Tri-Council Policy Statement

Ethical Conduct for Research Involving Humans

TCPS2 2018

Canadian Institutes of Health Research
Natural Sciences and Engineering Research Council of Canada
Social Sciences and Humanities Research Council

Government of Canada Gouvernement du Canada

Canada

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Note: For the most recent information on amendments, please consult the official online version of the TCPS at www.pre.ethics.gc.ca.

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The expertise and commitment of numerous people have contributed to TCPS 2 (2018) – this revised version of the *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans*. On behalf of the members of Panel on Research Ethics (Panel), I acknowledge and thank all who have contributed to the process and deliberations that led to the launch of TCPS 2 (2018). Research ethics practices and policy in Canada are strengthened by this collaborative effort and shared commitment to develop and maintain high ethical standards for ethical research involving humans.

The Secretariat on Responsible Conduct of Research (Secretariat), through its Executive Director, Susan Zimmerman, and group of policy analysts, provided efficient substantive and administrative support to the Panel. The Secretariat's commitment enabled and sustained the Panel through this multi-year process of revising and expanding the guidance in TCPS 2 (2018).

Engagement with Canada's research community and those with a professional focus on research ethics has continued to inform the priority areas for clarification and development of TCPS 2 (2018). Several vehicles enable this sharing of insights and suggestions. These include the TCPS 2 interpretation service, the survey upon completion of the online Course on Research Ethics (CORE), the Secretariat's speaking engagements at regional and national meetings, and public consultations on the Panel's proposed changes.

In addition, the Panel struck two subcommittees – the Chapter 11 (Clinical Trials) Subcommittee and the Material Incidental Findings Subcommittee – to engage closely with experts in these specific areas. These groups fostered critical deliberations about ethical conduct of research and provided the Panel with individual and collective perspectives for evolving research ethics policy. Members of these subcommittees generously contributed substantial time and expertise that informed this revision.

Integral to formulating and recommending the changes for TCPS 2 (2018) are the talented and dedicated members of the Panel, especially present members and those of the recent past. It is a privilege to have worked with each of you, and also a pleasure.

Respectfully,

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INTRODUCTION

The *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans* (TCPS or the Policy) is a joint policy of Canada's three federal research agencies – the Canadian Institutes of Health Research (CIHR), the Natural Sciences and Engineering Research Council of Canada (NSERC), and the Social Sciences and Humanities Research Council (SSHRC), or "the Agencies."

This Policy expresses the Agencies' continuing commitment to the people of Canada to promote the ethical conduct of research involving humans. It has been informed, in part, by leading international ethics norms, all of which may help, in some measure, to guide Canadian researchers, in Canada and abroad, in the conduct of research involving humans.

This edition introduces the second set of substantive changes to the Policy since the second edition of the TCPS was launched in 2010. It reflects the commitment of the Agencies to keep the TCPS current and responsive to the ethical issues that arise in the course of research involving humans. Most importantly, it reflects the feedback, questions and requests for guidance expressed by the research community, and the responses generated by the Panel on Research Ethics and the Secretariat on Responsible Conduct of Research. With these revisions to the Policy, as well their interpretation service and outreach functions, the Panel and Secretariat seek to facilitate the integration of ethics into the design and conduct of research involving humans.

Mandate of the Agencies

The people of Canada, through Acts of Parliament,[1] have created and funded the Agencies to promote and assist research within their respective legislative mandates. In discharging their mandates, the Agencies wish to promote research that is conducted according to the highest ethical standards. The Agencies have therefore adopted this Policy as a benchmark for the ethical conduct of research involving humans.

Compliance with the Policy

As a condition of funding,[2] the Agencies require that researchers and their institutions apply the ethical principles and the articles of this Policy and be guided by the Application sections of the articles. Institutions must therefore ensure that research conducted under their auspices complies with this Policy. Researchers are expected, as a condition of funding, to adhere to the TCPS. Institutions should support their efforts to do so. Failure to fulfill the requirements of the TCPS, by the researcher or the institution, may result in recourse by the Agencies, as set out in the *Tri-Agency Framework: Responsible Conduct of Research*.

Organizations and entities not party to the Agreement are welcome to adopt this Policy to guide the ethical aspects of the design, review and conduct of research involving humans. Since the adoption of the original Policy in 1998, many bodies in Canada and abroad have adopted, adapted and been guided by this document. The Agencies hope that this Policy will continue to serve as a model and guide for the ethical conduct of research involving humans.

The Agencies recognize that considerations around the ethical conduct of research involving humans are complex and continually evolving. We welcome comments and discussion and commit to the continued evolution of this document.

The official version of this Policy is the online version, which is continuously updated and available to print.

Endnotes

1 See *Canadian Institutes of Health Research Act*, Statutes of Canada, 2000, Chapter 6; *Natural Sciences and Engineering Research Council Act*, Revised Statutes of Canada, 1985, Chapter N-21; *Social Sciences and Humanities Research Council Act*, Revised Statutes of Canada, 1985, Chapter S-12.

2 *Agreement on the Administration of Agency Grants and Awards by Research Institutions*. http://www.science.gc.ca/eic/site/063.nsf/eng/h_56B87BE5.html

CHAPTER 1

ETHICS FRAMEWORK

A. Importance of Research and Research Ethics

The search for knowledge about ourselves and the world around us is a fundamental human endeavour. Research is a natural extension of this desire to understand and to improve the world in which we live.

The scope of research is vast. On the purely physical side, it ranges from seeking to understand the origins of the universe down to the fundamental nature of matter. At the analytic level, it covers mathematics, logic and metaphysics. Research involving humans ranges widely, including attempts to understand the broad sweep of history, the workings of the human body and the body politic, the nature of human interactions and the impact of nature on humans – the list is as boundless as the human imagination. For the purposes of the *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans* (TCPS or the Policy), research is defined as an undertaking intended to extend knowledge through a disciplined inquiry or systematic investigation.

There can be no doubt that research has greatly enriched and improved our lives. Significant advances in human understanding in the social sciences, humanities, natural sciences, engineering and health sciences have been made as a result of research involving humans. A fundamental premise of this Policy is that research can benefit human society. In order to maximize the benefits of research, researchers must have academic freedom. Academic freedom includes freedom of inquiry; the right to disseminate the results of that inquiry; freedom to challenge conventional thought; freedom to express one's opinion about the institution, its administration or the system in which one works; and freedom from institutional censorship. With academic freedom comes responsibility, including the responsibility to ensure that research involving humans meets high scientific and ethical standards that respect and protect the participants. Thus, researchers' commitment to the advancement of knowledge also implies duties of honest and thoughtful inquiry, rigorous analysis, commitment to the dissemination of research results, and adherence to the use of professional standards. There is a corresponding responsibility on the part of institutions to defend researchers in their efforts to uphold academic freedom and high ethical, scientific and professional standards.

Research is a step into the unknown. Because it seeks to understand something not yet revealed, research often entails risks to participants and others. These risks can be trivial or profound, physical or psychological, individual or social. History offers unfortunate examples where research participants have been needlessly, and at times profoundly, harmed by research, sometimes even dying as a result. Ethical principles and guidelines play an important role in advancing the pursuit of knowledge while protecting and respecting research participants in order to try to prevent such occurrences.

People have also been gratified and have had their lives enriched by their participation in research, either because they may have benefited directly or because their participation has contributed to the expansion of knowledge. Given the fundamental importance of research and of human participation in research, we must do all that we can as a society to ensure that research is conducted in an ethical manner so as to build public confidence and trust. By promoting and guiding the ethical conduct of research involving humans, this Policy seeks to contribute tangibly to these goals.

No single document can provide definitive answers to all ethical issues that may arise in an undertaking as complex as research involving humans. This Policy aims to assist those who use it – namely researchers, sponsors, members of research ethics boards (REBs), participants, and the public – to identify ethical issues in the design, conduct and oversight of research and to point the way to arriving at reasoned and ethical responses to these issues.

B. Core Principles

Respect for human dignity has been an underlying value of the Policy since its inception. Despite clear recognition of its centrality in research ethics, the term lends itself to a variety of definitions and interpretations that make it challenging to apply.

Respect for human dignity requires that research involving humans be conducted in a manner that is sensitive to the inherent worth of all human beings and the respect and consideration that they are due. In this Policy, respect for human dignity is expressed through three core principles: Respect for Persons, Concern for Welfare, and Justice. These core principles transcend disciplinary boundaries and, therefore, are relevant to the full range of research covered by this Policy.

Article 1.1 The guidelines in this Policy are based on the following three core principles:

- Respect for Persons
- Concern for Welfare
- Justice

These principles are complementary and interdependent. How they apply and the weight accorded to each will depend on the nature and context of the research being undertaken. Specific applications are addressed in the following chapters.

Respect for Persons

Respect for Persons recognizes the intrinsic value of human beings and the respect and consideration that they are due. It encompasses the treatment of persons involved in research directly as participants and those who are participants because their data or human biological materials (which, for the purposes of this Policy, include materials related to human reproduction) are used in research. Respect for Persons incorporates the dual moral obligations to respect autonomy and to protect those with developing, impaired or diminished autonomy.

Autonomy includes the ability to deliberate about a decision and to act based on that deliberation. Respecting autonomy means giving due deference to a person's judgment and ensuring that the person is free to choose without interference. Autonomy is not exercised in isolation but is influenced by a person's various connections to family, to community, and to cultural, social, linguistic, religious and other groups. Likewise, a person's decisions can have an impact on any of these connections.

An important mechanism for respecting participants' autonomy in research is the requirement to seek their free, informed and ongoing consent. This requirement reflects the commitment that participation in research, including participation through the use of one's data or biological materials, should be a matter of choice and that, to be meaningful, the choice must be informed. An informed choice is one that is based on as complete an understanding as is reasonably possible of the purpose of the

research, what it entails, and its foreseeable risks and potential benefits, both to the participant and to others. Respect for Persons also includes a commitment to accountability and transparency in the ethical conduct of research.

Certain factors may diminish a person's ability to exercise their autonomy, such as inadequate information or understanding for deliberation, or a lack of freedom to act due to controlling influences or coercion. Such constraints may include the fear of alienating those in positions of authority, such as professional or personal caregivers, researchers, leaders, larger groups, or a community to which one belongs. Other constraints may consist of barriers to accessing resources or knowledge outside the research context. These factors and constraints should be addressed prior to any research being carried out, so as to ensure participants are sufficiently protected.

Some people may be incapable of exercising autonomy because of youth, cognitive impairment, other mental health issues or illness. While autonomy may be considered a necessary condition for participation in research, involving those who lack capacity to make their own decisions to participate can be valuable, just and even necessary. For those prospective participants, additional measures are needed to protect their interests and to ensure that their wishes (to the extent that these are known) are respected. These measures will generally include seeking consent from an authorized third party who is entrusted to make decisions on behalf of the prospective participant, based on knowledge of that person and that person's wishes or, if such wishes are unknown, on consideration of that person's welfare. Even when the requirements of free, informed and ongoing consent cannot be met, Respect for Persons requires involving individuals in circumstances of vulnerability in decision making where possible. This may include asking about their feelings regarding participation and/or for their assent.

Where it is foreseeable that a participant may lose decision-making capacity during a research project, for example in studies of cognitive impairment, it may be appropriate to ask participants to express their preferences and ensure that they have authorized a trusted person to make decisions on their behalf should they lose the capacity to decide whether to continue their research participation. See Article 3.1 for guidance on research directives for individuals who lack decision-making capacity.

Concern for Welfare

The welfare of a person is the quality of that person's experience of life in all its aspects. Welfare consists of the impact on individuals of factors such as their physical, mental and spiritual health, as well as their physical, economic and social circumstances. Thus, determinants of welfare can include housing, employment, security, family life, community membership and social participation, among other aspects of life. Other contributing factors to welfare are privacy and the control of information about the person, and the treatment of human biological materials according to the free, informed and ongoing consent of the person who was the source of the information or materials. A person's or group's welfare is also affected by the welfare of those who are important to them. Harm includes any negative effects on welfare, broadly construed (for the relationship between risk and harm, see Chapter 2, Section B). Note that, for the purposes of this Policy, "group" and "community" are used in their ordinary sense. More detailed types of community as defined in Chapter 9 are specific to Indigenous contexts.

Concern for Welfare means that researchers and REBs should aim to protect the welfare of participants, and, in some circumstances, to promote that welfare in view of any foreseeable risks associated with the research. They are to provide participants with enough information to be able to adequately assess risks and potential benefits associated with their participation in the research. To do so, researchers

and REBs must ensure that participants are not exposed to unnecessary risks. Researchers and REBs must attempt to minimize the risks associated with answering any given research question. They should attempt to achieve the most favourable balance of risks and potential benefits in a research proposal. Then, in keeping with the principle of Respect for Persons, participants or authorized third parties make the final judgment about the acceptability of this balance to them.

The welfare of groups can also be affected by research. Groups may benefit from the knowledge gained from the research, but they may also suffer from stigmatization, discrimination or damage to reputation. Engagement during the design process with groups whose welfare may be affected by the research can help to clarify the potential impact of the research and indicate where any negative impact on welfare can be minimized. Researchers must also consider the risks and potential benefits of their research and the knowledge it might generate for the welfare of society as a whole. Where research on individuals may affect the welfare of a group, the weight given to the group's welfare will depend on the nature of the research being undertaken, and the individuals or group in question. This consideration does not imply, however, that the welfare of a group should be given priority over the welfare of individuals.

Justice

Justice refers to the obligation to treat people fairly and equitably. Fairness entails treating all people with equal respect and concern. Equity requires distributing the benefits and burdens of research participation in such a way that no segment of the population is unduly burdened by the harms of research or denied the benefits of the knowledge generated from it.

Treating people fairly and equitably does not always mean treating people in the same way. Differences in treatment or distribution are justified when failures to take differences into account may result in the creation or reinforcement of inequities. One important difference that must be considered for fairness and equity is vulnerability. Vulnerability is often caused by limited decision-making capacity, or limited access to social goods, such as rights, opportunities and power. Individuals or groups whose circumstances may make them vulnerable in the context of research have historically included children, the elderly, students, women, prisoners, those with mental health issues and those with diminished capacity for self-determination. Ethnocultural minorities and those who are institutionalized are other examples of groups who have, at times, been treated unfairly and inequitably in research, or have been excluded from research opportunities. People or groups whose circumstances cause them to be vulnerable or marginalized may need to be afforded special attention in order to be treated justly in research.

The recruitment process is an important component of the fair and equitable conduct of research, for both participants who may become directly involved in research and for those who participate as the source of information or biological materials to be used in research. Participation should be based on inclusion criteria that are justified by the research question. Inequity is created when particular groups fail to receive fair benefits of research or when groups, or their data or their biological materials, are excluded from research arbitrarily or for reasons unrelated to the research question.

An important threat to Justice is the imbalance of power that may exist in the relationship between researcher and participant. Participants will generally not understand the research in the same way and in the same depth as does the researcher. Historically, there have been instances in which this power imbalance has been abused, with resulting harm to participants.

The Core Principles – Conclusion

The importance of research and the need to ensure the ethical conduct of research requires both researchers and REB members to navigate a sometimes difficult course between the two main goals of providing the necessary protection of participants and serving the legitimate requirements of research. The three core principles that express the value of human dignity provide the compass for that journey. Their application will help ensure that a balance between these two goals is maintained. Applying the core principles will also maintain free, informed and ongoing consent throughout the research process and lead to sharing the benefits of the research. These results will help to build and maintain the trust of participants and the public in the research process.

C. How to Apply This Policy

Proportionate Approach to Research Ethics Board Review

This Policy aims to strike an appropriate balance between recognition of the potential benefits of research, and protection of participants from research-related harms, including injustices and breaches of Respect for Persons. Given that research involving humans spans the full spectrum of risk, from minimal to substantial, a crucial element of REB review is to ensure that the level of scrutiny of a research project is determined by the level of risk it poses to participants (Article 6.12). A reduced level of scrutiny applied to a research project assessed as minimal risk does not imply a lower level of adherence to the core principles. Rather, the intention is to ensure adequate protection of participants is maintained while reducing unnecessary impediments to, and facilitating the progress of, ethical research. This approach is in keeping with the need to respect academic freedom and not to place unwarranted constraints upon it.

In the context of both initial and continuing research ethics review, the REB assesses the ethical acceptability of a research project through consideration of the foreseeable risks, the potential benefits and the ethical implications of the project (Article 2.9). These two steps constitute the proportionate approach to REB review that is recommended throughout the Policy.

Research Ethics and Law

In addition to the principles and guidelines in this Policy, researchers are responsible for ascertaining and complying with all applicable legal and regulatory requirements with respect to consent and the protection of privacy of participants (Chapter 5). These legal and regulatory requirements may vary depending on the jurisdiction in Canada in which the research is being conducted, and who is funding and/or conducting the research. They may comprise constitutional, statutory, regulatory, common law, and/or international or legal requirements of jurisdictions outside of Canada. Where the research is considered to be a governmental activity, for example, standards for protecting privacy flowing from the *Canadian Charter of Rights and Freedoms,* federal privacy legislation and regulatory requirements would apply.

The law affects and regulates the standards and conduct of research involving humans in a variety of areas, including, but not limited to privacy, confidentiality, intellectual property and the decision-making capacity of participants. In addition, human rights legislation and most documents on research ethics prohibit discrimination on a variety of grounds and recognize equal treatment as fundamental. REBs and researchers should also respect the spirit of the *Canadian Charter of Rights and Freedoms*, particularly the sections dealing with life, liberty and security of the person, as well as those involving equality and discrimination.

Researchers may face situations where they experience a tension between the requirements of the law and the guidance of the ethical principles in this Policy. In such situations, researchers should strive to comply with the law in the application of ethical principles. Researchers should consult with colleagues, the REB or any relevant professional body, and, if necessary, seek independent legal advice to help resolve any conflicts between law and ethics, and guide an appropriate course of action.

This legal context for research involving humans is constantly evolving and varies from jurisdiction to jurisdiction. For this reason, REBs and researchers should be aware of applicable laws so they can identify legal issues that may occur in the conduct of research. REBs may satisfy this obligation through expertise among their members or through wider consultation. The researcher may seek independent legal advice when necessary.

The Perspective of the Participant

In designing and conducting research or reviewing the ethics of research, researchers and REBs must be mindful of the perspective of the participant. It may be necessary to consider the various contexts (e.g., social, economic, cultural) that shape the participant's life, to properly evaluate the implications of the research in terms of the core principles.

Appropriate Expertise for Review

It is also important that research ethics review be appropriate to the disciplines, fields of research, and methods of the research being reviewed. This means that REBs must understand the discipline and method under review and be able to assess the research on its own terms. This Policy provides more direction concerning appropriate expertise in Articles 6.4 and 6.5.

Interpreting This Policy

This Policy contains both guidance for the interpretation of the principles of research ethics, as well as a number of mandatory requirements for researchers, institutions and members of REBs. Mandatory provisions are signaled by the use of the term "shall." Guidance for the interpretation of the core principles is generally indicated by use of the term "should."

Evaluating the ethics of research involving humans is not, and cannot be, an exact science. The interpretation and application of the articles and principles to particular circumstances will always be a part of the exercise. The articles in this Policy are intended to provide guidance, and in some cases, to set out certain requirements. The Application sections are intended to supplement the articles with further explanation and examples. Although they cannot guarantee identical decisions across REBs, they can ensure that researchers and REBs employing this Policy are operating within the same parameters and taking into account the same considerations as they design and evaluate research involving humans.

At the end of some chapters, a section entitled “References” provides links to documents that contain further guidance on specific topics addressed in the chapter. These references are not meant to be exhaustive but are offered to assist the reader who wishes to explore certain topics in greater detail. The definitions provided in this Policy are intended specifically and solely for the purposes of this Policy.

CHAPTER 2

SCOPE AND APPROACH

Introduction

The purpose of this Policy, as set out in Chapter 1, is to establish principles to guide the design, ethical conduct and ethics review process of research involving humans. This chapter outlines the scope of application of the Policy and the approach to research ethics review that flows from the core principles – Respect for Persons, Concern for Welfare, and Justice. The preferred approach to research ethics review is a proportionate approach. The research ethics board (REB) tailors the level of scrutiny by an REB to the level of risk presented by the research, and assesses the ethical acceptability of the research through consideration of the foreseeable risks, the potential benefits and the ethical implications of the research, both at the stage of the initial REB review and throughout the life of the project (continuing ethics review). The establishment, governance, jurisdiction and composition of REBs, and operational issues related to their functioning are addressed in Chapter 6.

A. Scope of Research Ethics Review

The general categories of research that require REB review in accordance with this Policy are defined in Article 2.1. Some research is exempt from REB review where protections are available by other means (Articles 2.2 to 2.4). Non-research activities do not require REB review even if they employ methods and techniques similar to those in research (Articles 2.5 and 2.6).

Research Requiring Research Ethics Board Review

Article 2.1 The following requires ethics review and approval by an REB before the research commences. Research involving:

a. living human participants;

b. human biological materials, as well as human embryos, fetuses, fetal tissue, reproductive materials and stem cells. This applies to materials derived from living and deceased individuals.

Application

The scope of this Policy is restricted to the review of the ethical conduct of research involving humans. The scope of REB review is limited to those activities defined in this Policy as "research" involving "human participants." It includes course-based research activities, the primary purpose of which is pedagogical, because of the possible risks to those recruited to participate in such activities, and the fact that, from their perspective, such activities may appear indistinguishable from those that meet this Policy's definition of research (Application of Article 6.12).

For the purposes of this Policy, "research" is defined as an undertaking intended to extend knowledge through a disciplined inquiry and/or systematic investigation. The term "disciplined inquiry" refers to

an inquiry that is conducted with the expectation that the method, results and conclusions will be able to withstand the scrutiny of the relevant research community. For example, a study seeking to explore the narratives of teens coping with mental illness would be evaluated by the established standards of studies employing similar methods, technologies and/or theoretical frameworks.

A determination that research is the intended purpose of the undertaking is key for differentiating activities that require ethics review by an REB and those that do not (Article 2.5). In some cases, it can be difficult to make this distinction, underscoring the need to have reviewers or ad hoc advisors (Articles 6.4 and 6.5) who can assist with this determination. It is important to note that choice of methodology and/or intent or ability to publish findings are not factors that determine whether an activity is research requiring ethics review.

For the purposes of this Policy, "human participants" (referred to as "participants") are those individuals whose data, biological materials, or responses to interventions, stimuli or questions by the researcher, are relevant to answering the research question(s).

Pilot studies fall within this Policy's definition of research requiring REB review. For the purposes of this Policy, pilot studies are smaller versions of the main study (e.g., fewer participants, shorter duration). The purpose of pilot studies is to assess the feasibility and/or inform the design of a subsequent study intended to address a research question. They are not intended to produce definitive results with regard to the research question, but they can facilitate the successful conduct of the main study. For example, pilot studies can help identify recruitment issues, safety issues, the need to calibrate measures, adjust equipment, or improve procedures. The benefit of pilot studies is that they can limit the investment of participant and research time and effort in studies that are unlikely to succeed in addressing the research question. The information provided may assist the researcher in deciding whether and how to conduct the main study. Typical outcomes for pilot studies include: not continuing, as the main study is not feasible; continuing with modifications to the study design; or continuing without modifications, as the main study is feasible. The design of pilot studies and the criteria used to determine feasibility may vary by discipline. Researchers should clearly identify the purpose of pilot studies in their application for research ethics review. Undertaking pilot studies in research is distinct from the initial exploratory phase of research, which may involve contact with individuals or communities, but which does not require REB review (Article 6.11).

