confidential under the provisions of the Statistics Act will be divulged.

6. Public use microdata files
   - As provided in "Schedule A" or at its discretion, Statistics Canada may produce a screened microdata file for public distribution from any survey undertaken. Criteria and procedures for screening, approving and disseminating microdata files for public release are the exclusive right of Statistics Canada.

7. Record linkages
   - Linkages between sponsored survey records and other data sources at the level of individual personal records may only be conducted in conformity with Statistics Canada’s policies and procedures. Survey respondents must be informed of any linkage plans at the time of collection.