

Terms of Reference, Silent Genomes Indigenous Rare Disease Diagnosis Steering Committee

This document is the Terms of Reference (TOR) for the Silent Genomes Indigenous Rare Disease Diagnosis (S-GIRDD) Steering Committee. It contains the purpose and structures of the Steering Committee, describes the membership of the committee, contains details related to oversight, operating guidelines, conflict resolution and more. This document has been developed through an Indigenous lens with care to highlight sovereignty in the process. It is vital that Indigenous Data Sovereignty¹ (IDS) rights are protected, empowering Indigenous Peoples to challenge dominant colonial data and power dynamic discourses. A culturally safe environment will be created and protected where Indigenous peoples can then make decisions and actively harness their ways of knowing for and with the Steering Committee.

The TOR is a living document and may be amended any time see fit by approval of the Steering Committee.

Introduction

An Indigenous Background Variant Library (IBVL) is being developed under Activity 3 of the Silent Genomes research project. The IBVL will hold protected² Indigenous genomic variant data from consenting Indigenous participants across Canada. This process is intricately connected to Activity 2 (Precision Diagnosis) where Indigenous children with undiagnosed genetic conditions across Canada are being offered whole genome sequencing to increase the chance of a definitive diagnosis. Genomic reference data comprising the IBVL is an integral part of accurate genomic diagnosis.

The main purpose of the IBVL is to provide Indigenous representation of genomic variant data, which are currently lacking in population databases that hold genomic reference data. Such data will indicate the DNA letters (A, C, G, or T) and their frequency that are observed in the DNA of Indigenous people at each position of the genome, some of which will be different compared to the letters and frequencies observed in other populations. Knowledge of such information allows clinicians to determine if a DNA letter observed in a patient is common and therefore less likely to cause disease. The goal is to improve diagnostic success for Indigenous children with genetic disorders and thereby address the 'genomic gap' reflecting increasing health care inequity due to limited access to precision genomic diagnosis.

¹ 'Indigenous Data Sovereignty (IDS) refers to the right of Indigenous peoples to control data from and about their communities and lands, articulating both individual and collective rights to data access and to privacy' (<https://www.stateofopendata.od4d.net/chapters/issues/indigenous-data.html>).

² The word "protected" highlights that access to the IBVL is via quality set rules and ensures security.

The S-GIRDD Steering Committee is being established to provide cultural oversight, strategic guidance, and to provide input on decisions related to the creation of the IBVL, its use within Activity 2, and as a sustainable tool for diagnosis and related research beyond the Silent Genomes Project. This Steering Committee will assist with strategic planning for the implementation and utilization of culturally appropriate policies for clinical [and approved related research] access to data held in the IBVL.

Consultation and partnership building with Indigenous communities and leaders has highlighted issues that the S-GIRDD Steering Committee will be responsible for addressing alongside the Silent Genomes team. These may evolve as the partnerships grow and the sustained oversight identifies emerging topics to be addressed. Transition to an Indigenous Governance Group, that will provide oversight of the IBVL in a sustainable manner, is planned for when the Silent Genomes project ends.

Participating Indigenous communities:

- Support their data being used to benefit their peoples but want to ensure that it is protected from culturally insensitive and unethical uses such as uses that go beyond the scope of the consent.
- Expect that Free, Prior, and Informed (FPI) Consent for individual participation has been or will be obtained and community approval when communities or Nations are involved (TCPS2-Chapter 9, 2018).
- Utilize OCAP^{®3} (2014), and/or Indigenous Data Sovereignty principles such as the CARE Principles⁴ (2019) supporting the self-determination of communities.

Mechanisms such as the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) (2007) and the CARE Principles (2019) provide a universal framework perspective on data governance for Indigenous Peoples. In the context of UNDRIP (2007), CARE Principles (2019) and the Truth and Reconciliation Commission of Canada (TRC) (2015), the Steering Committee is committed to supporting Indigenous Peoples in their assertion of Indigenous governance and self-determination. Through this TOR (but not solely through this TOR) the steering Committee will collaborate on demonstrating progress in moving these commitments forward.