Human participants are unique among the many parties involved in research, because they bear the primary risks of the research. These individuals are often referred to as "research subjects." This Policy prefers the term "participant" because it better reflects the spirit behind the core principles: that individuals who choose to participate in research play a more active role than the term "subject" conveys. It also reflects the range of research covered by this Policy and the varied degree of involvement by participants that different types of research offer – including the use of their data or human biological materials. The core principles of this Policy – Respect for Persons, Concern for Welfare, and Justice – help to shape the relationship between researchers and participants.

Where researchers seek to collect, use, share and access different types of information or data about participants, they are expected to determine whether the information or data proposed in research may reasonably be expected to identify an individual. For the purposes of this Policy, researchers and REBs shall consider whether information is identifiable or non-identifiable. Information is identifiable if it may reasonably be expected to identify an individual, when used alone or combined with other available information. Information is non-identifiable if it does not identify an individual, for all practical purposes,

when used alone or combined with other available information. The term "personal information" generally denotes identifiable information about an individual. The assessment of whether information is identifiable is made in the context of a specific research project. Guidance on the assessment of the potential for information to identify an individual is addressed in this Policy in Chapter 5 , Section A.

In some cases, research may involve interaction with individuals who are not themselves the focus of the research, in order to obtain information. For example, one may collect information from authorized personnel to release information or data in the ordinary course of their employment about organizations, policies, procedures, professional practices or statistical reports. Such individuals are not considered participants for the purposes of this Policy. This is distinct from situations where individuals are considered participants because they are themselves the focus of the research. For example, individuals who are asked for their personal opinions about organizations, or who are observed in their work setting for the purposes of research, are considered participants.

For the purposes of this Policy, human biological materials include tissues, organs, blood, plasma, serum, DNA, RNA, proteins, cells, skin, hair, nail clippings, urine, saliva and other body fluids. Materials related to human reproduction include embryos, fetuses, fetal tissues and human reproductive materials. Embryo means a human organism during the first 56 days of its development following fertilization or creation, excluding any time during which its development has been suspended, and includes any cell derived from such an organism that is used for the purpose of creating a human being. Fetus means a human organism during the period of its development beginning on the 57th day following fertilization or creation, excluding any time during which its development has been suspended, and ending at birth. Fetal tissue includes membranes, placenta, umbilical cord, amniotic fluid and other tissue that contains genetic information about the fetus. Human reproductive materials mean a sperm, ovum or other human cell, or a human gene, as well as a part of any of them. The term "human biological materials" may be considered, for the purposes of this Policy, to include materials related to human reproduction. The last section of Chapter 12 discusses ethical issues specific to these materials.[1]

When in doubt about the applicability of this Policy to a particular research project, the researcher shall seek the opinion of the REB. The REB makes the final decision on exemption from research ethics review.

Research Exempt from Research Ethics Board Review

Some research is exempt from REB review where protections are available by other means. The exemptions from the requirement for REB review allowed under this Policy are outlined below.

Article 2.2 Research does not require REB review when it relies exclusively on information that is:

a. publicly available through a mechanism set out by legislation or regulation and that is protected by law; or

b. in the public domain and the individuals to whom the information refers have no reasonable expectation of privacy.

Application

Publicly available and protected by law

Some types of information are available to the public in a certain form and for a certain purpose, as specified by law or regulations: registries of deaths, court judgments, or public archives and publicly available statistics (e.g., Statistics Canada files), for example. In Canada, all publicly available archives (national, provincial or municipal) have policies governing access to their records. An archival record or database that is subject to restrictions, such as those under access to information and privacy legislation, may also be considered publicly available for the purposes of this Policy.

Research that relies exclusively on information that is made available through legislation or regulation does not require REB review. Exemption from REB review for research involving this type of information is based on the presence of a custodian/steward designated in accordance with access to information and privacy legislation who protects privacy and proprietary interests associated with the information (e.g., an access to information and privacy coordinator or a guardian of Canadian census data).

Public domain with no expectation of privacy

REB review is also not required where research uses exclusively information in the public domain that may contain identifiable information, and for which there is no reasonable expectation of privacy. For example, identifiable information may be disseminated in the public domain through print or electronic publications; film, audio or digital recordings; press accounts; official publications of private or public institutions; artistic installations, exhibitions or literary events freely open to the public; or publications accessible in public libraries. Research that is non-intrusive, does not involve direct interaction between the researcher and individuals through the Internet, and where there is no expectation of privacy does not require REB review. REB review is not required for cyber-material, such as documents, records, performances, online archival materials, or published third party interviews to which the public is given uncontrolled access on the Internet and for which there is no expectation of privacy.

Exemption from REB review for this type of information is based on the information being available in the public domain, and that the individuals to whom the information refers have no reasonable expectation of privacy. Information in the public domain may, however, be subject to copyright and/or intellectual property rights protections or dissemination restrictions imposed by the legal entity controlling the information.

There are situations where REB review is required. There are digital sites in the public domain where there is a reasonable expectation of privacy. Privacy expectations may be outlined in the sites' terms of use. When accessing identifiable information in digital sites, such as online groups with restricted membership, the privacy expectation of contributors of these sites is much higher. Research involving information from these types of sources shall be submitted for REB review (Article 10.3).

Data linkage

Where data linkage of different sources of information is involved, it could give rise to new forms of identifiable information that would raise issues of privacy and confidentiality when used in research, and would therefore require REB review (Article 5.7).

When in doubt about the applicability of this article to their research, researchers should consult their REBs.

Article 2.3 REB review is not required for research involving the observation of people in public places where:

a. it does not involve any intervention staged by the researcher, or direct interaction with the individuals or groups;

b. individuals or groups targeted for observation have no reasonable expectation of privacy; and

c. any dissemination of research results does not allow identification of specific individuals.

Application

For the purposes of this article, observational research is used to mean a study involving humans that does not involve an intervention by the researcher. There are different kinds of observational research based on the discipline or field of research. The type addressed in Article 2.3 is "non-participant observational research." Non-participant observational research is the study of human acts or behaviours in a natural environment in which people involved in their normal activities are observed with or without their knowledge by researchers who do not intervene in any way in the activity (also known as "naturalistic observational research"). In contrast, "participant observational research" is the study of human acts or behaviours in a natural environment in which people involved in their normal activities are observed with or without their knowledge by researchers who participate in some way in the activity. Participant observational research generally does not meet condition (a) of Article 2.3, as there is interaction with the individuals or group being studied.

This is distinct from epidemiological observational research, which is an epidemiological study that does not involve any intervention by the researcher. Epidemiological observational research that involves personal health information (e.g., review of medical charts) generally does not meet condition (b) of Article 2.3, as health information is considered to be private.

When designing their research, researchers shall pay attention to the environment in which observation takes place, the expectation of privacy that individuals in public places might have, and the means of recording observations. Researchers shall also determine whether the use of this information in the dissemination of research results (e.g., through publications, photographs, audio recordings, or video footage of groups or particular individuals) will allow the identification of individuals observed in public places especially if the public place may be predicted to be associated with potential stigma. When in doubt, researchers should consult the REB prior to the conduct of such research. Article 10.3 addresses participant and non-participant observational studies in qualitative research.

Article 2.4 REB review is not required for research that relies exclusively on secondary use of anonymous information, or anonymous human biological materials, so long as the process of data linkage or recording or dissemination of results does not generate identifiable information.

Application

Secondary use refers to the use in research of information or human biological materials originally collected for a purpose other than the current research purpose. Anonymous information and human biological materials are distinct from those that have been coded, and also from those that have been anonymized (Section A of Chapters 5 and 12).

Rapid technological advances facilitate identification of information and make it harder to achieve anonymity. These activities may heighten risks of identification and possible stigmatization where a data set contains information about or human biological materials from a population in a small geographical area, or information about individuals with unique characteristics (e.g., uncommon field of occupational specialization, diagnosis with a very rare disease). Where the researcher seeks data linkage of two or more anonymous sets of information or human biological materials and there is a reasonable prospect that this could generate identifiable information, then REB review is required.

Guidance related to other categories of identifiable and non-identifiable information and human biological materials and their possible secondary use is provided in Chapters 5 and 12.

Activities Not Requiring Research Ethics Board Review

The following distinguishes research requiring REB review from non-research activities that have traditionally employed methods and techniques similar to those employed in research. Such activities are not considered "research" as defined in this Policy, and do not require REB review. Activities outside the scope of research subject to REB review (Articles 2.5 and 2.6), as defined in this Policy, may still raise ethical issues that would benefit from careful consideration by an individual or a body capable of providing some independent guidance, other than an REB. These ethics resources may be based in professional or disciplinary associations, particularly where those associations have established best practices guidelines for such activities in their discipline.

When in doubt about the applicability of the articles to their studies, researchers should consult their REBs.

Article 2.5 Quality assurance and quality improvement studies, program evaluation activities, and performance reviews, or testing within normal educational requirements when used exclusively for assessment, management or improvement purposes, do not constitute research for the purposes of this Policy, and do not fall within the scope of REB review.

Application

Article 2.5 refers to assessments of the performance of an organization or its employees or students, within the mandate of the organization, or according to the terms and conditions of employment or training. Those activities are normally administered in the ordinary course of the operation of an organization where participation is required, for example, as a condition of employment in the case of staff performance reviews, or an evaluation in the course of academic or professional training. Other examples include student course evaluations, or data collection for internal or external organizational reports. Such activities do not normally follow the consent procedures outlined in this Policy.

If data are collected for the purposes of such activities but later proposed for research purposes, it would be considered secondary use of information not originally intended for research, and at that time may require REB review in accordance with this Policy. Refer to Section D of Chapter 5 for guidance concerning secondary use of identifiable information for research purposes.

Article 2.6 Creative practice activities, in and of themselves, do not require REB review. However, research that employs creative practice to obtain responses from participants that will be analyzed to answer a research question is subject to REB review.

Application

Creative practice is a process through which an artist makes or interprets a work or works of art. It may also include a study of the process of how a work of art is generated. Creative practice activities do not require REB review, but they may be governed by ethical practices established within the cultural sector.

Relationship Between Research Ethics Review and Scholarly Review

Article 2.7 As part of research ethics review, the REB shall review the ethical implications of the methods and design of the research.

Application

The primary test to be used by REBs in evaluating a research project should be ethical acceptability and, where appropriate, relevant disciplinary scholarly standards.

Traditions for scholarly review vary among disciplines or fields of research, including the stage at which scholarly review occurs, and this needs to be taken into account by REBs. The extent of the scholarly review that is required for biomedical research that does not involve more than minimal risk will vary according to the research being carried out. Research in the humanities and the social sciences that poses, at most, minimal risk shall not normally be required by the REB to be peer reviewed.

REBs should normally avoid duplicating previous professional peer-review assessments unless there is a good and defined reason to do so. It is to be noted that for specific types of research (e.g., clinical trials), REBs should respect the relevant guidelines[2] that require REBs to evaluate the scientific aspects of the research as part of their research ethics review.

Researchers have a role to play in demonstrating to their REBs whether, when and how appropriate scholarly review has been or will be undertaken for their research. REBs may request that the researcher provide them with the full documentation of scholarly reviews already completed.

Where scholarly review is required,

- an REB should consider what scholarly review has been applied to a particular research project (e.g., by a funder or sponsor, or for student research by the research supervisor or thesis committee, or by a permanent peer review committee where it exists);

- if scholarly review as indicated by the relevant disciplinary tradition has not yet been done, and there is nobody available to do it, the REB should consider the following mechanisms in satisfying itself that scholarly review of the research is completed:
    - establish an ad hoc independent peer review committee;
    - if the REB has the necessary scholarly expertise, assume complete responsibility for the scholarly review. In assuming this responsibility, the REB should not be driven by factors such as personal biases or preferences, and should not reject proposals because they are controversial, challenge mainstream thought, or offend powerful or vocal interest groups.

Research Ethics Board Review Shall Be Continuing

Article 2.8 Following initial REB review and approval, research ethics review shall continue throughout the life of the project in accordance with Article 6.14.

Application

The primary goal of REB review is to ensure the ethical acceptability of research involving humans that falls within the scope of this Policy. Following the initial REB review and approval, the ethics review shall continue to ensure that all stages of a research project are ethically acceptable in accordance with the principles of this Policy.

Continuing ethics review by an REB provides those involved in the research process (in particular, researchers and REBs) with multiple opportunities to reflect on the ethical issues surrounding the research. This reflection can show whether the stated risks, or other unknown risks, were incurred and how they affected the individual and collective welfare of participants. This reflective practice is intended to enable both researchers and REBs to be more effective in protecting participants in current and future research. This practice is especially important in new and emerging fields, where the ethical implications are not yet well understood. Here, reflection should involve an ongoing dialogue among REBs and researchers, as appropriate, to enable the practices surrounding research ethics to evolve as needed to comply with the principles of this Policy.

In the conduct of their approved research, should unanticipated issues arise that may increase the level of risk or have other ethical implications, researchers shall report them to their REBs in a timely manner. Researchers shall also submit to their REBs in a timely manner requests for changes to their approved research. Further details are provided in Articles 6.14 to 6.16.

B. Approach to Research Ethics Board Review

This section introduces the concepts of risks and potential benefits of research (including a definition of minimal risk), as well as their balance in research ethics review and the conduct of research. It describes the proportionate approach to REB review: the REB tailors its level of scrutiny to the level of risk presented by the research, and assesses the ethical acceptability of the research through consideration of the foreseeable risks, the potential benefits and the ethical implications of the research, both at the stage of the initial review and throughout the life of the project (continuing ethics review).

Concepts of Risks and Potential Benefits

Potential Benefits

Research involving humans may produce benefits that positively affect the welfare of society as a whole through the advancement of knowledge for future generations, for participants themselves or for other individuals. However, much research offers little or no direct benefit to participants. In most research, the primary benefits produced are for society and for the advancement of knowledge.

Risks

Because research is a step into the unknown, its undertaking can involve harms to participants and to others. Harm is anything that has a negative effect on the welfare of participants, and the nature of the harm may be social, behavioural, psychological, physical or economic.

Risk is a function of the magnitude or seriousness of the harm, and the probability that it will occur, whether to participants or to third parties (as outlined below). A proper ethical analysis of research should consider both the foreseeable risk and the available methods of eliminating or mitigating the risk.

- ***The magnitude or seriousness of the harm***
  Potential harms in research may span the spectrum from minimal (e.g., inconvenience of participation in research) to substantial (e.g., a major physical injury or an emotional trauma). Harms may be transient, such as a temporary emotional reaction to a survey question, while other types of harm may be longer lasting, such as the loss of reputation following a breach of confidentiality, or a traumatic experience. The perspective of the participants regarding harm may vary from that of researchers. Participants themselves may vary in their reaction to the research. Researchers and REBs should attempt to assess the harm from the perspective of the participants to the extent possible. Research in certain disciplines, such as epidemiology, genetics, sociology or cultural anthropology, may present risks that go beyond the individual and may involve the interests of communities, societies or other defined groups.

- ***The probability of occurrence of the harm***
  This refers to the likelihood of participants actually suffering the relevant harms. An assessment of such probability may be based on the researcher's past experience conducting such studies, on the review of existing publications that provide rates of the relevant harms in similar issues, or on other empirical evidence. And while researchers should attempt to estimate the occurrence of the relevant harms, this may be more difficult, or not possible, for new or emerging areas of research where no prior experience, comparable research or publications exist.

Certain accepted research paradigms bring inherent limitations to the prior identification of risk. For example, when research in the social sciences employs emergent design, the manner in which the research project will proceed and any associated risks may be known only as the project unfolds (Chapters 3 and 10).

Minimal Risk

Minimal risk research that falls within the scope of this Policy requires REB review. It is generally eligible for delegated review, as described in Article 6.12.

For the purposes of this Policy, "minimal risk" research is defined as research in which the probability and magnitude of possible harms implied by participation in the research are no greater than those encountered by participants in those aspects of their everyday life that relate to the research.

In their assessment of the acceptable threshold of minimal risk, REBs have special ethical obligations to individuals or groups whose situation or circumstances make them vulnerable in the context of a specific research project, and to those who live with relatively high levels of risk on a daily basis. Their inclusion in research should not exacerbate their vulnerability (Article 4.7).

Balancing Risks and Potential Benefits

The analysis, balance and distribution of risks and potential benefits are critical to the ethics of research involving humans. The principle of Concern for Welfare imposes an ethical obligation to design, assess and conduct research in a way that protects participants from any unnecessary or avoidable risks. In their review, REBs should be concerned with an assessment that the potential research outcomes and potential benefits merit the risks.

Risks and potential benefits may be perceived differently by different individuals and groups in society. Researchers and REBs should take this into account in designing and reviewing research. They should also recognize that researchers and participants may not always see the risks and potential benefits of a research project in the same way. In assessing risks and potential benefits for specific populations, researchers and REBs should understand the role of the culture, values and beliefs of the populations to be studied. In this regard, REBs may consult ad hoc advisors as needed. Researchers and REBs may also consult guidelines that exist for conducting research with these populations (Chapters 8, 9 and 10). Researchers shall demonstrate to their REBs that they have a reasonable understanding of the culture, values and beliefs of the population to be studied, and the likely effects of their research upon them. This could be demonstrated, for example, by referring to previous experience conducting research with a similar population, or to published research on the effects of that type of research on the population being studied, or by presenting feedback from a community advisory group.

Assessing Risks and Potential Benefits of Research Involving Communities

In research involving communities, risks and benefits must be considered from the perspective of the participant, the community and the individual members of the community (who may or may not be research participants). For example, research about the prevalence of sexually transmitted infection (STI) in a specific neighbourhood may present risks to these three groups. Risks may differ among them. Research participants may experience the emotional distress of discovering they have a sexually transmitted infection. The neighbourhood may be stigmatized should the findings show a high prevalence of STI in that neighbourhood's community. And finally, the residents of that neighbourhood may be stigmatized as individuals because of their association with the stigmatized neighbourhood. The same study may present similar or different benefits to all three groups. Research participants identified as having an STI can seek treatment. The community may benefit from the identification of the local

determinants associated with STI, allowing it to take steps to minimize the risks of infection. Individual members of the community may have access to additional health resources during the study and/or as a result of the study.

As with individual participant risk, community risk may be social, behavioural, psychological, physical or economic. Consideration must be given to the magnitude or seriousness of the harm and the probability that it will occur. Risks should be assessed from the perspective of the community in consideration of the social, health, economic and cultural context. The onus is on the researcher to engage the community and to minimize the risks of research to participants, the community and to individual members of the community. Research involving communities should be designed such that the potential benefits to the community, and the individuals within it, outweigh the foreseeable risks. Article 9.13 includes guidance on community benefit in the context of research with First Nations, Inuit and Métis communities. This guidance may also be helpful for research with other communities.

Article 2.9 The REB shall adopt a proportionate approach to research ethics review such that, as a preliminary step, the level of review is determined by the level of risk presented by the research: the lower the level of risk, the lower the level of scrutiny (delegated review); the higher the level of risk, the higher the level of scrutiny (full board review). A proportionate approach to assessing the ethical acceptability of the research, at either level of review, involves consideration of the foreseeable risks, the potential benefits and the ethical implications of the research.

Application

The proportionate approach to REB review encompasses both the initial assessment of the level of risk to participants posed by a research project – used to determine the level of review (i.e., delegated or full REB review [Articles 6.11 to 6.17]) – and the approach to the actual review of the research project itself. While all research shall be reviewed in light of the core principles of this Policy, the proportionate approach to REB review is intended to direct the most intensive scrutiny, time and resources, and correspondingly, the most protection, to the most ethically challenging research.

A proportionate approach to research ethics review starts with an assessment of the magnitude and probability of harms. Minimal risk research should normally receive delegated review, and above-minimal risk research shall receive full REB review. Whether the review is delegated, full board, initial or continuing, foreseeable risks and potential benefits should be considered as well as the ethical implications of the research. The proportionate approach to REB review requires that a project have a favourable balance of risks and benefits in order to receive REB approval. The REB should make this assessment in light of the context of the research – that is, elements of the research that may produce benefits or harms, or otherwise have an impact on the ethics of research. Regardless of the level of review selected, the review should include the necessary expertise.

Both risks and potential benefits may span the spectrum from minimal to substantial. The concept of minimal risk (described above) provides a foundation for the proportionate approach to REB review. The various applications of the proportionate approach to REB review are addressed in Article 6.12.

Research-Attributable Risk

Article 2.10 When describing the foreseeable risks and potential benefits of research involving participants who are also exposed to other risks, researchers should clearly distinguish between the risks that are attributable to the research, and the risks to which participants would normally be exposed.

In their evaluation of risk, REBs should evaluate those risks that are attributable to the research.

Application

The evaluation of foreseeable risks to participants can be complicated if the prospective participants are already exposed to risks in the course of their daily lives. The REB must take into consideration the ethical implications of recruiting people in high risk circumstances into studies that may offer additional risk. In accordance with Articles 4.1 and 4.7 on vulnerability and inclusion/exclusion criteria, prospective participants who are in high risk circumstances should not be inappropriately included in, or excluded from, participating in research.

The REB may approve research involving participants who are exposed to risk in their daily lives, where the REB finds a favourable balance between the foreseeable risks attributable to the research and the potential benefits. In their review, REBs should not compound research-attributable risks with other risks to which participants are exposed (e.g., a high risk research study that tests a new drug on cancer patients receiving high doses of chemotherapy; a behavioural study involving firefighters exposed to a volatile environment; research on survival strategies of families in impoverished conditions or in war-torn regions).

In addition to describing any other alternatives to the study (where relevant), researchers must ensure that prospective participants are informed of the foreseeable risks and potential benefits attributable to the research, as distinct from those arising from their circumstances. REBs should ensure that all consent materials reflect this distinction.

Research Involving Communities

Article 2.11 Where researchers intend to conduct research involving humans based on their membership in specific communities, researchers should consider relevant guidance in Chapter 9 on research involving First Nations, Inuit and Métis peoples of Canada, when appropriate.

Application

While Chapter 9 is designed to guide research involving First Nations, Inuit and Métis peoples of Canada, its discussion of respectful relationships, collaboration and engagement between researchers and participants may also be an important source of guidance for research involving other distinct communities. For example, research involving the Deaf community, which is a distinct and unique visually based culture, may benefit from engaging with this community by including a Deaf community

member on the research team and connecting with members of this community directly in order to understand how best to reach and support prospective participants. Consideration should also be given to presenting research materials and findings in a culturally relevant format (e.g., in a signed language).

Risks to Researchers

Risks in research are not limited to participants. In their conduct of research, researchers themselves may be exposed to risks that may take many forms (e.g., injury, incarceration). Risks to researchers may become a safety concern, especially for student researchers who are at a learning stage regarding the conduct of research and who may be subject to pressures from supervisors to conduct research in unsafe situations.

While it is not a formal part of its responsibilities, an REB may raise concerns about the safety of student researchers as part of its communication to the student researchers, and to their supervisors. Based on the level of risk, the REB may consider referring these concerns for review by an appropriate body within the institution.

Endnotes

1 The definitions of embryo, fetus and human reproductive materials are taken from the *Assisted Human Reproduction Act* (2004, c. 2). http://laws-lois.justice.gc.ca/eng/acts/a-13.4/, Retrieved on August 7, 2018.

2 See guidance 3.2.1 of Health Canada, *Guidance document. Good Clinical Practice: Integrated Addendum to E6(R1) ICH Topic E6(R2)*, Adopted November 9, 2016, Effective May 25, 2017. http://www.canada.ca/en/health-canada/services/drugs-health-products/drug-products/applications-submissions/guidance-documents/efficacy/guidance-document-good-clinical-practice-integrated-addendum-e6-r1-topic-e6-r2.html, Retrieved on June 29, 2018.

CHAPTER 3

THE CONSENT PROCESS

Introduction

This chapter sets out the ethical requirements for consent in research involving humans. Throughout this Policy, the term "consent" means "free, informed and ongoing consent." For the purpose of this Policy, "free" and "voluntary" are used interchangeably.

Respect for Persons implies that individuals who participate in research should do so voluntarily, understanding the purpose of the research, and its risks and potential benefits, as fully as reasonably possible. Where a person has the capacity to understand this information, and the ability to act on it voluntarily, the decision to participate is generally seen as an expression of autonomy. The Policy refers to the process of seeking consent from prospective participants, which may result in either agreement or refusal to participate. This process is meant to emphasize Respect for Persons. Under no circumstances may researchers proceed to conduct research with anyone who has refused to participate. Subject to exceptions set out in this Policy, consent must be obtained from participants prior to the conduct of research.

Equally, Respect for Persons implies that those who lack the capacity to decide for themselves should nevertheless have the opportunity to participate in research that may be of benefit to themselves or others. Authorized third parties acting on behalf of these individuals may decide whether participation would be appropriate. For the purposes of this Policy, the term "authorized third party" (also known as "authorized third party decision makers") refers to any person with the necessary legal authority to make decisions on behalf of an individual who lacks the capacity to decide whether to participate or to continue to participate in a particular research project. These decisions involve considerations of Concern for Welfare and Justice.

Certain types of research require alternate processes for seeking consent. These are also described in this chapter. Researchers may request an alteration to consent requirements if they can meet the criteria of Article 3.7A. These include a requirement to satisfy the research ethics board (REB) that it is impossible, impracticable (see Glossary) or inappropriate to address the research question without the requested alteration. Where elements of the consent process may need to be adapted to the requirements of a particular research project, the REB can play an educational and consultative role in determining the appropriate process for seeking and maintaining consent. REBs must consider whether the requested alterations are justified or whether another approach would make it possible, practicable and appropriate to follow the normal consent requirements.

The head of the research team, also known as the "principal investigator," is responsible for ensuring that the consent process is followed. This person is also responsible for the actions of any member of the research team involved in the consent process.

In addition to this Policy, researchers are responsible for ensuring that all applicable legal and regulatory requirements with respect to consent are met. In some circumstances, researchers may have further legal obligations that may be determined in part by the nature of the research and the jurisdiction in which the research is being conducted.[1]

A. General Principles

Consent Shall Be Given Voluntarily

Article 3.1

a. Consent shall be given voluntarily.

b. Consent can be withdrawn at any time.

c. If a participant withdraws consent, the participant can also request the withdrawal of their data or human biological materials.

Application

(a) The voluntariness of consent is important because it respects human dignity and means that individuals have chosen to participate in research according to their own values, preferences and wishes.

The approach to recruitment is an important element in assuring voluntariness. In particular, how, when and where participants are approached and who recruits them are important elements in assuring (or undermining) voluntariness. In considering the voluntariness of consent, REBs and researchers should be cognizant of situations where undue influence, coercion or the offer of incentives may undermine the voluntariness of a participant's consent to participate in research.

Undue influence

Undue influence and manipulation may arise when prospective participants are recruited by individuals in a position of authority. The influence of power relationships (e.g., employers and employees, teachers and students, commanding officers and members of the military or correctional officers and prisoners) on the voluntariness of consent should be judged from the perspective of prospective participants, since the individuals being recruited may feel constrained to follow the wishes of those who have some form of control over them. This control may be physical, psychological, financial or professional, for example, and may involve offering some form of inducement or threatening some form of deprivation. In such situations, the control exerted in a power relationship may place undue pressure on the prospective participants. At the extreme, there can be no voluntariness if consent is secured by the order of authorities.

REBs and researchers should also pay particular attention to elements of trust and dependency in relationships (e.g., between physician and patient or between professor and student). These relationships can impose undue influence on the individual in the position of dependence to participate in research projects. Any relationship of dependency, even a nurturing one, may give rise to undue influence even if it is not applied overtly. There may be a greater risk of undue influence in situations of ongoing or significant dependency.

Pre-existing entitlements to care, education and other services should not be prejudiced by the decision of whether to participate in or withdraw from a research project. Accordingly, for example, a physician should ensure that continued clinical care is not linked to research participation. Similarly, where students do not wish to participate in research studies for course credits, they should be offered a comparable alternative.

Coercion

Coercion is a more extreme form of undue influence, involving a threat of harm or punishment for failure to participate. Coercion would negate the voluntariness of a decision to participate or remain in a research project.

Incentives

Incentives are anything offered to participants, monetary or otherwise, for participation in research (incentives differ from reimbursements and compensation for injury, which are discussed in Article 3.2[j]). Because incentives are used to encourage participation in a research project, they are an important consideration in assessing voluntariness. Where incentives are offered to participants, they should not be so large or attractive as to encourage reckless disregard of risks. This is a particular consideration in the case of healthy volunteers for the early phases of clinical trials, as discussed in Article 11.2. The offer of incentives in some contexts may be perceived by prospective participants as a way for them to gain favour or improve their situation. This may amount to undue inducement and thus negate the voluntariness of participants' consent.

This Policy neither recommends nor discourages the use of incentives. The onus is on the researcher to justify to the REB the use of a particular model and the level of incentives. In considering the possibility of undue influence in research involving financial or other incentives, researchers and REBs should be sensitive to issues such as the economic circumstances of those in the pool of prospective participants, the age and decision-making capacity of participants, the customs and practices of the community, and the magnitude and probability of harms (Chapter 4, Section B). Guardians and authorized third parties should not receive incentives for arranging the involvement in research of the individual they represent. However, they may accept reasonable incentives or compensation on behalf of that individual, as long as these are suitable to the circumstances.

(b) To maintain the element of voluntariness, participants shall be free to withdraw their consent to participate in the research at any time, without offering any reason for doing so. In some cases, however, the physical practicalities of the project may prevent the actual withdrawal of the participant partway through, for example, if the project involves only a single intervention, or if the termination of a medical research procedure may compromise the safety of the participant.

The participant should not suffer any disadvantage or reprisal for withdrawing, nor should any payment due prior to the point of withdrawal be withheld. If the research project used a lump-sum incentive for participation, the participant is entitled to the entire amount. If a payment schedule is used, participants shall be paid in proportion to their participation.

(c) The consent process should set out any circumstances that do not allow withdrawal of data or human biological materials once collected. In some research projects, the withdrawal of data or human biological materials may not be possible (e.g., when personal information has been anonymized and added to a data pool). Researchers must provide a rationale to the REB for using collection methods that do not permit subsequent withdrawal of data or human biological materials. Where the terms of the research do not allow for withdrawal of their data or human biological materials, the identity of the participants shall be protected at all times during the project and after its completion. Participants shall also be informed that it is impracticable, if not impossible, to withdraw results once they have been published or otherwise disseminated.

Consent Shall Be Informed

Article 3.2 Researchers shall provide to prospective participants, or authorized third parties, full disclosure of all information necessary for making an informed decision to participate in a research project.

Application

At the commencement of any process of consent, researchers (or their qualified representatives) shall provide prospective participants with the information set out in the following list, as appropriate to the particular research project. Not all the listed elements are required for all research. However, additional information may be required in particular types of research or under particular circumstances.

If a researcher does not include some of the listed disclosure requirements, they should explain to the REB why these requirements do not apply to that particular project. It is also up to the REB to consider whether all elements listed, or additional elements, are necessary to the consent process of the research project.

The information generally required for informed consent includes:

a. information that the individual is being invited to participate in a research project;

b. a statement of the research purpose in plain language, the identity of the researcher, the identity of the funder or sponsor, the expected duration and nature of participation, a description of research procedures, and an explanation of the responsibilities of the participant;

c. a plain language description of all reasonably foreseeable risks and potential benefits, both to the participants and in general, that may arise from research participation;

d. an assurance that prospective participants:

- are under no obligation to participate and are free to withdraw at any time without prejudice to pre-existing entitlements;
- will be given, in a timely manner throughout the course of the research project, information that is relevant to their decision to continue or withdraw from participation; and
- will be given information on their right to request the withdrawal of data or human biological materials, including any limitations on the feasibility of that withdrawal;

e. information concerning the possibility of commercialization of research findings, and the presence of any real, potential or perceived conflicts of interest on the part of the researchers, their institutions or the research sponsors;

f. the measures to be undertaken for dissemination of research results and whether participants will be identified directly or indirectly;

g. the identity and contact information of a qualified designated representative who can explain scientific or scholarly aspects of the research to participants;

h. the identity and contact information of the appropriate individual(s) outside the research team whom participants may contact regarding possible ethical issues in the research;

i. an indication of what information will be collected about participants and for what purposes; an indication of who will have access to information collected about the identity of participants; a description of how confidentiality will be protected (Article 5.2); a description of the anticipated uses of data; and information indicating who may have a duty to disclose information collected, and to whom such disclosures could be made;

j. information about any payments, including incentives for participants, reimbursement for participation-related expenses and compensation for injury;

k. a statement to the effect that, by consenting, participants have not waived any rights to legal recourse in the event of research-related harm; and

l. in clinical trials, information on stopping rules and when researchers may remove participants from trial.

For consent to be informed, prospective participants shall be given adequate time and opportunity to assimilate the information provided, pose any questions they may have, and discuss and consider whether they will participate. The time required for this initial phase of the consent process will depend on such factors as the magnitude and probability of harms, the complexity of the information conveyed, and the setting where the information is given.

The key to informed consent is that prospective participants understand the information being conveyed to them by researchers. Researchers and REBs should consider how best to convey that information to facilitate understanding. For example, written documentation may be supplemented with audio and/or visual aids or accompanied by video presentations.

When language barriers necessitate the assistance of an intermediary for communication between the research team and participants, the researcher should select an intermediary who has the necessary language skills to ensure effective communication (Article 4.1). The involvement of such intermediaries may raise confidentiality issues (Article 5.2).

Paragraphs (a) to (c) require researchers to clearly explain the nature and goals of the research, and other essential information, in a manner that best promotes understanding on the part of prospective participants.

Paragraph (b) requires the disclosure of those who support a particular research project, through funding or sponsorship. It is unethical for researchers to engage in clandestine activities for intelligence, police or military purposes under the guise of research.

Paragraph (c) requires researchers to consider all reasonably foreseeable risks that may result from participation. When research is conducted about an organization or a community, researchers should inform prospective participants within that organization or community of the extent to which the organization or community is collaborating with the research, and of any risk this collaboration may pose to the participant.

Paragraph (d) helps to ensure that a prospective participant's choice to participate is voluntary. Paragraph (d) also supports the requirement that the consent process continue throughout the research. The consent process should set out any circumstances that do not allow withdrawal of data or human biological materials once collected (Article 3.1[c]).

Paragraph (e) aims at managing real, potential or perceived conflicts of interests. Researchers should separate, to the greatest extent possible, their role as researcher from their other roles as therapists, caregivers, teachers, advisors, consultants, supervisors, employers or the like. If a researcher is acting in dual roles, this fact must always be disclosed to the participant. Conflict of interest matters are further elaborated in Chapter 7.

Paragraph (f) requires that researchers provide a reasonable explanation of the measures they will undertake to publish and otherwise disseminate the results of the research – to the extent that it is feasible, and in a manner that is appropriate. Beyond the ethical obligation to disseminate results in such areas as clinical trials, this requirement is grounded on the reasonable expectation of participants that results will be published or otherwise disseminated in the public domain to advance societal knowledge (addressed further in Articles 11.10 and 4.8). With respect to research involving Indigenous peoples and disclosure of information, see Chapter 9.

Paragraph (h) acknowledges that some institutions may decide to either name an ombudsman for participants or designate a resource person to handle queries, receive complaints and transmit those complaints to the REB. This is a matter for institutions to determine.

Paragraph (i) touches on issues of privacy and confidentiality, secondary use of data, and the possibility of compelled disclosure by the researcher to third parties for administrative and/or legal purposes. These issues are addressed in further detail in Chapter 5 and, in particular, Article 5.2.

Paragraph (j) ensures that participants are informed of the payments they will receive (if any) for their participation. Reimbursement for participation-related expenses is intended to ensure that participants are not put at a direct or indirect financial disadvantage for the time and inconvenience of participation in research. Direct expenses are costs incurred because of research participation (e.g., paying for transportation to, or parking at, the research site), while indirect expenses refer to losses that arise from participation (e.g., taking unpaid leave from work). Participants should also be informed about any compensation they may be entitled to for research-related injuries.

Paragraph (l) is intended to inform the prospective participant in clinical trials of circumstances under which the researcher may end the participant's involvement in a research project. Clinical trials have stopping rules: statistically significant end points and safety considerations determined in advance that once reached, dictate that the trial must be terminated. As well, researchers may remove participants who are not following the procedures of the clinical trial or for safety reasons (Article 11.6).

Consent Shall Be an Ongoing Process

Article 3.3 Consent shall be maintained throughout the research project. Researchers have an ongoing duty to provide participants with all information relevant to their ongoing consent to participate in the research.

Application

Consent encompasses a process that begins with the initial contact (e.g., recruitment) and carries through to the end of participants' involvement in the project. Throughout the process, researchers have an ongoing duty to provide participants and REBs with all information relevant to participants' ongoing consent to participate in the research. The researcher has an ongoing ethical and legal obligation to bring to participants' attention any changes to the research project that may affect them. These changes may have ethical implications, may be germane to their decision to continue research participation, or may be relevant to the particular circumstances of individual participants. In particular, researchers shall disclose changes to the risks or potential benefits of the research. This gives participants the opportunity to reconsider the basis for their consent in light of the new information.

Rather than an age-based approach to consent, TCPS 2 (2018) advocates an approach based on decision-making capacity as long as it does not conflict with any laws governing research participation. Some children begin participation in a project on the basis of consent from an authorized third party (due to the determination that they lacked capacity to decide on their own behalf) and on the basis of their own assent (Article 3.10). In these cases, if the children mature sufficiently to decide on their own behalf (subject to legal requirements), the researcher must seek the children's autonomous consent in order for their participation to continue. Similarly, in the case of children who are unable to assent to research participation (e.g., infants) at the beginning of a project, the researcher must seek their assent to continue their participation once they are able to understand the purpose of the research as well as its risks and benefits.

Incidental Findings

An "incidental finding" is a discovery about research participants or prospective participants that is made in the course of research, but is outside the objectives of the research study. Incidental findings are considered to be material incidental findings if they are reasonably determined to have significant welfare implications for the participant or prospective participant. Material incidental findings may appear at any stage of the research. For example, material incidental findings can be discovered while screening for eligibility to participate in a study, while collecting baseline information, during study procedure, or during follow-up evaluations.

Article 3.4 Within the limits of consent provided by the participant, researchers shall disclose to the participant any material incidental findings discovered in the course of research.[2]

Application

Determination of materiality

To determine whether an incidental finding is material, expertise relevant to the finding is required. If researchers do not have such expertise, and are unsure of how to interpret the findings or are uncertain whether findings are material, they should seek expertise relevant to the finding and/or refer to professional practices and standards.

Management of foreseeable and non-foreseeable material incidental findings

Incidental findings can arise in any type of research. In some areas of research, such as genetic or genomic research and research that includes imaging, material incidental findings can reasonably be foreseeable in the specific participant population for the study. Where material incidental findings are foreseeable, researchers shall inform participants, as part of the initial consent process, of the likelihood of discovering material incidental findings, and where applicable, should provide information on their strategy to disclose such findings to participants. In addition, researchers should develop a management plan for review by the REB. For genetic research, researchers are required to develop a plan for managing information that may be revealed through their research, and submit the plan for REB review (Article 13.2).

In other areas of research, material incidental findings may not be reasonably foreseeable, but can be discovered unexpectedly in the course of the research. Upon discovery of an incidental finding, the researcher shall determine whether the finding is material, and report the discovery to the REB in accordance with guidance in Article 6.15. The researcher should describe the process used to determine the materiality of the finding(s), and present a plan for disclosing such findings to the participants.

Regardless of whether the material incidental findings were foreseeable, REBs should assess the researcher's plan to disclose material incidental findings to participants. If there is uncertainty as to whether a research project requires such a plan, researchers and REBs can make this determination on a case-by-case basis. The final decision on the need for a plan rests with the REB.

Consent and departures from consent

Upon discovery of a material incidental finding, the principle of Concern for Welfare places an obligation on researchers to share it with the relevant participants. To respect the participants' autonomy, the communication of the findings determined to be material can only be done when participants or their authorized third parties have consented to receiving them initially or as part of the ongoing consent process. See Articles 3.1, 3.2 and 3.3 for the consent process and Article 13.3 for human genetic research).

Where the researchers have undertaken, in the course of the consent process, not to disclose material incidental findings, and researchers discover an unforeseeable material incidental finding that can be addressed with a potentially significantly beneficial intervention, researchers should consult their REBs

to determine whether there is a sufficient ethical basis to disclose the finding to the participant, and if so, how to disclose it.

There may be limitations to the consent to receiving material incidental findings. For example, in the case of children, authorized third parties, who, by law, must always exercise their authority in the best interest of the child, must receive any findings for the child that are actionable immediately or during childhood.

Researchers should exercise care and sensitivity in determining who discloses material incidental findings that may have a negative impact on the welfare of participants, and how that disclosure is made. Researchers should assist participants in understanding the material incidental finding(s). Researchers' assistance may include suggesting that participants consider seeking additional advice from people they trust, such as family members, friends, experts or professionals. When necessary, researchers should direct participants to a qualified professional to discuss the possible implications of material incidental findings for their welfare.

In some cases, incidental findings may trigger legal reporting obligations. Researchers should be aware of these obligations and, as part of the initial consent process, should inform participants of the limits to confidentiality (Article 5.1).

Exceptions to the obligation to disclose

Researchers may also request an exception to their obligation to disclose material incidental findings, based on the impracticability or impossibility of disclosing such findings to the participant. "Impracticable" refers to undue hardship or onerousness that jeopardizes the conduct of the research; it does not mean mere inconvenience. Disclosure may be impossible or impracticable when participants or their authorized party may be deceased or difficult to track due to insufficient identifiers, cost, or time elapsed. The onus is on the researcher to justify to the REB the need for the exception.

Consent Shall Precede Collection of, or Access to, Research Data

Article 3.5 Research shall begin only after the participants, or their authorized third parties, have provided their consent.

Application

In keeping with the principle of Respect for Persons, participants shall provide their consent prior to engaging in research. This is the clearest demonstration that their participation is based on consideration of the risks and potential benefits of the research project, and other principles in this Policy.

There are exceptions to this general ethical requirement, however, set out in Articles 3.7A and 3.8.

This article does not apply to conversations that researchers may have with prospective participants as part of the development of the design of their research. These preliminary conversations – which may include negotiations concerning the terms on which a researcher may engage with a particular community or group – do not in themselves constitute research and therefore do not require consent (Chapter 2, Article 6.11, Articles 9.3 to 9.6 and Article 10.1).

Critical Inquiry

Article 3.6 In critical inquiry, permission is not required from an institution, organization or other group in order to conduct research on them. If a researcher engages the participation of members of any such group without the group's permission, the researcher shall inform participants of any foreseeable risk that may be posed by their participation.

Application

Research in the form of critical inquiry, that is, the analysis of social structures or activities, public policies or other social phenomena, requires an adjustment in the assessment of consent. Where the goal of the research is to adopt a critical perspective with respect to an institution, organization or other group, the fact that the institution, organization or group under study may not endorse the research project should not be a bar to the research receiving ethics approval. Where social sciences or humanities researchers seek knowledge that critiques or challenges the policies and practices of institutions, governments, interest groups or corporations, researchers do not need to seek the organization's permission to proceed with the proposed research. If institutional approval were required, it is unlikely that research could be conducted effectively on such matters as institutional sexual abuse or a government's silencing of dissident scientists. Important knowledge and insights from research would be forgone. Specific requirements pertain to First Nations, Inuit and/or Métis organizations, which are discussed in detail in Articles 9.4 to 9.8.

Researchers and REBs should be aware that institutions, organizations or other groups under study may have requirements for allowing access to their sites and to participants, and that some of these may have established mechanisms or guidelines, for instance, school boards, Indigenous communities (Chapter 9), correctional services, and community groups. Refer to Article 8.3 for more information. Nevertheless, REBs should not prohibit research simply because the research is unpopular or looked upon with disfavour by a community or organization, in Canada or abroad. Similarly, REBs should not veto research on the grounds that the government in place or its agents have not given approval for the research project or have expressed a dislike for the researchers.

However, individuals who are approached to participate in a research project about their organization should be fully informed about the views of the organization regarding the research, if these are known. Researchers shall inform participants when the permission of the organization has not been obtained. Researchers engaging in critical inquiry need to be attentive to risks of both stigmatization and breach of privacy, to those who participate in research about their organization. In particular, prospective participants should be fully informed of the possible consequences of participation.

REBs should, however, legitimately concern themselves with the welfare of participants and the security of research materials in such circumstances. When participants are vulnerable to risks from third parties (e.g., authoritarian regimes, gang leaders, employers) on account of their involvement in research, researchers should ensure that copies of field materials are kept in secure locations. When sharing research materials such as consent forms or transcripts of field notes with participants, researchers must honour their commitment to protect the anonymity and confidentiality of participants to ensure that their human rights, and the ethical principles set out in this Policy, are not compromised. In general, regardless of where the researchers conduct their research, researchers and REBs should concern themselves with safeguarding information while it is in transit (Articles 5.1 to 5.4).

REBs should also be aware that some research, for instance, research involving critical assessments of public, political or corporate institutions and associated public figures, may be legitimately critical and/or opposed to the welfare of those individuals in a position of power, and may cause them some harm. There may be a compelling public interest in this research. Therefore, it should not be blocked through the use of risk-benefit analysis. Such research should be carried out according to the professional standards of the relevant discipline(s) or field(s) of research. Where an individual in a position of power is invited to be interviewed or gives access to private papers and thus becomes a participant as defined by this Policy, Article 3.2 applies. See also Articles 3.12, 9.7 and 10.2). In such cases, the balance of risks to those who are the object of the research is mainly considered along with the potential benefit of new knowledge to society and the indirect benefits to the population affected by the public, political or corporate institutions to which the participant belongs.