³ OCAP[®] (ownership, control, access, and possession) is a registered trademark of the First Nations Information Governance Centre (FNIGC) (www.FNIGC.ca/OCAP). OCAP[®] ensures that First Nations own their information and respects that they are stewards of their information. It also reflects First Nation commitments to use and share information in a way that maximizes the benefit to a community, while minimizing harm.

⁴ The CARE (Collective Benefit, Authority to control, Responsibility, and Ethics) Principles for Indigenous Data Governance includes the right to create value from Indigenous data in ways that are grounded in Indigenous worldviews and realise opportunities within the knowledge economy. The CARE Principles for Indigenous Data Governance are people and purpose-oriented, reflecting the crucial role of data in advancing Indigenous innovation and self-determination.

The IBVL participation is anticipated to be comprised of: 1) some of the communities participating in the First Nations arm of the Canadian Alliance for Healthy Hearts and Minds (CAHHM) ['Alliance'] (refer to appendix 2) 2) persons from BC-based First Nations communities (in partnership with the First Nations Health Authority [FNHA]) and; 3) Re-consenting individuals identified from Activity 2 (family members of referred Indigenous patients to participating through National Clinic Network [NCN] sites). It is planned that these TOR be reviewed, discussed and amended based on input from all our Indigenous partners (Inuit, Métis and First Nations) regardless of level of individual or community participation in the IBVL. In the future, Inuit and Métis participation may be extended beyond those participating in Activity 2.

It is acknowledged that the building of the IBVL and establishment of its operating principles is Indigenous led and consultations are ongoing. However, we respect our partners in the process as many are at a different place and yet to decide regarding participation. The Terms of Reference (TOR) therefore apply to this Steering Committee comprised of Indigenous partners/participants and the Silent Genomes team that will engage in the process of building the IBVL and its governance framework. Ultimately, sovereignty will be exercised on the IBVL itself under the Indigenous Governance Group once the Silent Genome Project is complete.

The S-GIRDD Steering Committee will respect the path of each partner and work towards full participation in the IBVL. Indigenous partners will be able to fully engage in the process of building the IBVL, its governance framework, and subsequent data sovereignty.

Duties and Responsibilities of the Steering Committee⁵:

1. Guide in the development of the IBVL Operating Principles for Data Governance.
2. Advise on the protocols to ensure the cultural safety of the data held in the IBVL.
3. Inform on the protocols for culturally acceptable access to data held in the IBVL.
4. Review and give feedback on the utilization of data in the IBVL for clinical and for approved related research purposes.
 - If certain research is acceptable, advise on the development of a process for review of research requests (for example diagnosis for cardiac or neurological single gene disorders; genomics of host response to COVID-19 etc.)
5. Provide input for external communications regarding use of data in the IBVL (including summary data). This includes reports to Indigenous partners.

⁵ Resources and budget to operate the IBVL will be the responsibility of the BCCHR.

6. Advise on the process for review of publications (case studies, clinical research reports) generated through activities 2 and 3 of the Silent Genomes project. This will take into consideration other relevant parties and stakeholders who have in place their own review processes (such as at the Alliance or National clinical network sites).
7. Provide strategic guidance to Silent Genomes team and the leadership of the BC Children's Hospital Research Institute [BCCHR] (holder of IBVL) about maintaining the utility and usefulness of the IBVL into the future.
8. Provide guidance in the situation of complaints during the Silent Genomes project involving creation and use of the IBVL.
9. Provide guidance in conflict resolution as needed during the development of the IBVL.

Committee Membership

The S-GIRDD Steering Committee membership (8-12 people) will reflect the following:

- Elder member(s) from the territory surrounding the BC Children's Hospital
- Indigenous community member(s) with connection to genetic conditions. (These members may be suggested by community leaders, genetic counsellors, geneticists or self-nomination).
- Member(s) connected to communities of the Alliance (reporting structure to participating Alliance representatives and communities will be developed by them).
- Member(s)/representative(s) from the BC First Nations Health Authority.
- Representative(s) from the Métis National Council.
- Member(s)/representative(s) from other Indigenous organizations as pertinent to the Silent Genomes Project.
- Others as needed.