B. Departures from General Principles of Consent

Articles 3.1 to 3.5 set out the default requirements for seeking the consent of individuals to participate in research. However, there are some research questions that cannot be answered without an alteration to these consent requirements. For example, the question of what factors influence whether people will choose to return a wallet dropped by someone on the street could not be answered if the prospective participants were alerted to the presence of the researcher observing them and to the presence of the confederate dropping the wallet in front of them. Alterations to consent requirements may include providing prospective participants with only partial disclosure about the purpose of the study, deceiving prospective participants entirely about the purpose of the study, and not informing participants that they (or their data or biological materials) are involved in a study.

Article 3.7A sets out the conditions which a researcher must satisfy in order for an REB to approve research involving any alteration to consent requirements. The lack of prior consent, or of fully informed consent, may be addressed through debriefing conducted as soon as possible following participants' involvement in the research, and within a timeframe that allows participants to withdraw their data or human biological materials (where possible, practicable [see Glossary]and appropriate). Article 3.7B provides guidance with respect to debriefing in the context of an alteration to consent requirements.

Alterations to Consent Requirements

Article 3.7A The REB may approve research that involves an alteration to the requirements for consent set out in Articles 3.1 to 3.5 if the REB is satisfied, and documents, that all of the following apply:

a. the research involves no more than minimal risk to the participants;

b. the alteration to consent requirements is unlikely to adversely affect the welfare of participants;

c. it is impossible or impracticable (see Glossary) to carry out the research and to address the research question properly, given the research design, if the prior consent of participants is required;

d. in the case of a proposed alteration, the precise nature and extent of any proposed alteration is defined; and

e. the plan to provide a debriefing (if any) that may also offer participants the possibility of refusing consent and/or withdrawing data and/or human biological materials, shall be in accordance with Article 3.7B.

Application

In the circumstances described under Article 3.7A, the nature of the research may justify some alteration(s) to consent requirements if the potential benefits outweigh the foreseeable risks. As stated in paragraphs (a) and (b), the risks to participants must fall within the definition of no more than minimal risk (Chapter 2, Section B), and the alteration to the requirements must be unlikely to adversely affect participants' welfare. The potential benefits to be considered include benefits to the participants themselves, to the group they represent and/or to society more generally. Note that in paragraph (c), "impracticable" refers to undue hardship or onerousness that jeopardizes the conduct of the research. It does not refer to mere inconvenience (see Glossary). Researchers must clearly describe the nature and extent of the proposed alteration(s) (paragraph [d]) and their plans with respect to debriefing participants, in accordance with Article 3.7B(e). It is the responsibility of researchers to justify the need for any alteration to consent requirements to the satisfaction of their REBs.

Alterations to consent should be permitted only to the extent necessary. If the aims of the research can be achieved with a design that allows for full – or fuller – prior disclosure (in accordance with Articles 3.1 to 3.5), then that design must be adopted. It is the responsibility of REBs, however, to understand that certain research methods necessitate a different approach to consent, and to exercise judgment on whether the need for the research justifies any alterations to consent requirements. In determining whether to allow any alterations to consent requirements, REBs must consider both the proposed alterations and the proposed plan for debriefing or justification for not debriefing. In other words, the guidance in Articles 3.7A and 3.7B must be considered together in determining whether an alteration to consent requirements is ethically acceptable.

It should be noted that, in some cases of randomization and blinding in clinical trials, neither the participants nor the researchers know which treatment the participant will be receiving. As long as participants are informed of the probability of their assignment to each arm of the trial, this random and blind assignment does not constitute an alteration to consent requirements.

Research involving partial disclosure or deception

Some social science research, particularly in psychology, seeks to learn about human responses to situations that have been created experimentally. Some types of research can be carried out only if the participants do not know the true purpose of the research in advance. For example, some social science research that critically probes the inner workings of publicly accountable institutions might never be conducted without the limited use of partial disclosure. In some research that uses partial disclosure or deception, participants may be asked to perform a task and informed about only one of several elements the researchers are observing. Research employing deception can involve a number of techniques, such as giving participants false information about themselves, events, social conditions and/or the purpose of the research. For such techniques to fall within the exception to the general requirement of full disclosure for consent, the research must meet all the requirements of Article 3.7A.

Exception to the requirement to seek prior consent

In the circumstances described under Article 3.7A, an REB may allow an exception to the requirement that researchers seek consent from participants prior to collection of data and/or human biological materials. Researchers must demonstrate that this alteration to consent requirements is necessary to address the research question and that the lack of prior consent will not have an adverse impact on the welfare of participants. They must also demonstrate that the benefits of the research, whether direct, indirect or societal, justify any risks associated with no prior consent. For example, a study of the effect of environmental toxins on the members of nearby communities may involve the analysis of the level of toxins present in discarded hair clippings from the barber shops of these communities. The researchers may make the case that the collection and analysis of the hair clippings pose no risks to participants, that seeking prior consent for the use of the hair clippings could lead to a general panic about environmental toxins among the members of these communities, and that the possible benefits of identifying environmental toxins so that they can be removed justify this approach to the research question.

REBs must consider whether it is in the participants' best interests to be informed of the research (and to what extent) if not before, then afterwards (Article 3.7B). If the research design calls for no prior consent and no debriefing, then the participants may never know of their involvement. This raises ethical issues that differ somewhat from other alterations to consent requirements as these participants will have no opportunity to ask questions about the nature and purpose of the study or to request the withdrawal of their data and/or human biological materials (where possible, practicable [see Glossary] and appropriate). In light of these issues, the REB should apply greater scrutiny (Article 2.9) to the justification for an exception to the requirement to seek prior consent and an exception to the requirement to debrief (Article 3.7B).

Note that Article 3.7A does not address the exception to the requirement to seek consent for secondary use of identifiable information; this topic is addressed in Article 5.5A.

Participants' vulnerability

In considering the need for an alteration to consent requirements, researchers and REBs should also consider whether the prospective participants (as individuals, groups or populations) are in circumstances that may make them vulnerable in the context of research (Article 4.7). The existence of such circumstances may require greater effort to minimize risks to participants and/or maximize potential benefits (Chapter 2, Section B).

Population and public health research

Due to the nature of the research question and the need to test interventions that operate at the population level, some population and public health studies cannot be done with prior informed consent. For example, a cluster-randomized trial comparing two different stop smoking campaigns in two or more communities would not be able to answer the research question if community members were alerted, through a consent process, to the presence of the campaign and the existence of other campaigns in different communities, as this knowledge could affect the group response to the campaigns. Similarly, in a study comparing different types of water treatment facilities, it would not be possible to obtain individual informed consent for the type of water treatment each individual in a community is to

receive. Researchers should, however, seek community engagement prior to data collection (Chapter 9).

It is up to researchers to adequately explain why their research question cannot be answered without an exception to the requirement to seek prior consent. REBs are advised to have population and public health expertise involved in reviews of this type of research (Articles 6.4 and 6.5).

Community-level interventions controlled by researchers that have been approved to proceed without consent or a community engagement process may inadvertently expose people who do not meet the study's inclusion criteria to the intervention. Researchers and REBs should assess whether there are any risks to individuals posed by this exposure, and if so, consider ways to narrow the exposure. For example, the use of observational methods, census data or a source informed about the community could help researchers identify community members who should be excluded (e.g., do not knock on their doors; do not send flyers to that address). In the case of interventions that cannot help but be visible to, or affect the entire community (e.g., billboard ads, radio broadcasts), there would be no way to exclude non-target population community members or visitors to the community. Accordingly, the REB should be satisfied that any risks of inadvertent exposure to the intervention are minimal.

Debriefing in the Context of Alterations to Consent Requirements

Article 3.7B

a. Debriefing must be a part of all research involving an alteration to consent requirements (Article 3.7A) whenever it is possible, practicable and appropriate.

b. Participants in such research must have the opportunity to refuse consent and request the withdrawal of their data and/or human biological materials whenever possible, practicable and appropriate (Article 3.1).

Application

Debriefing

Where alterations to consent have been used, debriefing is important in maintaining the participant's trust in the research community. Often, debriefing in this context can be a simple and straightforward candid disclosure as described in Article 3.2. To allow for the possibility that participants may wish to withdraw their data or biological materials once they know the details of the study (see Post-Debriefing option to withdraw data and/or human biological materials in this Application), debriefing should take place while it is still possible to give participants this option (e.g., prior to merging or de-identification).

Researchers must explain why participants were temporarily led to believe that the research, or some aspect of it, had a different purpose, or why participants received less than full disclosure. In cases where participants were not asked for their consent prior to collection of data and/or human biological materials, researchers must explain why this exception to consent requirements was necessary. Researchers must give details about the importance of the research and the necessity of having to use alterations to consent requirements, and address any concerns raised by participants. In order to address any misconceptions that may have arisen, researchers must explain why these research procedures were necessary to obtain scientifically valid findings. When debriefing, researchers should

be alert and sensitive to participants' needs, feelings, reactions and concerns. REBs should assess the risks and benefits of the debriefing itself and whether the proposed plan is appropriate for participants – particularly those whose circumstances may make them vulnerable in the context of research and/or who lack the capacity to make a consent decision.

When it is not appropriate to provide complete details of the research in a debriefing, the level of detail should be determined by considering the impact of the information on the participant in terms of foreseeable risks and potential benefits. It should also be proportionate to the sensitivity of the issue and tailored to the decision-making capacity of participants. For example, in research involving children who do not have the capacity to make a consent decision on their own behalf, it may be more appropriate to debrief the parents, guardians or authorized third parties as well as the participants themselves. The debriefing process should be based upon the participants' capacity to understand the information provided. Note that in some cases, excluding children from a debriefing may be justified (e.g., when debriefing is focused on findings of a sensitive nature that relate to the child, such as intellectual capacity). In other cases, it may be more appropriate to debrief the entire family or community. Immediate, full debriefing of all individuals who have contributed data may not be possible or practicable in all cases. In studies with data collection over a longer term, debriefing may have to be deferred until the end of the project.

Post-Debriefing option to withdraw data and/or human biological materials

At the time of debriefing, participants should, whenever possible, practicable and appropriate, be able to indicate their consent/assent or their refusal for the continued use of their data or human biological materials. In cases where participants express concerns about their participation in a project, the researcher must address their concerns (e.g., by explaining the rationale for the research design, answering questions about data usage or privacy). Regardless of whether any concerns are raised, the researcher must give participants the option of removing their data and/or human biological materials unless this option is impossible, impracticable (see Glossary) or inappropriate.

In determining whether it is ethically acceptable not to permit the withdrawal of data and/or human biological materials, REBs must consider whether withdrawal of data is possible or practicable. If researchers intend to collect data or human biological materials without identifying information, or if all identifying information will be removed, it may not be possible for researchers to withdraw the data associated with specific individuals. Researchers must provide a rationale for using collection methods that do not permit subsequent withdrawal of data or human biological materials. REBs must also consider whether the option to withdraw data is appropriate. In some types of research, permitting the withdrawal of data and/or human biological materials could skew the results of the research, invalidating the study and denying potential benefits to society. The invalidation of study findings may also demonstrate a lack of respect for the contributions made by other participants. The onus is on researchers, however, to satisfy the REB that the withdrawal of data or biological materials by individual participants would threaten the validity of their research.

Where the terms of the research proposal do not permit the participants to withdraw their data, in the absence of the participants' consent, the identity of the participants shall be protected at all times during the project. Participants who express concern about the conduct of the project at the time of debriefing, or who contest the limits imposed on withdrawing their data, should be given the contact information for the REB that approved the research. Researchers must report to the REB concerns

about the conduct of the project raised by participants at the time of debriefing.

Exception to the requirement to debrief

There may be circumstances in which debriefing is impossible, impracticable or inappropriate in research involving alterations to consent requirements. Note that "impracticable" refers to undue hardship or onerousness that jeopardizes the conduct of the research. It does not refer to mere inconvenience. The onus is on researchers to satisfy the REB that their research involves circumstances that make it impossible, impracticable or inappropriate to offer debriefing.

When considering whether to grant an exception to the requirement to debrief, REBs should consider the level of potential harm to the participant which the debriefing itself may cause and the impact of the debriefing on the feasibility of the research. When seeking an exception to the requirement to debrief, researchers must also provide a plan to disseminate information about the study to participants and/or their communities (e.g., through local media, direct mail). This plan is of particular importance when the findings may affect participant welfare.

Consent for Research in Individual Medical Emergencies

This section addresses the exception to consent in situations where an individual who requires urgent medical care is unable to provide consent for research due to loss of consciousness or decision-making capacity – and the delay to seek authorized third party consent could seriously compromise that individual's health. Certain types of medical emergency practices can be evaluated only when they occur, hence the need for this exception.

This section is to be distinguished, however, from situations where there is a publicly declared emergency (such as the SARS crisis or a major flood) that disrupts the ordinary system for obtaining REB approval for research. For guidance on research ethics review during a publicly declared emergency, see Articles 6.21 and 6.22.

Article 3.8 Subject to all applicable legal and regulatory requirements, research involving medical emergencies shall be conducted only if it addresses the emergency needs of the individuals involved, and then only in accordance with criteria established in advance of such research by the REB. The REB may allow research that involves medical emergencies to be carried out without the consent of participants, or of their authorized third party, if all of the following apply:

a. A serious threat to the prospective participant requires immediate intervention.

b. Either no standard efficacious care exists, or the research offers a realistic possibility of direct benefit to the participant in comparison with standard care.

c. Either the risk is not greater than that involved in standard efficacious care, or it is clearly justified by the prospect for direct benefits to the participant.

d. The prospective participant is unconscious or lacks capacity to understand the risks, methods and purposes of the research project.

e. Third party authorization cannot be secured in sufficient time, despite diligent and documented efforts to do so.

f. No relevant prior directive by the participant is known to exist.

When a previously incapacitated participant regains decision-making capacity, or when an authorized third party is found, consent shall be sought for continuation in the project, and for subsequent examinations or tests related to the research project.

Application

For purposes of studying potential improvement in the treatment of life-threatening conditions, Article 3.8 outlines an exception (in addition to that in Article 3.7A) to the general obligation of seeking consent from those participating in research.

It is the responsibility of researchers to justify to the REB the need for this exception. The underlying assumption of Article 3.8 is that participants could not receive any direct benefits of the research without setting aside the need for the researcher to seek the prior consent of participants, or of their authorized third party. Article 3.8 indicates that research in emergency medicine must be reviewed by the REB, be restricted to the emergency needs of the participants, and be conducted under criteria designated by the REB.

It is unethical to expose participants to any additional risk without their consent if standard efficacious care exists, unless it can clearly be shown that there is a realistic possibility of meaningful improvement of the participant's condition. Accordingly, paragraphs (b) and (c) of Article 3.8 indicate that researchers and REBs must assess the risks and potential benefits of proposed research against existing standard efficacious care.

To respect the autonomy of the participant, Article 3.8(e) requires researchers to undertake diligent efforts to contact authorized third parties, if practicable, and to document such efforts for the benefit of both the participant and the continuing ethics review functions of the REB. The article also requires that participants who regain decision-making capacity be promptly afforded the opportunity to consent to their continued participation. Concern for the patient's welfare is paramount and should be informed by ethical and professional judgment.

Because their incapacity to make decisions puts them in circumstances that may make them vulnerable in the context of research, prospective participants for emergency research are owed special ethical obligations and protection commensurate with the risks involved. Their welfare should be protected by additional safeguards, where feasible and appropriate. These might include additional scientific, medical or REB consultation; procedures to identify prospective participants in advance so that consent may be sought prior to the occurrence of the emergency situation; consultation with former and prospective participants; and special monitoring procedures to be followed by data safety and monitoring boards.

C. Decision-Making Capacity

Decision-making capacity refers to the ability of prospective or actual participants to understand relevant information presented about a research project and to appreciate the potential consequences of their decision to participate or not participate. This ability may vary according to the complexity of the choice being made, the circumstances surrounding the decision, or the point in time at which consent is sought. The determination of capacity to decide whether to participate in research, then, is not a static determination. It is a process that may change over time, depending on the nature of the decision the prospective participant needs to make, and on any changes in the participant's condition. Assessing decision-making capacity is a question of determining, at a particular point in time, whether a participant (or prospective participant) sufficiently understands the nature of a particular research project, and the risks, consequences and potential benefits associated with it.

One may therefore have diminished capacity in some respects but still be able to decide whether to participate in certain types of research. Researchers should be aware of all applicable legal and regulatory requirements with respect to decision-making capacity and/or consent. These may vary among jurisdictions. Authorized third parties who are asked to make a consent decision on behalf of a prospective participant should also be aware of their legal responsibilities.

In keeping with the principle of Justice, those who lack the capacity to decide on their own behalf must neither be unfairly excluded from the potential benefits of research participation, nor may their lack of decision-making capacity be used to inappropriately include them in research. REBs and researchers should be aware of these ethical considerations and seek to find a balance between them for the benefit of prospective participants who lack decision-making capacity (Chapter 4).

As indicated in Chapter 1, Respect for Persons and Concern for Welfare entails special ethical obligations to individuals whose circumstances may make them vulnerable in the context of research. Such obligations often translate into special procedures to promote and protect their interests. This may include the development of consent materials that are appropriate to the cognitive and communication abilities of prospective participants. Articles 3.9, 3.10 and 3.11 describe special procedures for research involving individuals who lack decision-making capacity.

Article 3.9 For research involving individuals who lack the capacity, either permanently or temporarily, to decide for themselves whether to participate, the REB shall ensure that, as a minimum, the following conditions are met:

a. The researcher involves participants who lack the capacity to decide on their own behalf to the greatest extent possible in the decision-making process.

b. The researcher seeks and maintains consent from authorized third parties in accordance with the best interests of the persons concerned.

c. The authorized third party is not the researcher or any other member of the research team.

d. The researcher demonstrates that the research is being carried out for the participant's direct benefit, or for the benefit of other persons in the same category. If the research does not have the potential for direct benefit to the participant but only for the benefit of the other persons in the same category, the researcher shall demonstrate that the research will expose

the participant to only a minimal risk and minimal burden, and demonstrate how the participant's welfare will be protected throughout the participation in research.

e. When authorization for participation was granted by an authorized third party, and a participant acquires or regains decision-making capacity during the course of the research, the researcher shall promptly seek the participant's consent as a condition of continuing participation.

Application

The decision of authorized third parties should be based on their knowledge of the prospective participants and on consideration of the prospective participants' welfare. The third parties should not be in a position of conflict of interest when making their decision.

Article 3.9 outlines other safeguards to protect those who lack the capacity to consent to participate in research. The article details several considerations relevant to the use of third party authorization. Beyond the legal and regulatory requirements for seeking consent from authorized third parties, family members and friends may also provide information to the authorized third party about the interests and previous wishes of prospective participants. An authorized third party should take into account any research directives given in accordance with Article 3.11.

Article 3.10 Where an authorized third party has consented on behalf of an individual who lacks legal capacity, but that person has some ability to understand the significance of the research, the researcher shall ascertain the wishes of that individual with respect to participation. Prospective participants' dissent will preclude their participation.

Application

Many individuals who lack legal capacity to make decisions may still be able to express their wishes in a meaningful way, even if such expression may not fulfill all the requirements for consent. Prospective participants may be capable of verbally or physically assenting to, or dissenting from, participation in research. Those who may be capable of assent or dissent include:

a. those whose decision-making capacity is in the process of development, such as children whose capacity for judgment and self-direction is maturing;

b. those who once were capable of making an autonomous decision regarding consent but whose decision-making capacity is diminishing or fluctuating; and

c. those whose decision-making capacity remains only partially developed, such as those living with permanent cognitive impairment.

While their assent would not be sufficient to permit them to participate in the absence of consent by an authorized third party, their expression of dissent or signs suggesting they do not wish to participate must be respected.

Research Directives

Although advance directives for treatment are recognized as a legitimate tool in health care, the use of directives in the context of research is not well developed, and they have no legal status. For the purposes of this Policy, research directives should be understood to express an individual's preferences for participation in future research in the event that the individual loses capacity. Research directives are written instructions to be used by the authorized third party as information about a prospective participant's preferences when the third party is asked to provide substitute consent.

The efficacy of research directives is unknown, and their legal status has not yet been recognized or tested. Research directives, nevertheless, are congruent with this Policy's core principle of Respect for Persons. The use of research directives respects the right of individuals to express their preference regarding participation in research and respects privacy by allowing individuals to control information about themselves and materials from their bodies. Authorized third parties should consult with an individual's research directive when deciding whether to consent to participation in research on behalf of that individual.

Article 3.11 Where individuals have signed a research directive indicating their preferences about future participation in research in the event that they lose capacity or upon death, researchers and authorized third parties should be guided by these directives during the consent process.

Application

Research directives allow individuals with decision-making capacity to express preferences about their future participation in research should they ever lose this capacity. Researchers and authorized third parties should take these directives into account during the consent process, but only if the individual who provided the research directive lacks decision-making capacity at the time the research is initiated. Research directives may also be used for participants who have decision-making capacity when research is initiated but lose this capacity during research.

Research directives are useful to individuals who are already participating in research as well as those who are not participating but may wish to participate in research at a later date. They give individuals a range of options regarding future participation in research. The use of research directives is particularly relevant for research involving participants with diminishing and/or fluctuating decision-making capacity or degenerative conditions, and research that collects information or human biological materials.

The use of research directives does not alter the requirements for consent as articulated by the provisions of this Policy. In particular, in accordance with Article 3.9, researchers are required to seek the consent of authorized third parties before individuals who lack decision-making capacity can participate in research. If an individual regains this capacity, the researcher should promptly seek the consent of the individual as a condition of continuing participation.

Researchers, institutions and organizations may suggest the use of research directives in order to give participants an opportunity to express preferences about the use of information or human biological material that has already been collected. Researchers who collect information or human biological materials for a specific research project may anticipate subsequent research uses. Some types of research initiatives (e.g., the creation of large databases sometimes known as "research platforms")

involve long-term retention and use of information or human biological materials for research purposes (e.g., longitudinal studies that involve biobanking). When data for these platforms are initially collected, it is not typically possible to specify every research study that could be carried out using the participants' information or human biological materials. Research directives may be used in these contexts to give participants the opportunity to express their preferences about future research should they lose decision-making capacity (Article 5.5A[d] for expression of preferences in the context of secondary use of data).

In long-term projects, research directives may be used to allow participants to make choices about other aspects of research participation. For example, participants could specify preferences about receiving findings, or allowing the continued use of their information or samples in the event that they lose decision-making capacity, or after they die.

Individuals can also use research directives to express preferences concerning participation in future research. For example, individuals in an early stage of cognitive impairment may use a research directive to express their preferences for future participation in research that, due to diminishing decision-making capacity, they would not otherwise be able to consent to on their own. Research directives also allow existing participants to express their preference to continue to participate in research should they lose decision-making capacity. Research directives should be as specific as possible, and in the event of ambiguity or imprecision, should be interpreted narrowly. Individuals should be encouraged to periodically update their research directives and, if possible, construct directives in contemplation of specific types of research interventions. Research directives should be written, dated and witnessed, and include a declaration about the decision-making capacity of the individual at the time the directive was made.

D. Consent Shall Be Documented

Article 3.12 Evidence of consent shall be contained either in a signed consent form or in documentation by the researcher of another appropriate means of consent.

Application

Written consent in a signed statement from the participant is a common means of demonstrating consent, and in some instances, is mandatory (e.g., Health Canada regulations under the *Food and Drugs Act*, the *Civil Code of Québec*). However, there are other means of providing consent that are equally ethically acceptable. In some types of research, and for some groups or individuals, written signed consent may be perceived as an attempt to legalize or formalize the consent process and therefore may be interpreted by the participant as a lack of trust on the part of the researcher. In these cases, oral consent, a verbal agreement or a handshake may be required, rather than signing a consent form. In some cultures, the exchange of gifts symbolizes the establishment of a relationship comparable to consent.

Where consent is not documented in a signed consent form, researchers may use a range of consent procedures, including oral consent, field notes and other strategies, for documenting the consent process. Consent may also be demonstrated solely by the actions of the participant (e.g., through the return of a completed questionnaire). Where there are valid reasons for not recording consent in writing, the procedures used to seek consent must be documented (Article 10.2).

Whether or not a consent form is signed, it may be advisable to leave a written statement of the information conveyed in the consent process with the participant. For participants, it is evidence that they have agreed to participate in a particular research project. It may serve as a reminder to participants of the terms of the research project. It may also facilitate the ability of participants to consider and reconsider their involvement as the research proceeds. However, researchers should not leave any documentation with participants if it may compromise their safety or confidentiality. Additionally, in some cases it may not be appropriate to leave a written statement, such as in cultural settings where such written documentation is contrary to prevailing norms.

Endnotes

1 For example, see article 21 of the *Civil Code of Québec*, which sets conditions for the conduct of research involving minors or adults who lack the capacity to consent.

2 See Panel on Research Ethics online educational resource, *How to Address Material Incidental Findings – Guidance in Applying TCPS 2 Article 3.4,* 2018. www.pre.ethics.gc.ca/eng/incidental_findings.html.

Reference

Centre of Genomics and Policy (CGP), Maternal Infant Child and Youth Research Network (MICYRN), *Best Practices for Health Research Involving Children and Adolescents*, 2012. http://www.genomicsandpolicy.org/en/best-practices-2012, Retrieved on June 29, 2018.

CHAPTER 4

FAIRNESS AND EQUITY IN RESEARCH PARTICIPATION

Introduction

The principle of Justice holds that particular individuals, groups or communities should neither bear an unfair share of the direct burdens of participating in research, nor should they be unfairly excluded from the potential benefits of research participation. Inclusiveness in research and fair distribution of benefits and burdens should be important considerations for researchers, research ethics boards (REBs), research institutions and sponsors. Issues of fair and equitable treatment arise in deciding whether and how to include individuals, groups or communities in research, and the basis for the exclusion of some.

This chapter addresses inclusion in research of individuals and groups that might be inappropriately excluded on the basis of attributes such as culture, language, gender, race, ethnicity, age and disability. It provides guidance relevant to inclusion in research of specific groups such as women, children, the elderly and those who lack the capacity to decide whether to participate in research. Historically, these groups have often been inappropriately excluded from research.

This chapter also addresses the fair inclusion and equitable treatment of individuals, groups and communities whose situation or circumstances make them vulnerable in the context of a specific research project. These individuals run the risk of being included in research in ways that may be unfair and inequitable. This chapter provides guidance relevant to the equitable distribution of the risks and benefits of research.

Over-protectionist attitudes or practices of researchers or REBs, whether intentional or inadvertent, can exclude some members of society from participating in research. The exclusion of individuals, groups or communities may constitute a failure to treat them justly. For example, age has been used to exclude individuals from participation in research, particularly health research (e.g., studies that only accept participants between the ages of 18 to 35). As a result, sufficient research may not be done on groups that fall outside of narrow age criteria. The inclusion of the young and the elderly in research, for example, ensures that treatments frequently given to these populations are effective and safe.

Researchers, institutions and REBs all have important roles to play in advancing that societal commitment, and in ensuring a fair distribution of the benefits and burdens of research. Researchers and REBs must navigate between the dangers of imposing unfair burdens on particular participants, groups and communities, and overprotecting them. In assessing fairness and equity issues in the research ethics process, REBs should not intervene in the choice of research topics.

A. Appropriate Inclusion

Article 4.1 Taking into account the scope and objectives of their research, researchers should be inclusive in selecting participants. Researchers shall not exclude individuals from the opportunity to participate in research on the basis of attributes such as culture, language, religion, race, disability, sexual orientation, ethnicity, linguistic proficiency, gender or age, unless there is a valid reason for the exclusion.

Application

Article 4.1 is based on the principle of Justice. It imposes a duty on researchers not to exclude individuals or groups from participation for reasons that are unrelated to the research. This duty is explicitly stated because groups have been inappropriately excluded from participation in research on the basis of attributes such as gender, race, ethnicity, age and disability. Similarly, some groups have been unfairly included in research because they are convenient populations for research (e.g., prisoners, students, people with limited financial resources or those in other circumstances of vulnerability).

The determination of inclusion and exclusion criteria affects the fair and equitable distribution of the burdens and benefits of research. The focus, objective, nature of research, and context in which the research is conducted inform the inclusion and exclusion criteria for a specific research project. Some research may be focused on a certain individual (such as in a biography) or on a group of individuals who share a specific characteristic (e.g., an identifiable group of painters who happen to be all of one sex; a religious order that is restricted to one sex). Other examples include research that is focused on specific cultural traditions or languages, or on one age group (e.g., a biomechanical modeling study of posture corrections in adolescents). Such research should not be precluded so long as the selection criteria for those to be included in the research are germane to answering the research question. Researchers who plan to actively exclude particular groups should clarify to their REBs the grounds for the exclusion.

Where a language barrier exists between the researcher and the prospective participant, various measures may be used to ensure effective communication in recruitment and consent discussions. For example, an intermediary who may not be part of the research project or team but who is competent in the language used by the researchers, as well as that preferred by the participant, may assist with communication between prospective participants and researchers. The selection of an intermediary and their activities will depend on the nature, context and risks of the research.

B. Inappropriate Exclusion

Research Involving Women

Women have historically been inappropriately excluded from participating in some research. This exclusion of women, where unwarranted, has delayed the advancement of knowledge, denied potential benefits to women, and exposed women to harm when research findings from male-only research projects were generalized inappropriately to women, as has often been the case in clinical drug trials. The inclusion of women in research advances the commitment to Justice, improves the generalizability of research findings to women where that is a goal of the research, and is essential to ensure that women and men benefit equally from research.

Article 4.2 Women shall not be inappropriately excluded from research solely on the basis of gender or sex.

Application

Researchers should not exclude women from research unless there is a valid reason for doing so. While some research is properly focused on particular research populations that do not include women, or include very few women, women should generally be represented where there is a reasonable expectation that the results of the research will be generalized to women.

Article 4.2 rejects discriminatory and unethical use of inclusion or exclusion criteria that presumptively or inappropriately exclude women because of their gender or sex.

Article 4.3 Women shall not be inappropriately excluded from research solely on the basis of their reproductive capacity, or because they are pregnant or breastfeeding.

Application

Researchers should not exclude women from research on the basis of their capacity, or their pregnancy, or because they are breastfeeding, unless there is a valid reason for doing so.

Subjecting women of childbearing potential to inappropriate requirements precludes their participation in research. Exclusions should be made on the basis of clear criteria that reflect attention to the potential benefits as well as the foreseeable risks of the research that may affect the welfare of women. For example, researchers should not require participants to use oral contraception, unless there is a valid reason for doing so.

In considering research on pregnant or breastfeeding women, researchers and REBs shall take into account foreseeable risks and potential benefits for the woman and her embryo, fetus or infant, as well as the foreseeable risks and potential benefits of excluding pregnant or breastfeeding women from the research.

Research Involving Children

Children have varying degrees of maturity – metabolically, immunologically and cognitively – that might present important challenges for research design and the consent process, depending on the nature and complexity of the research. In addition to the vulnerability that arises from their developmental stage, children may also lack the decision-making capacity to decide whether to participate in research (Article 4.6). As well, physical or psychological harms a child may experience in a research setting may have long-lasting consequences. As a result, researchers have often avoided the inclusion of children in some research, especially in clinical trials testing new treatments, so as to eliminate any risks. Clinical trials conducted only with adults yield a generally poor understanding of the results that apply to children.

As is the case with women, the inclusion of children in research advances the commitment to justice in research by improving our knowledge of, and ability to respond to, the unique needs of children throughout their development.

Article 4.4 Children shall not be inappropriately excluded from research solely on the basis of their age or developmental stage. The inclusion of children in research is subject to Article 4.6.

Application

Researchers should not exclude children from research unless there is a valid reason for doing so. Participation of children in research is justifiable when the research objective cannot be achieved with adult participants only. When considering the inclusion of children in research, researchers and REBs shall consider a child's stage of physical, physiological, psychological, and social development to ensure adequate protections for the child's welfare. Where children have not yet attained the capacity to decide for themselves whether to participate in research, researchers shall seek consent from an authorized third party while ascertaining the child's assent or dissent, as outlined in Chapter 3. Note that Article 4.6 equally applies to children.

Research Involving the Elderly

As the population ages, the proportion of elderly people is increasing, and so is their life expectancy. Research designed to improve our understanding of a wide range of aspects of aging and the lives of elderly people is important for ensuring that they stay fully integrated into society and maintain a continuing high quality of life. Medically, elderly patients are the highest consumers of drugs, yet many of these treatments have not been tested adequately on elderly patients. Research that takes into account the differential effects on the elderly and how best to accommodate their needs provides scientific evidence that can inform changes to policies and standards of care for the elderly.

Article 4.5 Elderly people shall not be inappropriately excluded from research solely on the basis of their age.

Application

Researchers should not exclude elderly people from research unless there is a valid reason for doing so. When considering the inclusion of elderly people in research, researchers and REBs shall consider their physical and social needs to ensure adequate protections. Depending on their social circumstances, elderly people may require some reasonable accommodation for mobility, transportation support and other types of assistance to facilitate their participation in research. The principle of Justice requires that such accommodations for the natural processes of aging be considered by REBs and researchers. Exclusion of the elderly shall not be based on easily remediable issues that are not germane to the research question.

Research Involving Participants Who Lack Decision-Making Capacity

The core principles of Justice and Concern for Welfare entail special ethical obligations toward individuals who lack capacity to decide whether to participate in research. This section sets out conditions that apply to research involving those who cannot consent for themselves due to a lack of decision-making capacity. It should be read in conjunction with Section C of Chapter 3.

Article 4.6 Subject to applicable legal requirements, individuals who lack capacity to decide whether to participate in research shall not be inappropriately excluded from research. Where a researcher seeks to involve individuals in research who do not have decision-making capacity, the researcher shall, in addition to fulfilling the conditions in Articles 3.9 and 3.10, satisfy the REB that:

a. the research question can be addressed only with participants within the identified group; and

b. the research does not expose the participants to more than minimal risk without the prospect of direct benefits for them; or

c. where the research entails only minimal risk, it should at least have the prospect of providing benefits to participants or to a group that is the focus of the research and to which the participants belong.

Application

Children, and individuals with cognitive impairments or intellectual disabilities, may lack the capacity to decide whether to participate in particular research initiatives. As a result, they have, historically, experienced both over-inclusion as populations of convenience for some research and unjustified exclusion from other research. Yet the advancement of knowledge about their social, psychological, and health experiences and needs may depend on their appropriate participation in research. Their inclusion in research requires special considerations as outlined in this article.

To be ethically acceptable, the participation of those who lack the capacity to decide for themselves shall be necessary and appropriate to address the research question. Researchers and REBs shall consider the level of risk to which participants who lack decision-making capacity are exposed, and the prospect of direct benefits accruing to the participants. Their participation should generally be limited to research of minimal risk as defined in this Policy. See Chapter 2 for the definition of minimal risk.

Where the research presents more than minimal risk, it should have appropriate justification aimed at generating knowledge of sufficient importance to addressing the participants' disorder, condition, interest or situation. Such research should have the prospect of direct benefits for the participants themselves commensurate with the level of foreseeable risk to participants. The relation of the potential benefit to the foreseeable risk presented by the research should be at least as favourable to the participants as that provided by available alternative approaches.

Where the research entails only minimal risk, it is sufficient if the research presents the prospect of benefits to participants or to a group that is the focus of the research and to which the participants belong.

The research design should take into account factors that may affect the decision-making capacity of prospective participants to receive information, to consent to the research at some stage, or to participate in it. These factors may be permanent or may vary over time (e.g., the participant's decision-making capacity may fluctuate over time). Articles 3.9 and 3.10 in Chapter 3 establish other conditions regarding research involving individuals who lack decision-making capacity. This includes the involvement of an authorized third party to consent on their behalf, and adequate provisions to ascertain the wishes of the individuals concerning their participation.

Participants' Vulnerability and Research

Article 4.7 Individuals or groups whose circumstances may make them vulnerable in the context of research should not be inappropriately included or automatically excluded from participation in research on the basis of their circumstances.

Application

The core principles of Respect for Persons, Concern for Welfare, and Justice entail special ethical obligations toward individuals or groups whose circumstances may lead to their vulnerability in the context of a specific research project and limit their ability to fully safeguard their own interests. Those who are owed special ethical obligations may include individuals who are institutionalized, those in dependent situations, or those whose circumstances (e.g., poverty or poor health status) may render even modest participation incentives so attractive as to constitute an inducement to take risks they would otherwise not take. Their situation may also compromise the voluntariness of consent in other ways. However, individuals should not automatically be considered vulnerable simply because of assumptions made about the vulnerability of the group to which they belong. Their particular circumstances shall be considered in the context of the proposed research project.

REBs and researchers shall carefully examine the relationship between the circumstances of the individuals and groups they aim to recruit, and the proposed research question. They should not presume that these circumstances will automatically result in the inclusion or exclusion of individuals or groups as prospective participants. Participation should be based on inclusion or exclusion criteria that are justified by the research question. Researchers and REBs should recognize and address changes in a participant's circumstances that may create, heighten, or attenuate their vulnerability, and provide special protections or consideration.

In general, researchers should be familiar with the cultural, social and economic circumstances of prospective participants, groups or communities. Researchers should anticipate, to the best of their ability, needs of participants, groups and their communities that might arise in any given research project. Especially when groups, and their communities, have a wide range of pressing needs due to their low socioeconomic circumstances, these needs can present significant ethical challenges for researchers. An equitable distribution of research benefits (discussed below) can help ensure that individuals, groups and communities whose circumstances may make them vulnerable in the context of research are not inappropriately included in research based on these circumstances.

Equitable Distribution of Research Benefits

Researchers should consider ways to ensure the equitable distribution of any benefits of participation in research. Benefits of research participation may be direct, where, for example, an individual participant experiences amelioration of a health condition as a result of an experimental therapy, or learns new information about social issues as a result of participation in a research focus group. In a community hosting research, benefits may take the form of information sharing, training for local personnel, the establishment of health care or similar services. Benefits may be indirect, where the participation in research of an individual or group, or in a research project involving a community contributes to the advancement of knowledge that may lead to improved conditions for a group to which the participant belongs. Such knowledge may also inform other communities or society in general.

Researchers should be sensitive to the expectations and opinions of participants regarding potential benefits of the research. Prior to the commencement of the research, researchers should formally or informally discuss these expectations with individuals and/or groups, and outline the scope and nature of potential benefits that may accrue to participants during and after the research (Article 9.13). REBs should be vigilant to ensure that the proposed distribution of benefits is fair, without imposing undue burdens on the researcher that would make it too difficult or costly to complete research.

Dissemination of Research Results

Any prohibition or undue limitation on the publication or dissemination of findings from research is ethically unacceptable. Informing participants of the research results is as important as disseminating results to the research community. See Equitable Distribution of Research Benefits.

Article 4.8 Researchers shall disseminate, through publication or otherwise, the analysis of data and interpretation of research results, including those that do not support the research hypotheses. The dissemination shall take place in a timely manner without undue restriction.

Application

If research findings are not disseminated (e.g., published in a peer-reviewed journal, added to a publicly available database, posted on a website, discussed at a public presentation) within a reasonable time, their value may be diminished or lost, thereby squandering the contributions of participants.

The following risks may result from failing to disseminate all research findings, including those that do not support the research hypotheses (if any), or lead to useful or favourable results:

- making misinformed decisions based on incomplete or skewed data;
- developing inappropriate and potentially harmful policy, or practices;
- negatively affecting participant welfare;
- needlessly duplicating research with associated risks to participants and waste of resources;
- introducing fraud or deception in the research process; and/or
- eroding participant and/or public trust and accountability in research.

Researchers, including student researchers, have an ethical responsibility to make reasonable efforts to publicly disseminate research findings in appropriate venues, in a timely manner and without undue restriction.

Researchers should endeavour to publish the results of pilot studies that provide useful information about the feasibility of research designs. Disseminating this knowledge can help other researchers and participants avoid wasting their time and efforts on study designs that have been determined to be unsuccessful. Researchers can instead focus on developing more useful studies. REBs should review dissemination plans to verify that they are appropriate and have no undue restrictions.

Researchers should ensure that participating individuals, groups and communities are informed of how to access the results of the research. Results of the research should be made available to them in a culturally appropriate and meaningful format, such as reports in plain language in addition to technical reports. Researchers should normally provide copies of or access to publications or other research reports or products, arising from the research to the institution or organization that is best suited to act as a repository and disseminator of the results within the participating communities. This may not be necessary in jurisdictions where the results are readily available in print or electronically.

Data Availability

Researchers are encouraged to make their data available for further analysis or verification by their peers. When sharing participant data with peers, researchers must be mindful of their responsibility to safeguard participant privacy (Articles 3.2, 5.1 and 5.5A) and may have to code or anonymize the data to do so.

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CHAPTER 5

PRIVACY AND CONFIDENTIALITY

Introduction

There is widespread agreement about the interests of participants in protection of privacy, and the corresponding duties of researchers to treat personal information in a confidential manner. Indeed, the respect for privacy in research is an internationally recognized norm and ethical standard. Fundamental rights and freedoms in the Canadian Constitution have been interpreted by the courts to include privacy protections. Privacy rights are protected in federal and provincial/territorial legislation. Model voluntary codes have also been adopted to govern access to, and the protection of, personal information. Some professional organizations have established codes that set out the conditions and obligations of their members regarding the collection, use and disclosure of personal information.

Privacy risks in research relate to the identifiability of participants, and the potential harms they, or groups to which they belong, may experience from the collection, use and disclosure of personal information. Privacy risks arise at all stages of the research life cycle, including initial collection of information, use and analysis to address research questions, dissemination of findings, storage and retention of information, and disposal of records or devices on which information is stored.

This Policy is based on a proportionate approach to the assessment of the ethical acceptability of research. Researchers and research ethics boards (REBs) are expected to identify and minimize privacy risks, keeping in mind that a matter that is not sensitive or embarrassing for the researcher may be so for the participant.

In addition to following the guidance provided in this Policy, researchers are responsible for compliance with all applicable legal and regulatory requirements with respect to protection of privacy, and consent for the collection, use or disclosure of information about participants. These requirements may vary by jurisdiction and, depending on who is funding or conducting the research, may include obligations under the Constitution (including the *Canadian Charter of Rights and Freedoms*), and federal or provincial privacy legislation, among other legal and regulatory requirements.

A. Key Concepts

Privacy

Privacy refers to an individual's right to be free from intrusion or interference by others. It is a fundamental right in a free and democratic society. Individuals have privacy interests in relation to their bodies, personal information, expressed thoughts and opinions, personal communications with others, and spaces they occupy. Research affects these various domains of privacy in different ways, depending on its objectives and methods. An important aspect of privacy is the right to control information about oneself. The concept of consent is related to the right to privacy. Privacy is respected if an individual has an opportunity to exercise control over personal information by consenting to, or withholding consent for, the collection, use and/or disclosure of information (see Chapter 3 for further discussion of consent).

Confidentiality

The ethical duty of confidentiality refers to the obligation of an individual or organization to safeguard entrusted information. The ethical duty of confidentiality includes obligations to protect information from unauthorized access, use, disclosure, modification, loss or theft. Fulfilling the ethical duty of confidentiality is essential to the trust relationship between researcher and participant, and to the integrity of the research project.

Security

Security refers to measures used to protect information. It includes physical, administrative and technical safeguards. An individual or organization fulfills its confidentiality duties, in part, by adopting and enforcing appropriate security measures. Physical safeguards include the use of locked filing cabinets, and the location of computers containing research data away from public areas. Administrative safeguards include the development and enforcement of organizational rules about who has access to personal information about participants. Technical safeguards include use of computer passwords, firewalls, anti-virus software, encryption and other measures that protect data from unauthorized access, loss or modification.

Identifiable Information

Where researchers seek to collect, use, share and access different types of information or data about participants, they are expected to determine whether the information or data proposed in research may reasonably be expected to identify an individual. For the purposes of this Policy, researchers and REBs shall consider whether information is identifiable or non-identifiable. Information is identifiable if it may reasonably be expected to identify an individual, when used alone or combined with other available information. Information is non-identifiable if it does not identify an individual, for all practical purposes, when used alone or combined with other available information. The term "personal information" generally denotes identifiable information about an individual. The assessment of whether information is identifiable is made in the context of a specific research project.

Types of Information

Researchers may seek to collect, use, share and access different types of information about participants. Such information may include personal characteristics or other information about which an individual has a reasonable expectation of privacy (e.g., age, ethnicity, educational background, employment history, health history, life experience, religion, social status).

For the purposes of this Policy, researchers and REBs shall consider whether information proposed for use in research is identifiable. The following categories provide guidance for assessing the extent to which information could be used to identify an individual:

- Directly identifying information – the information identifies a specific individual through direct identifiers (e.g., name, social insurance number, personal health number).

- Indirectly identifying information – the information can reasonably be expected to identify an individual through a combination of indirect identifiers (e.g., date of birth, place of residence or unique personal characteristic).
- Coded information – direct identifiers are removed from the information and replaced with a code. Depending on access to the code, it may be possible to re-identify specific participants (e.g., the principal investigator retains a list that links the participants' code names with their actual names so data can be re-linked if necessary).
- Anonymized information – the information is irrevocably stripped of direct identifiers, a code is not kept to allow future re-linkage, and risk of re-identification of individuals from remaining indirect identifiers is low or very low.
- Anonymous information – the information never had identifiers associated with it (e.g., anonymous surveys) and risk of identification of individuals is low or very low.

Ethical concerns regarding privacy decrease as it becomes more difficult (or impossible) to associate information with a particular individual. These concerns also vary with the sensitivity of the information and the extent to which access, use or disclosure may harm an individual or group.

The easiest way to protect participants is through the collection and use of anonymous or anonymized data, although this is not always possible or desirable. For example, after information is anonymized, it is not possible to link new information to individuals within a data set, or to return results to participants. A "next best" alternative is to use de-identified data: the data are provided to the researcher in de-identified form and the existing key code is accessible only to a custodian or trusted third party who is independent of the researcher. The last alternative is for researchers to collect data in identifiable form and take measures to de-identify the data as soon as possible. Although these measures are effective ways to protect participants from identification, the use of indirectly identifying, coded, anonymized or anonymous information for research may still present risks of re-identification.

Technological developments have increased the ability to access, store and analyze large volumes of data. These activities may heighten risks of re-identification, such as when researchers link data sets (Section E, this chapter), or where a data set contains information about a population in a small geographical area, or about individuals with unique characteristics (e.g., uncommon field of occupational specialization, diagnosis of a very rare disease). Various factors can affect the risks of re-identification, and researchers and REBs should be vigilant in their efforts to recognize and reduce these risks. Data linkage of two or more data sets of anonymous information may present risks of identification (Article 2.4 or Article 9.22).