Roles of the Steering Committee

- To develop a reasonable/fully informed understanding of the project and its goals.
- To consider issues raised and provide guidance or "wise counsel" as pertinent to the governance of the IBVL and its role in precision diagnosis (activity 2).
- To highlight possible challenges to team leads and members that aim to improve the project and its outcomes/impact.
- To promote sustainable performance of the project by enabling development of a feasible and living governance framework for the IBVL (to operate after Silent Genomes Project completed).
- To assist and support in the transition plan from the Silent Genomes Project and ongoing governance and sustainability of the IBVL when project is complete. The two co-chairs of the SC, with SGP support person will lead the transition with the input of the rest of the committee.

This S-GIRDD Steering Committee will work with key members of the Silent Genomes team, including those with previous experience working with Indigenous communities, as well as those with expertise in medical sciences, genomic sciences, data security, among others; all of whom who are open to learning from the S-GIRDD Steering Committee and other Indigenous partners and working in full partnership and collaboration.

Operating Guidelines for the Steering Committee

- **Accountability and Reporting Arrangements:** Members will be required to declare any interests they might have in any issues arising at the meeting that might conflict with the Silent Genomes project and/or the IBVL. These issues may be temporary or for a single matter, and the member will be required to step away for the duration of the conflicting issue. The S-GIRDD Steering Committee minutes will be formally recorded and a summary report on a yearly basis will be made available for review by the FNHA, participating Alliance communities, and the National Clinical Network.
- **Attendance by Members:** The Chair of the Steering Committee will use their best endeavours to attend 100% of the meetings. If the Chairperson is unable to attend, they will appoint a proxy as a member of the committee. Other group members should attend a minimum of 50% of all meetings.
 - ❖ It is noteworthy that once Silent Genomes is phased out, the IBVL will be held at the BC Children’s Hospital Research Institute (BCCHR) and the Steering Committee will transition to an Indigenous Governance Group. The Governance Group that takes over may consider a rotation system on a long enough cycle and overlapping to ensure that there is continuity of knowledge.

Frequency: Steering Committee meetings will be held at least quarterly either in person or by video link/ teleconference and will require more frequent meetings as the IBVL is developed. The planning of the meetings, approving the agenda, and reviewing the minutes before distribution is the responsibility of the Chairperson. During the length of the project, a member of the Silent Genomes team will assist the Chairperson. The team leads will establish a schedule of meetings each year with priority for availability of the Chair.

- **Independent advice:** The Steering Committee may from time to time need to obtain independent advice and/or to invite experts with relevant experience to its meetings. [Any costs associated with this will require approval by the co-leads with reference to Silent Genomes budget.]
- **Confidentiality:** All members will respect the privacy of individual, family, and community stories. Personal information and stories shared amongst the group will not be disclosed without permission.

- Annual report: The Steering Committee will not be required to do annual reports. The Steering Committee will be provided with a draft annual report for their review and feedback by the Silent Genomes team.
- Terms of Reference: The Steering Committee will review its TOR on an annual basis before Silent Genomes comes to the end of their funding. This will be a “living document” and ultimately transition into the TOR of the Indigenous Governance Group for sustainability of the IBVL after Silent Genomes project is complete.

Support

1. Members of the Steering Committee shall be offered an honorarium. These payments reflect commitments to:

- 1.1. Attend meetings and any specific work required outside meetings
- 1.2. Expenses related to travel will be covered (if travel required)

2. Administration support will be provided by Silent Genomes project members. They will: 2.1. Record and distribute the minutes, agenda and relevant information to members of the Steering Committee at least 2 weeks prior to meetings.

- 2.2. Arrange venue and/or videoconference and teleconference information for meetings.
- 2.3. Organize travel and accommodation arrangements where required.
- 2.4. Arrange to pay fees and any reimbursements to members of the Steering Committee in a timely manner.
- 2.5. Record decisions and obtain approval from the Steering Committee before communicating them more widely.

Duration

The duration of the terms contained herein shall be from the date of adoption of the TOR until three months prior to the end of the project) when they shall be reviewed and may upon agreement be extended or varied. This date will provide time for review and amendments before the Silent Genomes project is complete and the Indigenous Governance Group is formalized.