Where it is not feasible to use anonymous or anonymized data for research (and there are many reasons why data may need to be gathered and retained in an identifiable form), the ethical duty of confidentiality and the use of appropriate measures to safeguard information become paramount. This Policy generally requires more stringent protections in research involving identifiable information. Researchers are expected to consult their REBs if they are uncertain about whether information proposed for use in research is identifiable (e.g., when proposing to link anonymized or coded data sets).

B. Ethical Duty of Confidentiality

Article 5.1 Researchers shall safeguard information entrusted to them and not misuse or wrongfully disclose it. Institutions shall support their researchers in maintaining promises of confidentiality.

Application

When researchers obtain information with a promise of confidentiality, they assume an ethical duty that is central to respect for participants and the integrity of the research project. Breaches of confidentiality may harm the participant, the trust relationship between the researcher and the participant, other individuals or groups, and/or the reputation of the research community. Research that probes sensitive topics (e.g., illegal activities) generally depends on strong promises of confidentiality to establish trust with participants.

The ethical duty of confidentiality applies to information obtained directly from participants, or from other researchers or organizations that have legal, professional or other obligations to maintain confidentiality.

The ethical duty of confidentiality must, at times, be balanced against competing ethical considerations or legal or professional requirements that call for disclosure of information obtained or created in a research context. For example, in exceptional and compelling circumstances, researchers may be subject to obligations to report information to authorities to protect the health, life or safety of a participant or a third party, a community, or the general population. Researchers are expected to be aware of ethical codes (such as professional codes of conduct) or laws (e.g., those requiring the reporting of children in need of protection or the presence of reportable communicable diseases) that may require disclosure of information they obtain in a research context. In other situations, a third party may seek access to information obtained and/or created in confidence in a research context. An access request may seek voluntary disclosure of information or may seek to compel disclosure through force of law (e.g., by subpoena). Chapter 1, Section C, elaborates on the relationship between research ethics and law.

Certain areas of research (such as research involving children at risk of abuse or studies of criminal behaviour or research about reportable communicable diseases) are more likely to put researchers in positions where they may experience tension between the ethical duty of confidentiality and disclosure to third parties (Article 5.2, Application). Where possible, practicable and appropriate, researchers should design their research to avoid or mitigate foreseeable conflicts, for instance, by collecting the minimal identifiable information that is necessary to answer the research question. Researchers shall maintain their promise of confidentiality to participants within the extent permitted by ethical principles and/or law. This may involve resisting requests for access, such as opposing court applications seeking disclosure. Researchers' conduct in such situations should be assessed on a case-by-case basis and guided by consultation with colleagues, any relevant professional body, the REB, legal counsel and/or persons knowledgeable about applicable laws and regulations in the relevant jurisdictions.

In some instances, participants may waive anonymity (e.g., if they wish to be identified for their contributions to the research). Researchers should obtain the consent of these participants and negotiate agreements with them that specify how they may be identified or recognized for their contribution. Where an individual participant waives anonymity but other members of the participant group object

because identification may cause harm to the group, researchers shall maintain anonymity for all members of the participant group (Article 3.2[f] and Article 10.4).

Researchers, REBs and institutions share the responsibility for protecting participant confidentiality. Institutions are responsible for creating and maintaining a supportive research environment, establishing appropriate institutional security safeguards, training researchers and REBs regarding best privacy practices, and implementing processes and policies that guide and support researchers and REBs in protecting participant confidentiality. See Articles 5.4, 6.2 and 6.7 and the *Agreement on the Administration of Agency Grants and Awards by Research Institutions*.

In granting its approval for a study, the REB triggers the responsibility of the institution to support researchers in their commitment to protect participant confidentiality (Articles 6.1 and 6.2). Use of an alternative model of REB review (e.g., delegating review to an external REB) does not relieve the institution of this responsibility. Institutions that have adopted alternative review models remain responsible for the ethical acceptability and ethical conduct of research undertaken within their jurisdictions or under their auspices (Article 8.1).

In situations where there is an attempt by legal means (e.g., warrant, subpoena) to compel disclosure of confidential participant information, institutions are required to provide researchers with financial and other support to obtain independent legal advice or to ensure that such support is provided. For the purposes of this Policy, "legal advice" includes all legal services that a researcher in this situation may require, including representation. The purpose of independent legal advice is to permit the researcher to make an informed decision as to whether to disclose or to resist disclosure of confidential participant information. Researchers who are considering resisting disclosure must be aware of the personal consequences of choosing to respect ethical principles rather than legal obligations where the two cannot be reconciled. Such legal advice should be independent of any advice to the institution.

Institutions should consider whether research being conducted under its auspices or within its jurisdiction is likely to put researchers in positions where they may experience tension between the ethical duty of participant confidentiality and the legal obligation of disclosure of confidential participant information or attempts to compel disclosure of confidential participant information to third parties. Where that likelihood exists, the institution should establish policies, procedures or guidelines that explain how it will fulfill its responsibilities to support its researchers. They should include an explanation of the nature and the scope of the support, a mechanism to determine the level of support in individual cases, the source of funding (e.g., dedicated fund, insurance, agreement with professional association) and any other relevant criteria. The institution should establish such policies, procedures or guidelines in collaboration with its researchers.

Article 5.2 Researchers shall describe measures for meeting confidentiality obligations and explain any reasonably foreseeable disclosure requirements:

a. in application materials they submit to the REB; and

b. during the consent process with prospective participants.

Application

This article recognizes that some research projects and some areas of research are more likely to put researchers in a position where they may have a requirement to disclose information to third parties. The reasonable foreseeability of disclosure requirements can be assessed by considering the nature and objectives of the research inquiry. For example, research that involves interviewing high risk families about intergenerational violence raises a reasonably foreseeable prospect that researchers may acquire information that a child is being abused. Another example is community health research where researchers may be required to notify public health authorities of participants who have contracted a reportable communicable disease. Researchers who reasonably foresee that their inquiries may give rise to an ethical or legal obligation to disclose information obtained in the research context shall advise the REB and prospective participants about the possibility of compelled disclosure. Advising participants of reasonably foreseeable disclosure requirements is an important aspect of the consent process.

Situations may arise where researchers unexpectedly acquire information that gives rise to a reason for disclosure to a third party, or researchers may receive a disclosure demand from a third party. In such cases, advising a participant about the disclosure may be important to respect the trust relationship with the participant and to ensure the validity of the participant's ongoing consent. Decisions about whether, how and when to advise a participant of disclosure should be guided by any applicable disciplinary standards and consultation with colleagues, any relevant professional body, the REB, legal counsel, and/or persons knowledgeable about applicable laws and regulations in the relevant jurisdiction(s) (e.g., public health).

Researchers shall also inform participants and seek their consent if their personal information may be shared with mandated government departments or agencies (such as local public health authorities), community partners in the research, a research sponsor (such as a pharmaceutical company), the REB or a regulatory agency.

Researchers shall avoid being put in a position of becoming informants for authorities or leaders of organizations. For example, when records of prisoners, employees, students or others are used for research purposes, the researcher shall not provide authorities with results that could identify individuals unless the prior written consent of the participants has been given. Researchers may, however, provide administrative bodies with aggregated data that cannot be linked to individuals for purposes such as policy making or program evaluation. When seeking consent, researchers shall advise prospective participants if aggregated data from a project may be disclosed, particularly where such disclosure may pose a risk to the participants. For example, aggregate data provided to authorities about research on illicit drug use in a penitentiary may pose risks of reprisal to the prisoners even though they are not identified individually.

When planning a study, researchers should incorporate any applicable statute-based or other legal principles that may afford protection for the privacy of participants and the confidentiality of research information.

C. Safeguarding Information

Article 5.3 Researchers shall provide details to the REB regarding their proposed measures for safeguarding information, for the full life cycle of information: its collection, use, dissemination, retention and/or disposal.

Application

Researchers shall assess privacy risks and threats to the security of information for all stages of the research life cycle and implement appropriate measures to protect information. Safeguarding information helps respect the privacy of participants and helps researchers fulfill their confidentiality obligations. In adopting measures to safeguard information, researchers should follow disciplinary standards and practices for the collection and protection of information gathered for research purposes. Formal privacy impact assessments are required in some institutions and may also be required under legislation or policy in some jurisdictions. Security measures should take into account the nature, type and state of data: the data's form (e.g., paper or electronic records); content (e.g., presence of direct or indirect identifiers); mobility (e.g., kept in one location or subject to physical or electronic transport); and vulnerability to unauthorized access (e.g., use of encryption or password protection). Measures for safeguarding information apply both to original documents and copies of information.

Factors relevant to the REB's assessment of the adequacy of the researchers' proposed measures for safeguarding information include:

a. the type of information to be collected;

b. the purpose for which the information will be used, and the purpose of any secondary use of identifiable information;

c. limits on the use, disclosure and retention of the information;

d. risks to participants should the security of the data be breached, including risks of re-identification of individuals;

e. appropriate security safeguards for the full life cycle of information;

f. any recording of observations (e.g., photographs, videos, sound recordings) in the research that may allow identification of particular participants;

g. any anticipated uses of personal information from the research; and

h. any anticipated linkage of data gathered in the research with other data about participants, whether those data are contained in public or personal records (see also Section E of this chapter).

In considering the adequacy of proposed measures for safeguarding information during its full life cycle, REBs should not automatically impose a requirement that researchers destroy the research data. Stored information may be useful for a variety of future purposes. Appropriate data retention periods vary depending on the research discipline, research purpose and the kind of data involved. In some situations, formal data sharing with participants may occur, for example, by giving individual participants copies of a recording or transcript as a gift for personal, family or other archival use. Similarly, some

funding bodies, such as the Social Sciences and Humanities Research Council and the Canadian Institutes of Health Research, have specific policies on data archiving and sharing.[1] Researchers should address how participants' information will be handled if participants choose to withdraw from the research.

In disseminating findings, researchers shall not disclose identifiable information without the consent of participants. In the case of critical inquiry research, identifiable information may be revealed about any objects of the inquiry as they are usually not regarded as participants (Article 3.6). Researchers shall take reasonable measures to avoid inadvertent identification of individuals or groups in publications or other means of dissemination – and they must address this issue to the satisfaction of the REB.

Consideration of future uses of personal information refers not just to research, but also to other purposes, such as the future use of research materials for educational purposes.

Research data sent over the Internet may require encryption or use of special denominalization software to prevent interception by unauthorized individuals, or other risks to data security. In general, identifiable data obtained through research that is kept on a computer and connected to the Internet should be encrypted.

Article 5.4 Institutions or organizations where research data are held have a responsibility to establish appropriate institutional security safeguards.

Application

In addition to the security measures researchers implement to protect data, safeguards put in place at the institutional or organizational level also provide important protection. These data security safeguards should include adequate physical, administrative and technical measures and should address the full life cycle of information. This includes institutional or organizational safeguards for information while it is currently in use by researchers, and for any long-term retention of information.

D. Consent and Secondary Use of Information for Research Purposes

Secondary use refers to the use in research of information originally collected for a purpose other than the current research purpose. Common examples are social science or health survey data sets that are collected for specific research or statistical purposes but then re-used to answer other research questions. Information initially collected for program evaluation may be useful for subsequent research. Other examples include health care records, school records, biological specimens, vital statistics registries or unemployment records, all of which are originally created or collected for therapeutic, educational or administrative purposes, but which may be sought later for use in research. Chapter 12 provides further guidance on research involving secondary use of previously collected biological materials.

Reasons to conduct secondary analyses of data include: avoidance of duplication in primary collection and the associated reduction of burdens on participants; corroboration or criticism of the conclusions of the original project; comparison of change in a research sample over time; application of new tests of hypotheses that were not available at the time of original data collection; and confirmation that the data are authentic. Privacy concerns and questions about the need to seek consent arise, however, when information provided for secondary use in research can be linked to individuals, and when

the possibility exists that individuals can be identified in published reports, or through data linkage (Article 5.7). Privacy legislation recognizes these concerns and permits secondary use of identifiable information under certain circumstances.

Article 5.5A Researchers who have not obtained consent from participants for secondary use of identifiable information shall only use such information for these purposes if they have satisfied the REB that:

a. identifiable information is essential to the research;

b. the use of identifiable information without the participants' consent is unlikely to adversely affect the welfare of individuals to whom the information relates;

c. the researchers will take appropriate measures to protect the privacy of individuals and to safeguard the identifiable information;

d. the researchers will comply with any known preferences previously expressed by individuals about any use of their information;

e. it is impossible or impracticable (see Glossary) to seek consent from individuals to whom the information relates; and

f. the researchers have obtained any other necessary permission for secondary use of information for research purposes.

If a researcher satisfies all the conditions in Article 5.5A(a) to (f), the REB may approve the research without requiring consent from the individuals to whom the information relates.

Application

In the case of secondary use of identifiable information, researchers must obtain consent unless the researcher satisfies all the requirements in Article 5.5A.

The exception to the requirement to seek consent in this article is specific to secondary use of identifiable information. The terms of Article 3.7A address alteration of consent in other circumstances and do not apply here.

Secondary use of information identifiable as originating from a specific First Nations, Inuit or Métis community, or a segment of the Indigenous community at large, is addressed in Articles 9.20 to 9.22[2]

"Impracticable" refers to undue hardship or onerousness that jeopardizes the conduct of the research; it does not mean mere inconvenience (see Glossary). Consent may be impossible or impracticable when the group is very large or when its members are likely to be deceased, geographically dispersed, or difficult to track. Attempting to track and contact members of the group may raise additional privacy concerns. Financial, human and other resources required to contact individuals and seek consent may impose undue hardship on the researcher. In some jurisdictions, privacy laws may preclude researchers from using personal information to contact individuals to seek their consent for secondary use of information.[3]

The researcher must respect relevant privacy laws, regulations and institutional policies and may be required to consult with or obtain approval from appropriate data stewards. Privacy laws may impose specific rules regarding disclosure of information for secondary use in research. These laws may require the individual or organization that has custody or control of requested personal information to obtain approval from a privacy commissioner or other body before disclosing information to researchers. They may also impose additional requirements such as information-sharing agreements that describe disclosure conditions. These requirements may include the stipulation that the researcher not publish identifiable information or contact individuals to whom the information relates.

At the time of initial collection, individuals may have had an opportunity to express preferences about future uses of information, including research uses. See Article 3.2(d). Data stewards have an obligation to respect the individual's expressed preferences. For example, where an individual does not want information used for future research, data stewards shall remove this information from any data sets used or made available for research.

In cases where the proposed research involves information of greater sensitivity (e.g., genetic information, information about individuals who seek help through domestic violence shelters, information about sexual practices), the REB may require that researchers engage in discussion with people whose perspectives can help identify the ethical implications of the research, and suggest ways to minimize any associated risks. Discussion is not intended to serve as proxy consent. Rather, a goal of discussion is to seek input regarding the proposed research, such as the design of the research, measures for privacy protection, and potential uses of findings. Discussion may also be useful to determine whether the research will adversely affect the welfare of individuals to whom the information relates. Researchers shall advise the REB of the outcome of such discussions. The REB may require modifications to the research proposal based on these discussions.

Article 5.5B Researchers shall seek REB review, but are not required to seek participant consent, for research that relies exclusively on the secondary use of non-identifiable information.

Application

The onus will be on the researcher to establish to the satisfaction of the REB that, in the context of the proposed research, the information to be used can be considered non-identifiable for all practical purposes. For example, the secondary use of coded information may identify individuals in research projects where the researcher has access to the key that links the participants' codes with their names. Consent would be required in this situation. However, the same coded information may be assessed as non-identifiable in research projects where the researcher does not have access to the key. Consent would not be required in this situation.

Article 5.6 When secondary use of identifiable information without the requirement to seek consent has been approved under Article 5.5A, researchers who propose to contact individuals for additional information or for reasons related to the welfare of the participant shall, prior to contact, seek REB approval of the plan for making contact.

Application

In certain cases, a research goal may be achieved only through follow-up contact with individuals to collect additional information. In rare cases, during the course of analysis, a researcher may discover a finding that has a potential impact on an individual's welfare. If the researcher suspects that welfare implications to the participant may be significant, the researcher and REB should refer to the guidance in Article 3.4, which addresses material incidental findings. Under Article 5.5A, the REB may have approved secondary use without the requirement to seek consent, based, in part, on the impossibility or impracticability of seeking consent from all individuals whose information is proposed for use in research. Where contact with a subgroup is feasible, researchers may subsequently wish to attempt to make contact with some individuals to obtain additional information. Contact with individuals whose previously collected information has been approved for secondary use in research raises privacy concerns. Individuals might not want to be contacted by researchers or might be upset that identifiable information was disclosed to researchers without their consent. The potential benefits of follow-up contact must clearly outweigh the risks to individuals of follow-up contact, and the REB must be satisfied that the proposed manner of follow-up contact minimizes risks to individuals. The proposed plan shall explain who will contact individuals to invite their participation in the research (e.g., a representative of the organization that holds the individual's information) and the nature of his or her relationship with those individuals. Researchers shall also ensure that a plan for follow-up contact complies with applicable privacy legislation. For example, some privacy laws prohibit researchers from contacting individuals unless the custodian of the information has first sought and obtained individuals' consent to be contacted. Whenever possible, it is preferable that re-contact with participants be carried out by the custodian of the original data set. Researchers will need to seek consent from individual participants for any new data collection. Article 3.1 provides further guidance on consent and approaches to recruitment.

E. Data Linkage

Article 5.7 Researchers who propose to engage in data linkage shall obtain REB approval prior to carrying out the data linkage. The application for approval shall describe the data that will be linked and the likelihood that identifiable information will be created through the data linkage.

Where data linkage involves or is likely to produce identifiable information, researchers shall satisfy the REB that:

a. the data linkage is essential to the research; and

b. appropriate security measures will be implemented to safeguard information.

Application

Growing numbers of databases and advancing technological capacity to link databases create new research opportunities, but also new privacy risks. In particular, linkage of de-identified or anonymized databases may permit re-identification of individuals. This article provides guidance for researchers who propose to carry out data linkage and requires that they assess and minimize risks of re-identification. Only a restricted number of individuals should perform the function of merging databases. Researchers should use enhanced security measures to store the merged file.

Where researchers seek access to data sets held by another organization, it may be preferable for the data holder to carry out the data linkage and remove identifiers before disclosing the merged data set.

Legislation and organizational policies may regulate data linkage in specific circumstances. For example, some personal information protection legislation requires data-sharing agreements that regulate conditions under which data linkage may be carried out. Data holders, such as statistics agencies, may also have policies on data linkage.[4]

Where researchers propose to access and link data sets of identifiable information for the secondary purpose of research, the requirements of Section D apply.

Endnotes

1 See Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada, and the Social Sciences and Humanities Research Council of Canada, *Tri-Agency Open Access Policy on Publications*, Modified 2016-12-21. http://www.ic.gc.ca/eic/site/063.nsf/eng/h_F6765465.html, Retrieved on June 29, 2018;
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2 See also Canadian Institutes of Health Research, *CIHR Guidelines for Health Research Involving Aboriginal People*, 2007. http://www.cihr-irsc.gc.ca/e/29134.html, Retrieved on June 29, 2018.

3 For discussion of factors relevant to assessing impracticability of consent, see, for example, Canadian Institutes of Health Research, *CIHR Best Practices for Protecting Privacy in Health Research*, Section 3.3, Secondary Use, 2005. www.cihr-irsc.gc.ca/e/29072.html#Element2 , Retrieved on June 29, 2018.

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CHAPTER 6

GOVERNANCE OF RESEARCH ETHICS REVIEW

Introduction

This chapter sets out the elements of research ethics review including the procedures necessary to establish a research ethics board (REB), and operational guidelines for the REBs and research ethics review, both initially and throughout the course of the research project. It also includes guidelines for the conduct of research ethics review during publicly declared emergencies.

A key goal in establishing an appropriate governance structure for research ethics review is to ensure that REBs operate with a clear mandate, authority and accountability; and that roles and responsibilities are clearly defined. REBs need independence in their decision-making process to carry out their role effectively and to properly apply the core principles of this Policy – Respect for Persons, Concern for Welfare, and Justice – to their ethics review of research projects. These operational guidelines are meant to be flexible enough to apply in various contexts, at institutions of various sizes, and to the full range of research disciplines, fields and methodologies.

A. Establishment of Research Ethics Boards

Authority, Mandate and Accountability

Article 6.1 Institutions shall establish or appoint an REB (or REBs) to review the ethical acceptability of all research involving humans conducted within their jurisdiction or under their auspices, that is, by their faculty, staff or students, regardless of where the research is conducted, in accordance with this Policy.

Application

Each institution is accountable for the research carried out in its own jurisdiction or under its auspices. In fulfilling this responsibility, where research involving humans takes place within the jurisdiction or under the auspices of an institution, that institution shall establish the necessary structure of an REB (or REBs) capable of reviewing the ethical acceptability of that research. In fulfilling this responsibility, institutions may opt to appoint an external REB in accordance with the *Agreement on the Administration of Agency Grants and Awards by Research Institutions*.[1] Any such appointment should be based on an official agreement clarifying the ultimate responsibility of the institution for the ethical acceptability of research undertaken within its jurisdiction or under its auspices. To demonstrate their accountability, institutions may wish to issue public reports summarizing the institution's activities and initiatives relevant to the ethics review of research involving humans, its research ethics administration, and relevant research ethics education and training.

The number of REBs and the expertise of their members will depend on the range and volume of research for which that institution is responsible, in accordance with Articles 6.4 and 6.5 relating to REB composition. Large institutions may find it necessary to create more than one REB to cover different

areas of research or to accommodate a large volume of research. Small institutions may wish to explore regional cooperation or alliances for access to an REB based on formal agreements between the institutions (Article 8.1).

Members of an institution (i.e., its faculty, staff and students) may be affiliated with other institutions, or may be engaged in consulting or other professional activities in a separate enterprise, or in student co-op work or field placements. If members of the institution make reference to their affiliation to the institution or use any of its resources when engaging in research, they should submit their research proposals to their institutional REB for research ethics review in accordance with this Policy. Where student co-op work or field placements involve components of research that require research ethics review, institutions and organizations hosting co-op student researchers may consider specifying in advance (e.g., in policies, agreements or contracts for co-op student placements) the roles and responsibilities pertaining to the ethics review of research involving humans of the host organization versus those of the institution.

Should the institution determine that some situations warrant an exception to the requirement for REB review, the basis and conditions for case-by-case exceptions shall be clearly documented in the institutional policies. Case-by-case exceptions may be determined by such factors as the degree to which the members' affiliation with the institution is their primary affiliation, or by how practical it is to distinguish the capacity in which the member is conducting the research, and the participants' reasonable perceptions of this capacity. Other factors include the availability of other avenues through which the member may address the guidance in this Policy outside the institution, including the possibility of sharing responsibility for research ethics review, and the methods in place to address real, potential or perceived conflict of interest issues.

Article 6.2 The highest body within an institution shall: establish the REB or REBs; define an appropriate reporting relationship with the REBs; and ensure the REBs are provided with necessary and sufficient ongoing financial and administrative resources to fulfill their duties. REBs are independent in their decision making and are accountable to the highest body that established them for the process of research ethics review.

Application

The highest body of the institution that establishes the REB or REBs could be an individual, such as the president, rector or chief executive officer, or an equivalent body, such as a governing council, board of directors, or council of administration. Institutions determine the highest body based on their individual governance structures and taking into consideration whether other responsibilities of those bodies may conflict with the responsibility for establishing an REB. Institutions shall have in place written procedures for the appointment, renewal and removal of REB members, including Chairs.

For the integrity of the research ethics review process, and to safeguard public trust in that process, institutions shall ensure that REBs are able to operate effectively and independently in their decision making. Disagreement between the researcher and the REB over a decision that cannot be resolved through discussion and reconsideration can be resolved through the normal appeal process (Articles 6.18 to 6.20).

Institutional policies and procedures shall also support and promote the independence of REBs in their decision making so that REBs may be free of inappropriate influence, including situations of real, potential or perceived conflicts of interest (Chapter 7).

It is critical that institutions provide appropriate administrative resources to REBs (e.g., research ethics administration staff, a research ethics office) for the effective and efficient operation of the REB. The means by which this support may be provided will vary by institution, but may include REB coordination, support in policy development and interpretation, record keeping, and provision of research ethics training opportunities to REB members, researchers and students. The research ethics administration staff may provide important ethics expertise in support of the REB's ethical analysis and discussion. Research ethics administration staff should also have the necessary qualifications, as well as initial and continuing training, to appropriately perform their roles and responsibilities. Institutions should recognize the integral role of research ethics administration staff and research ethics office(s), as applicable, in supporting the REB in fulfilling its mandate.

As an entity that draws its authority and resources from the institution, the REB remains accountable to the highest body of the institution that established it for the integrity of its processes.

Article 6.3 The institution shall grant the REB the mandate to review the ethical acceptability of research on behalf of the institution, including approving, rejecting, proposing modifications to, or terminating any proposed or ongoing research involving humans. This mandate shall apply to research conducted under the auspices or within the jurisdiction of the institution, using the considerations set forth in this Policy.

Application

The institution shall delegate to the REB the authority to review the ethical acceptability of research through its normal process of governance. In defining the scope of the REB's mandate, the institution shall clearly define the jurisdiction of the REB to cover a range of research consistent with relevant disciplinary competence and a manageable workload. Where the institution requires more than one REB, it should establish a mechanism to coordinate the operations of all its REBs, and clarify their relationship with each other, and with other relevant bodies or authorities. Institutions shall have clear written policies describing the mandate of each REB. An institution may wish to use different models for the ethics review of research conducted under its auspices (Chapter 8).

Institutions shall respect the authority delegated to the REB. An institution may not override an REB decision to reject a research proposal. An appeal of the REB decision to reject a research proposal can only be brought in accordance with Section C of this chapter.

An REB approval applies to the ethical acceptability of the research and does not, in itself, constitute authorization for the research to proceed.

Research Ethics Board Composition

Basic Research Ethics Board Membership Requirements

The membership of the REB is designed to ensure competent independent research ethics review. Provisions respecting its size, composition, terms of appointment and quorum are set out below.

Article 6.4 The REB shall consist of at least five members, including both men and women, of whom at least:

a. two members have expertise in relevant research disciplines, fields and methodologies covered by the REB;

b. one member is knowledgeable in ethics;

c. one member is knowledgeable in the relevant law. That member should not be the institution's legal counsel or risk manager. This is mandatory for biomedical research and is advisable, but not mandatory, for other areas of research; and

d. one community member has no affiliation with the institution.

It is advisable that each member be appointed to formally fulfill the requirements of only one of the above categories.

To ensure the independence of REB decision making, institutional senior administrators shall not serve on the REB.

Application

This minimum requirement for REB membership brings to bear the necessary basic background, expertise and perspectives to allow informed independent reflection and decision making on the ethics of research involving humans. At a minimum, the REB shall have members appointed in one capacity only for each of the membership categories. Where the size of the REB exceeds the minimum requirements, additional members may fulfill more than one capacity. In any case, REB members can contribute to the review based on their experience, expertise or knowledge in more than one of the categories above (Article 6.4[a] to [d]).

As an entity created and supported by the institution, an REB is encouraged to build strong relationships with its host institution and senior administration. The involvement of administrative staff dedicated to research ethics functions (e.g., the research ethics office administrator or director) may be relevant and appropriate to support REB procedures. However, an institutional senior administrator (e.g., vice-president of research, director general or director of business development) should not serve on an REB, or directly or indirectly influence the REB decision-making process (Articles 6.2 and 6.10). The mere presence of a non-voting institutional senior administrator at REB meetings may be a source of real, potential or perceived conflict of interest, and may therefore undermine the independence of the REB by unduly influencing REB deliberations and decisions (Article 7.2).

The size of an REB may vary based on the diversity of disciplines, fields of research and methodologies to be covered by the REB, as well as on the needs of the institution. In appointing REB members, institutions should strive for appropriate diversity. Institutions may need to exceed the minimum REB

membership requirements to ensure adequate and thorough reviews as well as reasonable workload for REB members, or to respond to other local, provincial/territorial, or federal legal or regulatory requirements. For example, in the case of REB review of clinical trials, provincial/territorial or federal regulations may outline specific membership requirements in addition to the requirements set out in this Policy. Where REBs mainly review student research, they may consider adding a student REB member. Additional community representation should be commensurate with the size of the REB. Institutions are encouraged to establish a pool of substitute members (see below). Where research ethics administration staff have the requisite experience, expertise and knowledge comparable to what is expected of REB members, institutions may appoint them (based on the written policies and procedures of the institution) to serve as non-voting members on the REB.

Relevant Expertise in Research Content and Methodology

At least two members should have the relevant knowledge and expertise to understand the content area and methodology of the proposed or ongoing research, and to assess the risks and potential benefits that may be associated with the research (Article 6.4[a]). For example, REBs reviewing oncology research, population and public health research, research involving First Nations, Inuit or Métis peoples, or research using qualitative methodologies, should have members that are knowledgeable and competent to address those fields of research, disciplines and methodologies.

Knowledgeable in Ethics

Knowledge of ethics of research involving humans is key within the REB membership as a whole. A member knowledgeable in ethics (Article 6.4[b]) needs to have sufficient knowledge to guide an REB in identifying and addressing ethics issues. A balance of ethics theory, practice and experience offers the most effective path to knowledge in ethics for REB membership. The kind and level of knowledge or expertise needed on the REB will be commensurate with the types and complexities of research the REB reviews. For example, a member knowledgeable in ethics serving on a social sciences and humanities REB may need to have different contextual and disciplinary knowledge in ethics than a member knowledgeable in ethics serving on a biomedical REB.

Knowledgeable in the Law

The role of the member knowledgeable in the law (Article 6.4[c]) is to alert REBs to legal issues and their implications (e.g., privacy issues), not to provide formal legal opinions or to serve as legal counsel for the REB. To avoid undermining the independence and credibility of the REB, the institution's legal counsel or risk manager should not be a member of the REB. In-house legal counsel might be seen to identify too closely with the institution's financial interest in having research go forward or, conversely, may be unduly concerned with protecting the institution from potential liability. Any external legal counsel hired on a case-by-case basis by the institution should not serve as a member of that institution's REBs while working for the institution.

An understanding of relevant legal issues and contexts is advisable for all REBs, although for non-biomedical research such insights may be sought from an ad hoc advisor whom the REB consults only for specific research projects. Where REBs review research on complex topics that regularly require advice on legal issues, they should appoint a member knowledgeable in the relevant law. In some instances, the legal issues that may be identified by the REB will necessitate further scrutiny and even

formal legal advice by the legal counsel to the institution. Legal liability is a separate issue for institutions to handle through mechanisms other than the REB.

Community Member

The community member shall not be affiliated with the institution. The community member requirement (Article 6.4[d]) is essential to help broaden the perspective and value base of the REB, and thus advances dialogue with, and accountability to, relevant communities. In addition to a broad-based representation from the community, it is highly desirable that institutions seek to appoint former participants on REBs. Their experience as participants provides the REB with a vital perspective and an important contribution to the research ethics review process. It is advisable that members are not currently engaged in research or legal work as their principal activities.

The role of community members on REBs during the ethics review process is unique and at arm's length from the institution. Their primary role is to reflect the perspective of the participant. This is particularly important when participants are vulnerable and/or risks to participants are high.

To maintain effective community representation, the number of community members should be commensurate with the size of an REB and should increase as the size of an REB increases. Institutions should provide training opportunities to community members (Article 6.7).

Substitute Members

Institutions should consider the nomination of substitute REB members so that REBs can continue to function when regular members are unable to attend due to illness or other unforeseen eventualities. The appointment of substitute members should not, however, alter the REB membership composition as set out in this article. Substitute members should have the appropriate knowledge, expertise and training to contribute to the research ethics review process.

Ad Hoc Advisors

Article 6.5 The REB should have provisions for consulting ad hoc advisors in the event that it lacks the specific expertise or knowledge to review the ethical acceptability of a research proposal competently.

Application

In the event that the REB is reviewing a project that requires particular community or participant representation or specific disciplinary or methodological expertise not available from its members, it should have provisions for consulting ad hoc advisors. Consultation with an ad hoc advisor shall not alter the composition and representation of the REB as outlined in Article 6.4.

Ad hoc advisors are consulted for a specific research ethics review and for the duration of that review. Should this occur regularly, the membership of the REB should be modified to ensure appropriate expertise on the REB. For example, in cases where ethics review of research on topics related to Indigenous peoples is regularly required, the REB membership should be modified to ensure that relevant and competent knowledge of and expertise in Indigenous cultures are captured within its regular membership.

While ad hoc advisors may complement the REB through their experience, knowledge or expertise, their input is a form of consultation that may or may not be considered in the final decision of an REB. They are not REB members and, as such, do not necessarily have the knowledge and experience gained from reviewing research proposals as members. Ad hoc advisors should not be counted in the quorum for an REB, nor be allowed to vote on REB decisions.

Terms of Appointment of Research Ethics Board Members

Article 6.6 In appointing REB members, institutions shall establish their terms to allow for continuity of the research ethics review process.

Application

In appointing REB members, institutions should arrange the terms of members and their rotation to balance the need to maintain continuity with the need to ensure diversity of opinion, and the opportunity to spread knowledge and experience gained from REB membership throughout the institution and community. The REB membership selection process should be fair and impartial. Institutions should have written policies that define the process of appointing REB members.

Article 6.7 In appointing and renewing REB members, institutions should consider the qualifications and expertise their REBs need. Institutions should provide REB members with necessary training opportunities to effectively review the ethical issues raised by research proposals that fall within the mandate of their REB.

Application

An REB should have adequate expertise, experience and training to understand the research disciplines, methodologies and approaches of the research that it considers for research ethics review. Although an REB possesses the necessary expertise globally, each REB member brings specialized and complementary expertise and knowledge, or relevant experience to the ethics review of research involving humans.

Institutions should ensure that all REB members receive appropriate education and training in ethics review of research involving humans, to enable them to fulfill their duties. This includes providing training opportunities for all members in core principles and understanding of this Policy, basic ethics standards, applicable institutional policies, and legal or regulatory requirements. It includes an understanding of the role and mandate of REBs and responsibilities of REB members. Training should be tailored to the types and complexities of the research the REB reviews. This training should be offered both upon the appointment of new members, and periodically throughout a member's tenure.

Institutions should promote and recognize the contribution of REB members to the research ethics review process, as a valued and essential component of the research enterprise.

Research Ethics Board Chair

Article 6.8 The REB Chair is responsible for ensuring that the REB review process conforms to the requirements of this Policy.

Application

The role of the REB Chair is to provide overall leadership for the REB and to facilitate the REB review process, based on institutional policies and procedures and this Policy. The Chair should monitor the REB's decisions for consistency and ensure that these decisions are recorded accurately and communicated clearly to researchers in writing as soon as possible by the Chair or his or her designate. Institutions shall provide the necessary resources and adequate administrative support to enable the REB Chair to fulfill his or her responsibilities.

Research Ethics Board Quorum

Article 6.9 Institutions shall establish quorum rules for REBs that meet the minimum requirements of membership representation outlined in Article 6.4. When there is less than full attendance, decisions requiring full review should be adopted only when the members in attendance at that meeting have the specific expertise, relevant competence and knowledge necessary to provide an adequate research ethics review of the proposals under consideration.

Application

Institutions shall establish REB quorum rules subject to the range of competence and knowledge required by this Policy to ensure the soundness and integrity of the research ethics review process. To maintain quorum when REB members are geographically dispersed or in unexpected circumstances (e.g., emergencies), input from member(s) is allowed by other means, such as the use of technology (Article 6.10).

Ad hoc advisors, observers, research ethics administration staff and others attending REB meetings should not be counted in the quorum for an REB. Nor should they be allowed to vote on REB decisions (Article 6.5). Decisions without a quorum are not valid or binding.

Research Ethics Board Meetings and Attendance

Article 6.10 REBs shall have regular meetings to discharge their responsibilities, and shall normally meet face to face to review proposed research that is not assigned to delegated review.

Application

Face-to-face meetings are essential for adequate discussion of, and effective REB decision making on, research proposals, and for the collective education of the REB. The face-to-face medium provides interactive dynamics that tend to heighten the quality of communications and decisions.

Planning regular meetings is essential to fulfilling REB responsibilities. Where a member is frequently absent, the REB should have some mechanism for reviewing whether that member should continue to serve on the REB. Unexpected circumstances such as emergencies may prevent member(s) from attending the REB meeting. In these exceptional cases, input from member(s) by the use of technology (e.g., phone or video link) would be acceptable.

Videoconferencing, teleconferencing or use of other technologies may be regarded as necessary for meetings when REB members are geographically dispersed and there is no other way of holding an effective REB meeting, or when exceptional or exigent circumstances significantly disrupt or limit the feasibility of face-to-face REB meetings (e.g., during a public emergency). All efforts should be made to ensure that technical difficulties do not prevent the maintenance of quorum throughout the meeting. Use of such technologies requires the Chair to ensure active participation of members not physically present. Institutions should consider developing written procedures for the occasional use of video conferences or other technologies by an REB.

In the design phase of their research prior to the formal ethics review process, researchers may consult informally with REBs. Such dialogue can establish the stage at which REB review and approval would be required, or it can facilitate the review. Such informal meetings cannot, however, substitute for the formal review process. A schedule of REB meetings should be communicated to researchers for the planning of ethics review of their research.

On occasion, REBs may need to consult other resources within or outside the institution for advice and may invite experts to attend their meetings. REBs should consider whether the institutional functions of other individuals attending their meetings could exercise undue influence or provide elements of power imbalances or coercion that would affect REB review, deliberations and decisions (Articles 6.4 and 6.5 and Chapter 7).

REBs should establish a process for the basis of arriving at decisions requiring full REB review. For example, they may arrive at decisions by consensus, and where this is not possible resort to a vote. REBs should hold general meetings, retreats and workshops to enhance educational opportunities that may benefit the overall operation of the REB, to discuss any general issues arising out of the REB's activities, or to revise relevant policies.

B. Procedures for Research Ethics Board Review

Initial Research Ethics Review

Article 6.11 Researchers shall submit their research proposals, including proposals for pilot studies, for REB review and approval of their ethical acceptability prior to the start of recruitment of participants, data collection, access to data or collection of human biological materials. REB review is not required for the initial exploratory phase, which is intended to establish research partnerships or to inform the design of a research proposal, and may involve contact with individuals or communities.

Application

REB review and approval of the ethical acceptability of research are required before recruitment, formal data collection involving participants, access to data, or collection of human biological materials.

Researchers shall submit sufficient details to enable the REB to make an informed review of the ethical acceptability of the research.

Some types of research using quantitative or qualitative research methods, or a combination of methods as well as collaborative or community-based research (Chapters 9 and 10), may entail prior contact and dialogue with individuals or communities to establish research collaborations or partnerships prior to the actual design of the research. Other research may not involve humans in the initial stages but may require preparatory work, for instance, observing a research setting, taking notes, or setting up equipment. These activities may precede REB review. If, however, the researcher later wishes to use any information gathered from individuals or communities during the exploratory phase as research findings, this intention must be made clear when the researcher submits the application for ethics review, along with any provisions for seeking the consent of those who contributed the information.

Pilot Studies

As an integral component of their research design, researchers may undertake pilot studies involving participants (Article 2.1). Some of the ethical issues to consider in the review of pilot studies concern recruitment and sample size. Although pilot studies may offer indirect benefits to groups and to society by informing the design of the main study (and other similar studies), they often provide no direct benefits to participants. Researchers have an ethical responsibility to fully disclose the purpose and nature of the pilot study and the likelihood of benefits to participants during recruitment and when seeking consent. When reviewing pilot studies, REBs should ensure that recruitment and consent materials provide this information and describe how the findings of the pilot study will be used to determine the feasibility of conducting a larger study (see also Article 3.2). When considering the ethical acceptability of pilot studies, REBs should keep in mind that the main purpose of a pilot study is not to provide a definitive answer(s) to the research question(s). Accordingly, the number of participants specified may not equal the sample size that would be required in the main study. The researcher should provide justification for the sample size based on the focus of the pilot study: to test feasibility and/or to inform study design.

The level of REB review for pilot studies should follow a proportionate approach to research ethics review (Article 2.9). REB Chairs should ensure that REB members with the relevant expertise are involved in the review process (Articles 6.4 and 6.5).

Determining the Level of Research Ethics Review

Article 6.12 In keeping with a proportionate approach to research ethics review, the selection of the level of REB review shall be determined by the level of foreseeable risks to participants: the lower the level of risk, the lower the level of scrutiny (delegated review); the higher the level of risk, the higher the level of scrutiny (full board review).

Application

REBs shall assess the level of risk that the research under review poses to participants to determine the appropriate level of research ethics review (delegated or full REB review). (For a full discussion of the proportionate approach to research ethics review, see Chapter 1, Section C, and Article 2.9). This applies to both initial research ethics review (Article 6.11) and continuing research ethics review (Article 6.14).

With the support of their institutions, REBs may develop their own mechanisms under which delegation of the conduct of research ethics review, decision making, and the associated reporting processes will occur. Those mechanisms and procedures should be made public. It is the REB, based on its established procedures and through its Chair, that decides on the level of review for each research proposal.

Two levels of research ethics review may apply:

1) Full REB review

Research ethics review by the full REB should be the default requirement for research involving humans.

2) Delegated REB review of minimal risk research

The REB delegates research ethics review to an individual or individuals. Delegates shall be selected from among the REB membership with the exception of the ethics review of student course-based research activities. This can be delegated to the department, faculty or an equivalent level as indicated below.

Where it is determined that the research is of minimal risk (defined in Chapter 2 of this Policy), an REB may authorize a delegated research ethics review in accordance with its institutional policies and written procedures. Delegated reviewer(s) shall be selected from the REB membership: the REB Chair or another member (see Article 6.4 on the appointment of research ethics administration staff to the REB as non-voting members). Research ethics review may also be undertaken by non-REB members for student course-based research, as outlined below. Delegated reviewers who are non-members or non-voting members of the REB must have experience, expertise and knowledge comparable to what is expected of an REB member.

The REB may decide that its Chair or other REB member(s) may review and approve categories of research that are confidently expected to involve minimal risk. Delegated reviewers may call on other reviewers within the REB or refer projects back to the full REB if they determine that full board review is required. Where delegates consider a negative decision (i.e., one that would refuse ethics approval), this decision shall be referred to the full REB for review and endorsement before communicating the decision to the researcher.

An institution may decide that ethics review of minimal risk course-based research activities with a primarily pedagogical purpose can be delegated to non-REB members at the institution's department, faculty or equivalent level. Such pedagogical activities are normally required of students (at all levels) with the objective of providing them with exposure to research methods in their field of study (e.g., interviewing techniques). If these activities are used for the purposes of research (e.g., as part of a researcher's own research program), they should be reviewed by the regular institutional REB procedures. Theses or equivalent research projects involving human participants typically meet this Policy's definition of research (Application of Article 2.1) and should be reviewed by the REB following a proportionate approach (Article 6.12). The REB should establish written procedures and set out criteria for determining

which categories of research proposal may be eligible for this type of review, and should specify who is responsible for implementing and overseeing the approval mechanisms.

In delegating research ethics review, the REB should carefully select delegated reviewer(s) and ensure that all delegated reviewers who are non-voting members of the REB have the appropriate experience, expertise, training and resources required to review the ethical acceptability of all aspects of the proposal in accordance with this Policy. In the selection of delegated reviewers, special attention should be given to the assessment of real, potential or perceived conflicts of interest (Article 7.3).

Examples of categories that may be delegated for research ethics review include:

- research that is confidently expected to involve minimal risk;
- minimal risk changes to approved research;
- annual renewals of approved minimal risk research;
- annual renewals of more than minimal risk research where the remaining research-attributable risk is minimal. For example, the research will no longer involve new interventions to current participants and no additional participants will be enrolled in the study; and
- annual renewals of more than minimal risk research in which there has been:
    - no significant changes to the research;
    - no increase in risk to (or other ethical implications for) the participants since the most recent review by the full REB; and
    - the REB Chair has determined that the delegated review process is appropriate.

  Note that other applicable guidelines or policies (such as the ICH Guideline for Good Clinical Practice) may require a full REB review of the annual renewal for specific types of research.

  An REB that implements a delegated review process shall require that the actions and decisions of the delegated reviewer(s) be well documented and formally reported to the full REB, in a timely and appropriate manner. Where the delegated review is conducted by non-voting members or non-members of the REB, this formal report shall be made through the Chair. This will permit the REB to maintain oversight over the decisions made on its behalf so as to protect the interests of participants. Accountability requires that, regardless of the review strategy, the REB continue to be responsible for the ethics of all research involving humans within its jurisdiction.

Decision Making

Article 6.13 REBs shall function impartially, provide a fair hearing to the researchers involved, and provide reasoned and appropriately documented opinions and decisions. REBs should make their decisions on the ethical acceptability of research in an efficient and timely manner, and shall communicate all approvals and refusals to researchers in writing, in print or by electronic means, in accordance with their procedures.

Application

The REB shall accommodate reasonable requests from researchers to participate in discussions about their proposals. The REB may also invite researchers to attend an REB meeting to provide further information about their proposals. In either case, the researchers shall not be present when the REB is making its decision. When an REB is considering a negative decision, it shall provide the researcher with all the reasons for doing so and give the researcher an opportunity to reply before making a final decision (Article 6.18).

In the event that a minority within the REB membership considers a research project unethical, even though it is acceptable to a majority of members, an effort should be made to reach consensus. Consultation with the researcher, external advice or further reflection by the REB may be helpful. If disagreement persists, a decision should be made in accordance with the process agreed upon, and documented by the REB. In such instances, the minority position may be communicated to the researcher.

Participation by the researcher in REB discussions is often very helpful to both REBs and researchers. It may result in a deferral of the REB's decision until the researcher has considered the discussions and possibly modified the proposal. Such discussions are an essential part of the educational role of the REB.