Conflict Resolution

The S-GIRDD Steering Committee shall work in partnership and with respect under these terms and any conflict between the parties shall be resolved with integrity:

1. By working toward majority agreement whilst addressing the basis of conflict. A progress plan will be based on a process focused towards achieving common ground, mutually beneficial outcomes and foster an environment that delivers best practice.
2. By advice and support from independent third parties where applicable. Independent advice will be objectively considered on structural aspects, events and behavioral/attitudinal patterns and not on individual personalities.

The importance of conflict awareness and timely management is acknowledged as this has the potential to not only generate better solutions with new practices and processes but also to foster trust, increase motivation, morale, performance and productivity. Following clarification of pertinent issues from any conflict, the solution(s) agreed upon and responsibilities of each party going forward would be acknowledged. The net effect of resolution would be to ensure all opinions are thoroughly considered and addressed, and when possible resolved with consensus, or if not possible, with majority agreement (voting procedures to be established).

Note: We are still awaiting input from our partners on any different approach they may advise on this issue.

Register of Interests Declaration

A register of interests relating to other roles members of the Steering Committee will be established, maintained and updated as needed by the Activity 1 team. This will follow standard Conflicts of Interest guidelines established by the University of British Columbia (refer to appendix 4); Real, potential or perceived conflicts of interest will be obtained and updated annually and as needed.

References

CARE Principles of Indigenous Data Governance — Global Indigenous Data Alliance. (2019). Retrieved 5 February 2021, from <https://www.gida-global.org/care>

Ownership, Control, Access and Possession (OCAP™): The Path to First Nations Information Governance. (2014). Retrieved 18 January 2021, from https://fnigc.ca/wp-content/uploads/2020/09/5776c4ee9387f966e6771aa93a04f389_ocap_path_to_fn_information_governance_en_final.pdf

Rainie, S., Kukutai, T., Walter, M., Figueroa-Rodriguez, O., Walker, J., & Axelsson, P. (2019) Issues in Open Data - Indigenous Data Sovereignty. In T. Davies, S. Walker, M. Rubinstein, & F. Perini (Eds.), *The State of Open Data: Histories and Horizons*. Cape Town and Ottawa: African Minds and International Development Research Centre.

Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans – TCPS 2 (2018) – Chapter 9: Research Involving the First Nations, Inuit and Métis Peoples of Canada. (2021). Retrieved 28 January 2021, from https://ethics.gc.ca/eng/tcps2-eptc2_2018_chapter9-chapitre9.html

Truth and Reconciliation Commission: Reports. (2015). Retrieved 26 January 2021, from http://nctr.ca/assets/reports/Calls_to_Action_English2.pdf

United Nations Declaration on the Rights of Indigenous Peoples. (2007). Retrieved 5 February 2021, from https://www.un.org/development/desa/indigenouspeoples/wp-content/uploads/sites/19/2018/11/UNDRIP_E_web.pdf

APPENDICES:

1. Glossary

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| Activity 2 | Precision Diagnosis |
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| Activity 3 | Building an Indigenous Background Variant Library |
| BCCHR | BC Children's Hospital Research |
| CAHHM | Canadian Alliance for Health Hearts and Minds [Alliance] |
| CARE | Collective Benefit, Authority to Control, Responsibility, and Ethics |
| FNHA | First Nations Health Authority |
| IBVL | Indigenous Background Variant Library |
| IDS | Indigenous Data Sovereignty |
| MNC | Métis National Council |
| NCN | National Clinic Network |
| OCAP | Ownership, Control, Access, and Possession |
| TCPS2-Chapter 9 | Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans- – Chapter 9: Research Involving the First Nations, Inuit and Métis Peoples of Canada |
| TOR | Terms of Reference |
| TRC | Truth and Reconciliation Commission of Canada |
| S-GIRDD | Silent Genomes Indigenous Rare Disease Diagnosis |
| UNDRIP | United Nations Declaration on the Rights of Indigenous Peoples |

2. Alliance background and governance outline on the project/communities

Background:

CAHHM [Alliance] First Nations cohort study was part of the larger study on chronic disease in Canada which included 9700 non-indigenous participants and 2000 Indigenous participants. The First Nation participants were recruited from nine communities across Canada. The overarching objective of the CAHHM First Nations cohort was to investigate how the community-level environment is associated with individual health behaviors and the presence and progression of chronic disease risk factors and chronic diseases such as CVD and cancer. The specific objectives of the CAHHM-FN are to:

1. Determine the frequency of risk factors for CVD and cancer among First Nations people from diverse First Nations communities in Canada;
2. Characterize the availability and access to primary care screening, and management of chronic diseases and their risk factors;
3. Determine the burden of subclinical cerebrovascular and cardiac disease and ectopic adipose tissue using brain, heart, carotid, and abdomen MRI; and

4. Characterize the contextual factor profile of each community and understand how community-level environment is associated with individual health behaviors and risk factors.

In addition to the Alliance study, participants were invited to provide a blood samples for long term storage (biobanking) for use in future research studies. This was an optional and voluntary additional consent. The Silent Genomes team have partnered with the Alliance study and may be the first research study to access the biobank samples. The samples stored under 'Biobanking for future research' consents with the Alliance cohort project could be used for the development of the IBVL, with a return of the data generated to the Alliance study. The ultimate delivery of the IBVL will only happen if there is a shared desire for its creation and governance processes are acceptable and in place.

Alliance Governance outline:

The Alliance First Nations Cohort's decision making is done at two levels:

1. Community level, by the Local Community Advisory Board (LCAB), and
2. National level, by the National First Nations Working Group (NFNWG).

Each First Nation community owns their data and works with their LCAB to decide how the study data may be used. Interim data are presented to the NFNWG showing all communities anonymously, and discussion is invited and reports modified as needed. The LCAB includes a minimum of three members made up of one community member, the director health services (or equivalent), and the local lead investigator. The volunteer community member is selected and mutually agreed on by the local lead investigator and health services director. This individual has interest and experience with research. The NFNWG is composed of at least one representative from the LCAB and the local lead investigator from each community. The mandate of the NFNWG is to oversee the storage and use of all blood samples and data.

Reference: Anand, Sonia S., et al. "Canadian Alliance for Healthy Hearts and Minds: First Nations Cohort Study Rationale and Design." *Progress in Community Health Partnerships*, vol. 12, no. 1, 2018, pp. 55-64.

3. Steering Committee and Silent Genome Project members

Updated: February 2021

| | Steering Committee Members | | Silent Genome Project Members |
|----|-----------------------------------|--|--|
| 1. | Susan Dowan (Chair) | | Laura Arbour |
| 2. | Eduardo Vides (Co-chair) | | Nadine Caron |
| 3. | Syexwaliya Ann Whonnock (Elder) | | Wyeth Wasserman Solenne Correard (delegate) |
| 4. | Bonnie Davis | | Brittany Morgan |
| 5. | Joe Keesickquayash | | Sarah McIntosh |
| 6. | Lisa Mayotte | | Laurie Montour |
| 7. | Julie Morrison | | Irina Manokhina |
| 8. | Namaste Marsden | | Sonia Anand Dipika Desai (delegate) |

4. UBC Conflict of Interest information/directions

Conflicts of Interest (COI) occur when an aspect of our private life influences or conflicts with the decisions we make on behalf of the Steering Committee or appears to do so.

Although the term Conflict of Interest has come to have a negative connotation, the mere existence of a conflict of interest does not necessarily indicate wrongdoing. In order to protect the integrity of the University and the Steering Committee, Conflicts of Interest must be disclosed and managed. Please refer to the UBC website ‘Understanding Conflicts’ (<https://universitycounsel.ubc.ca/subject-areas/coi/coi-overview/>) for more information on examples of conflicts and types of conflicts.

Each member of the Steering Committee will complete a COI and be responsible for changes during their time on the Committee.

Reference: Understanding conflicts. (n.d.). Retrieved February 08, 2021, from <https://universitycounsel.ubc.ca/subject-areas/coi/coi-overview/>

5. Timeline of SC within the SG project