Continuing Research Ethics Review

Article 6.14 The REB shall make the final determination as to the nature and frequency of continuing research ethics review in accordance with a proportionate approach to research ethics review. At minimum, continuing research ethics review shall consist of an annual status report (for multi-year research projects), and an end-of-study report (projects lasting less than one year).

Application

Research is subject to continuing research ethics review from the date of initial REB approval and throughout the life of the project (Article 2.8). At the time of the initial review, the REB has the authority to determine the term of approval and the level at which continuing ethics review occurs in accordance with a proportionate approach to research ethics review. As with initial review, continuing ethics review could be full board review or delegated review based on the level of risk of the research (Article 6.12). The level of research ethics review may be adjusted over the life of the project based on the level of risk.

For research projects lasting longer than one year, researchers shall submit, at minimum, an annual report with sufficient details to enable the REB to make an informed judgment about the continued ethical acceptability of the research. For research lasting less than one year, an end-of-study report may suffice.

Institutional ethics policies should include provisions that assist REBs, researchers and institutions to determine when continuing research ethics review is no longer required. Such provisions should consider different types of research designs (e.g., short-term project, longitudinal research, research with reporting back requirements). They should also consider issues, such as: the extent of any remaining risk to participants; the nature of plans (if any) for future interaction with participants; the status of

any commitments to or agreements with participants (e.g., with respect to reporting findings); and/or the relative likelihood of future unanticipated events, material incidental findings, or new information.

For some types of research (e.g., qualitative research or longitudinal research), there may be some difficulty in establishing start or end dates. In these cases, the REB should work with researchers to determine a reasonable timeline for continuing ethics review, and for determining the completion date dependent on the discipline and method of research. The reporting schedule for continuing ethics review may be adjusted throughout the life of the project. This would be necessary, for example, if the risk level of the research increases as a result of the addition of new procedures, or is re-assessed in light of changes to the approved research (Articles 6.15 and 6.16).

Research that involves minimal or no risk to participants should be held to the minimum requirements for continuing ethics review, that is, an annual report. Consistent with a proportionate approach, an REB has the option of requesting more frequent and/or more substantive reports if necessary. Research that poses greater than minimal risk may require more extensive continuing ethics review. This may include more frequent reporting to the REB, monitoring and review of the consent process, review of participant records, and site visits. Other reporting mechanisms for continuing ethics review may be required by funders, sponsors or regulators.

Continuing research ethics review should be understood as a collective responsibility to be carried out with a common interest in maintaining the highest ethical standards:

- Institutions have a responsibility to provide necessary resources to REBs to assist them in fulfilling their continuing ethics review responsibilities.
- REBs make the final decision about the nature and frequency of continuing ethics review.
- Researchers' responsibilities include monitoring their research to ensure that it is conducted in an ethical manner, reporting unanticipated issues (Article 6.15) or changes to the research (Article 6.16), supervising all team members in the application of the research procedures, and ensuring that they are properly qualified and versed in the conduct of ethical research.

Reports of Unanticipated Issues

Article 6.15 Researchers shall report to the REB any unanticipated issue or event that may increase the level of risk to participants or that has other ethical implications that may affect participants' welfare.

Application

Over the course of the implementation of the approved research project, issues may arise that the researcher did not anticipate when originally submitting the research for ethics review. Unanticipated issues include unexpected reactions by participants to a research intervention (e.g., unintended stimulation of traumatic memories, unforeseen side effects of a medication or natural health product), as well as unavoidable single incidents (e.g., a translator not available for a day, or a failure to follow correct research procedure for one participant on one occasion). They may be minor or serious in magnitude, with short- or long-term implications.

Any unanticipated issue that increases the level of risk to participants or has other ethical implications should be reported to the REB without delay. Changes that are necessary to eliminate an immediate risk(s) to the participants may be implemented as needed, but must be reported to the REB at the earliest opportunity. For clinical trials, reporting requirements for safety data or unanticipated issues are also addressed in Chapter 11 (Articles 11.6 and 11.8). If the incident or issue has immediate implications for the safety of participants, the REB may withdraw ethics approval, which would require that the research be halted or modified until the matter can be addressed (Articles 6.3, 11.8 and 11.9). It may require submission of a revised research proposal for REB review.

Minor deviations from the research (e.g., a slight increase or decrease of testing time, a wording adjustment on a question) should not require immediate reporting to the REB, but may be summarized in annual status reports (Article 6.14). In some types of qualitative research, for example, emergent design (Article 10.5), the research design evolves over time, so adjustments to the research are to be expected and need not be reported to the REB, unless they alter the level of risk or have other ethical implications for participants (Article 6.16).

The report to the REB should include a description of the unanticipated issue or incident, including details of how the researcher(s) dealt with the situation. Reports may be submitted by researchers or, in some cases, by data safety monitoring boards (Articles 11.6 and 11.8). The point in reporting is to enable the REB and the researcher to better protect participants. Depending on the nature of the issue, and in consultation with researchers, REBs may require that researchers adjust their procedures to prevent its recurrence during the research project.

Requests for Changes to Approved Research

Article 6.16 Researchers shall submit to their REBs in a timely manner requests for substantive changes to their originally approved research. REBs shall decide on the ethical acceptability of those changes to the research in accordance with a proportionate approach to research ethics review.

Application

In general, it is not the size of the change that dictates the ethics review process, but rather the ethical implications and risk associated with the proposed change. In case of doubt on the potential impact of the change to approved research on the level of risk to participants, researchers should consult with their REBs. Changes that substantially alter the nature of the approved research may be assessed as a new research project and require a new REB review.

In the conduct of their approved research, researchers should be aware of the requirement to report to their REBs, in a timely manner, proposed changes from approved research that affect participants at any stage of the process including, but not limited to, changes to the consent form, changes to the tasks or interventions involved in the research, or changes to measures to protect privacy and confidentiality. Any substantive change to the research should not be implemented without documented approval by the REB, except when necessary to eliminate an immediate risk(s) to the participants.

Requests for changes to approved research may receive delegated or full REB review depending on the level of risk to participants that the changes represent. REB evaluation of these requests can result

in a change to the assessed risk of the research and a corresponding change in the level of continuing ethics review.

REBs should give special attention to circumstances that may necessitate change in long-term research, such as new knowledge, equipment or instruments, or new or revised applicable policies and laws that may develop over the lifetime of a research project.

Record Keeping of Research Ethics Board Documents

Article 6.17 REBs shall prepare and maintain comprehensive records, including all documentation related to the projects submitted to the REB for review, attendance at all REB meetings, and accurate minutes reflecting REB decisions. Where the REB denies ethics approval for a research proposal, the minutes shall include the reasons for this decision.

Application

REBs need to act, and to be seen to be acting, fairly and reasonably. Institutions shall provide REBs with the necessary resources to enable them to maintain complete study files, including the original research proposal, as well as annual and end-of-study reports. When deciding the retention period of their files, REBs should be guided by their institutional record-keeping policies and other relevant legal or regulatory requirements. Files, minutes and other relevant documentation shall be accessible to authorized representatives of the institution, researchers, sponsors and funders when necessary to assist internal and external audits, or research monitoring, and to facilitate reconsideration or appeals.

The minutes of REB meetings shall clearly document the REB's decisions, any dissents and the reasons for them. REB decisions should be supported by clear references (e.g., date of decision, title of project), documentary basis for decision (i.e., documents or progress reports received and reviewed), the plan for continuing ethics review and timelines, reasons for decisions, and any conditions or limitations attached to the approval. Providing reasons for REB decisions is optional when ethics approval is granted.

REBs should have written procedures for its management of record keeping and other submitted reports. REBs shall maintain reports and decisions on unanticipated issues or changes to approved research, including details of how the researcher dealt with or is proposing to deal with the situation and the REB's response or decision (Articles 6.15 and 6.16).

The research ethics administration should also maintain general records related to REB membership and qualifications of members (e.g., copies of curriculum vitae, participation in relevant research ethics training).

C. Reconsideration and Appeals

Where researchers do not receive ethics approval, or receive approval conditional on revisions that they find compromise the feasibility or integrity of the proposed research, they are entitled to reconsideration by the REB. If that is not successful, they may appeal using the established appeal mechanism in accordance with the institution's procedures.

Reconsideration of Research Ethics Board Decisions

Article 6.18 Researchers have the right to request, and REBs have an obligation to provide, prompt reconsideration of decisions affecting a research project.

Application

Researchers and REBs should make every effort to resolve disagreements they may have through deliberation, consultation or advice. If a disagreement between the researcher and the REB cannot be resolved through reconsideration, the researcher shall have the option of appealing the REB decisions through the established appeal mechanism (Article 6.19). REBs should establish timelines to promptly conduct reconsiderations and issue their decisions.

The onus is on researchers to justify the grounds on which they request reconsideration by the REB and to indicate any alleged breaches to the established research ethics review process, or any elements of the REB decision that are not supported by this Policy.

Appeal of Research Ethics Board Decisions

Article 6.19 Institutions shall have an established mechanism and a procedure in place for promptly handling appeals from researchers when, after reconsideration, the REB has refused ethics approval of the research.

Application

In cases when researchers and REBs cannot reach agreement through reconsideration, the institution shall provide access to an established appeal process for the review of an REB decision. The researcher and the REB must have fully exhausted the reconsideration process, and the REB must have issued a final decision before the researcher initiates an appeal.

Based on its written institutional policies, the same authority that established the REB shall establish or appoint an appeal committee that reflects a range of expertise and knowledge similar to that of the REB, and that meets the procedural requirements of this Policy. An appeal committee may be an ad hoc or a permanent committee. Members of the REB whose decision is under appeal shall not serve on that appeal committee.

It should be stressed that the appeal process is not a substitute for REBs and researchers working closely together to ensure high quality ethical research, nor is it a forum to merely seek a second opinion.

Institutions may wish to explore regional cooperation or alliances, including the sharing of appeal boards. If two institutions decide to use each other's REB as an appeal board, a formal letter of agreement between institutions is required (Chapter 8).

It is not the role of the three federal research agencies that are responsible for this Policy to consider any appeals of REB decisions.

Article 6.20 The appeal committee shall have the authority to review negative decisions made by an REB. In so doing, it may approve, reject or request modifications to the research proposal. Its decision on behalf of the institution shall be final.

Application

Researchers have the right to request an appeal of an REB decision. An appeal can be launched for procedural or substantive reasons. The onus is on the researchers to justify the grounds on which they request an appeal and to indicate any breaches to the research ethics review process or any elements of the REB decision that are not supported by this Policy.

The appeal committee shall function impartially, provide a fair hearing to those involved, and provide reasoned and appropriately documented opinions and decisions. Both the researcher and a representative of the REB shall be granted the opportunity to address the appeal committee, but neither shall be present when the appeal committee deliberates and makes a decision. Appeal committee decisions on behalf of the institution shall be final and should be communicated in writing (in print or by electronic means) to researchers and to the REB whose decision was appealed. Recourse to judicial review may be available to the researcher.

D. Research Ethics Review during Publicly Declared Emergencies

This section addresses research ethics review within the context of the official declaration of public emergencies. For the purposes of this Policy, a publicly declared emergency is an emergency situation that, due to the extraordinary risks it presents, has been proclaimed as such by an authorized public official (in accordance with legislation and/or public policy).

Publicly declared emergencies are extraordinary events that arise suddenly or unexpectedly and require urgent or quick responses to minimize devastation. Examples include hurricanes and other natural disasters, large communicable disease outbreaks, catastrophic civil disorders, bio-hazardous releases, environmental disasters, and humanitarian emergencies. They tend to be time-limited. They may severely disrupt or may destroy normal functioning of institutions and communities, as well as individual lives. Once an emergency has been designated a publicly declared emergency, authorities may exercise special responsibilities and powers to deal with the situation, and the exercise of those responsibilities may temporarily modify normal procedures or practices. This section therefore applies to narrow, limited and exceptional circumstances.

There is a growing awareness of the need for institutional planning to respond to publicly declared emergencies and the associated potential challenges for research ethics review. Given the extraordinary circumstances that participants are potentially subjected to in publicly declared emergencies, special attention and effort should be given to upholding the core principles of Respect for Persons, Concern for Welfare, and Justice when reviewing the ethics of research to be conducted in emergencies. It should be noted that the following articles and the requirement for consent will not apply to public health activities undertaken by federal, provincial and territorial public health officials operating under statutory powers during publicly declared health emergencies.

Preparedness Plans for Research Ethics Review during Publicly Declared Emergencies

Article 6.21 In collaboration with their researchers, institutions and their REBs should develop preparedness plans for emergency research ethics review. Research ethics review during publicly declared emergencies may follow modified procedures and practices.

Application

Preparedness plans should outline policies and procedures for addressing research ethics review during public health outbreaks, natural disasters and other publicly declared emergencies. Research ethics policies and procedures, and their implementation, should adhere rigorously to a rule of reasonable, fair, and principled design and use during publicly declared emergencies.

Through their emergency preparedness plans, institutions, researchers and their REBs need to anticipate the pressures, time constraints, priorities and logistical challenges that may arise to ensure quality, timely, proportionate and appropriate research ethics review. The plan and its policies should proactively address basic operational questions. Examples include, but are not limited to, how emergencies may affect research and research ethics review in institutions; how REBs conduct business or meetings; what research needs should be planned in advance of, or addressed after, an emergency; what research, if any, needs to be done during an emergency; what qualifies as time-sensitive or "essential" research; what procedures govern the research ethics review process in emergency circumstances; and what evaluation methods need to be developed for post-response evaluations to inform any revisions to the institution's emergency procedures. It is important to pilot test the emergency procedures and plans in advance.

Policies should try to anticipate the extraordinary circumstances or demands occasioned by emergencies and set priorities among them. For example, REBs should try to work collaboratively with researchers who would likely be involved in emergency research (e.g., relevant biomedical, environmental and social science researchers), and determine what special consent provisions may be made (Chapter 3). Institutions might consider the use of an instrument to identify and triage the kinds of research that should be designed before, undertaken during or conducted after officially declared public emergencies. Likewise, a plan to help prioritize REB reviews during emergencies should take into account the following:

- what research is "essential" research during the emergency;
- the initial ethics review process of new research projects arising from the emergency (e.g., research involving interviews with first responders and victims to understand human response during a disaster, such as a tornado or earthquake);
- continuing ethics review of research undertaken prior to the occurrence of the emergency; and
- the ethics review process for changes to approved research, because new information may become available and require action very rapidly during emergencies (Articles 6.15 and 6.16).

REB procedures may warrant reasonable adjustments to address the timing, locale, expertise, form and scope of research ethics review, and the holding of REB meetings during emergency situations (Article 6.10). Special attention could be given to REB procedures to review and approve research (e.g., full or

delegated research ethics reviews, quorum rules, or special agreements with other institutions), while considering the impact of the emergency on participants, researchers, REB members, institutional staff, and others. It is also important to coordinate research efforts and research ethics review processes within and across institutions. REB members may become unavailable (e.g., due to illness, relocation, or quarantine by public authorities). Institutions and REBs should explore the nomination of substitute REB members and consultation with ad hoc advisors with relevant expertise (Articles 6.4 and 6.5), negotiate reciprocity agreements with other institutions for REB reviews (Article 8.1), and revisit how scholarly review (Article 2.7) would be applied in emergency situations.

Research ethics review should be commensurate with the necessities occasioned by the emergency because of the critical interplay between public urgencies, essential research and a continuing commitment to the core principles even in the face of acute public necessity. Indeed, research ethics review during publicly declared emergencies is even more important than under normal circumstances, and may require even greater care, since everyone (participants, researchers and REB members themselves) may be rendered more vulnerable by the nature of the emergency.

Research Ethics Review Policy and Procedures during Publicly Declared Emergencies

Article 6.22 Research ethics policies and procedures for emergencies take effect once an emergency has been publicly declared. They should cease to apply as soon as is feasible after the end of the publicly declared emergency.

Application

Because emergencies present extraordinary public risks that warrant special responses, legislation or public policies usually require that they be officially proclaimed or declared. Research ethics review procedures that have been established for use during publicly declared emergencies should be applied only after an authorized public official declares a public emergency. These procedures therefore apply to very narrow, limited and exceptional circumstances. Institutions and REBs must endeavour to return to normal operating procedures as soon as possible after public officials have declared that the emergency is over.

Respecting Core Principles: Limiting Exceptions

Article 6.23 REBs should give special care to requests for exceptions to the principles and procedures outlined in this Policy during publicly declared emergencies.

Application

Especially during times of emergency, researchers, REBs and institutions need to be vigilant and exercise due diligence in respecting ethical principles, procedures and the law in effect during the emergency to preserve the values, purpose and protection that the principles of this Policy advance.

To guide fair and reasonable implementation of these principles in emergency circumstances, any exception to, or infringement of, ethics principles and REB procedures must be demonstrably justified by those urging the exception or infringement.

Where exceptions to or infringements of ethics principles and REB procedures are justified, they should be narrowly tailored to address the necessities occasioned by the publicly declared emergency, such that they rely on the most restrictive or least intrusive means necessary to achieve the Policy goal: the promotion and guidance of ethical conduct in research. This approach – consistent with international bioethics and human rights norms – maximizes respect for ethical principles and helps to ensure that exceptions and the means to implement them are not unduly broad, overreaching or unjustifiably invasive.

Recognizing and respecting the principle of Justice means that research ethics review policies and procedures for publicly declared emergencies shall be used in a manner that is not discriminatory or arbitrary. The commitment to justice advances a fair and balanced distribution of risks and potential benefits even in the face of public emergencies.

REBs and researchers should be aware that individuals, prospective participants, researchers, and institutions may not normally be considered vulnerable, but may become so by the very nature of public emergencies. Those already vulnerable may become acutely so (Article 4.7). The increased public risks and devastation that cause public emergencies to be declared can threaten autonomy and physical, emotional, institutional and social welfare or safety. They also bring inherent tensions and pressures that may impact deliberative decision making. Taking all of this into consideration, REBs and researchers should ensure that the risks and potential benefits posed by any proposed research are appropriately evaluated, including provisions for greater than normal attention to risk, where applicable.

E. Review of Sponsor-Researcher Contracts

The rights of sponsors with respect to the analysis of data, interpretation of results and publication of findings, and ownership thereof, are typically described in sponsor-researcher contracts. In the context of clinical trials, they are often referred to as "clinical trial agreements." These contracts may seek to place restrictions on access to data and the publication of findings, either directly or through provisions that seek to protect their intellectual property rights to research procedures, data, or other information.

Institutions should ensure that sponsors' legitimate interests are reasonably balanced against researchers' ethical and legal obligations to participants and their duty to disseminate data and research findings.

Article 6.24 It is the responsibility of institutions to review clauses in sponsor-researcher contracts related to confidentiality, publication, and access to data. They shall require that any clauses related to confidentiality and publication be consistent with the researchers' duties to:

a. disclose new information that may affect participant welfare or consent to REBs and participants; and

b. report research findings in a timely manner without undue restriction.

Institutions shall also ensure that sponsor-researcher contracts:

a. stipulate that researchers, primarily the principal investigator, should assume the primary role and responsibility for the analysis, interpretation, and preparation of the findings for publication;

b. permit principal investigators to access all study data;

c. permit researchers to access all study data collected at their respective sites; and

d. permit all researchers to access all study data in cases where no principal investigator is named.

Application

Institutions must be satisfied that clauses will not impede researchers from reporting new information relevant to participants' consent and/or welfare. They must be assured that such information will be reported in time to allow REBs to address any risks to participants.

Institutions shall make sponsor-researcher contracts available to REBs upon request. In addition, institutions must require the satisfactory amendment or removal of any restrictions in sponsor-researcher contracts that unduly limit either the content of the scientific information that may be disseminated or the timing of dissemination.

Contracts should ensure that principal investigators have the necessary access to original study data, and the opportunity to analyze them, to ensure that they can report study findings fairly and accurately, particularly with respect to efficacy and safety. Normally, it is the responsibility of the named principal investigator to examine the entire data set and to ensure that data are not inappropriately excluded from analyses and disseminations of findings.

The onus to justify restrictions on dissemination or access to data should lie with the one seeking any such restriction, usually the researcher or sponsor. Restrictions on information that participants would reasonably consider relevant to their welfare or that are required to give appropriate context to a manuscript or other publication, are seldom, if ever, justified (Articles 11.6 and 11.8).

Endnote

1 Government of Canada, *Agreement on the Administration of Agency Grants and Awards by Research Institutions,* Effective April 1, 2018 to March 31, 2023. http://www.science.gc.ca/eic/site/063.nsf/eng/h_56B87BE5.html?OpenDocument, Retrieved on May 31, 2018.

CHAPTER 7

CONFLICTS OF INTEREST

Introduction

This chapter addresses ethical issues that can arise when research activities and other activities conflict. A conflict of interest may arise when activities or situations place an individual or institution in a real, potential or perceived conflict between the duties or responsibilities related to research, and personal, institutional or other interests. These interests include, but are not limited to, business, commercial or financial interests pertaining to the institution and/or the individual, their family members, friends, or their former, current or prospective professional associates.

Conflicts of interest must be assessed when conducting research, as they may jeopardize the integrity of the research and the protection offered to participants. Conflicts that create divided loyalties may distract researchers, research ethics boards (REBs), and institutions from concern for the welfare of participants and are contrary to the core principles on which this Policy is based. Failure to disclose and manage conflicts may impede the informed and autonomous choices of individuals to participate in research. Prospective participants need to know about real, potential or perceived conflicts of interest in order to make an informed decision about whether to participate (Article 3.2[e]). Conflicts of interest may also undermine the respect for participants that is fundamental to the principle of Justice.

It is preferable to avoid or prevent being in a position of conflict of interest. When it is not possible to avoid a conflict of interest, then it shall be disclosed to the appropriate people and steps shall be taken to minimize or manage the conflict. Researchers, their institutions and REBs should identify and address conflicts of interest – real, potential or perceived – to discharge professional and institutional obligations, maintain public confidence and trust, and ensure accountability. In some cases, the conflict cannot be managed and the institutions, the researcher or the REB member may need to abandon one of the interests in conflict. When necessary, researchers may have to manage a conflict of interest either by disclosing it to participants or by removing themselves from the research.

A. Key Concepts

Institutional Conflict of Interest

Institutions involved in research hold trust relationships with participants, research sponsors, researchers and society. These institutions may have financial or reputational interests including, but not limited to, the provision of education and the promotion of research that conflict with the institution's obligations to protect and respect human dignity as characterized by the core principles of this Policy. For example, institutions may experience pressures to attract particular research funding or certain types of research activities that are self-sustaining, which may compromise their independence and public trust. Institutions have an obligation to ensure that the ethical conduct of research is not compromised by real, potential or perceived conflicts of interest.

An institutional conflict of interest involves a conflict between at least two substantial institutional obligations that cannot be adequately fulfilled without compromising one or both obligations. Conflicts may occur when pursuing particular goals, for instance, the pursuit of two different "goods," such as an effort to obtain general infrastructure funding from a donor that conflicts with an effort to promote research that the donor does not wish to support.

Institutional conflicts of interest may compromise duties of loyalty and lead to biased judgments. Conflicts may also undermine public trust in the ability of the institution to carry out its missions, operations and ethical responsibilities in research.

Institutions may be in conflict of interest, for example, when they (a) sponsor a research project; (b) manage the intellectual property that forms the basis of a research project or stand to benefit from intellectual property resulting from the research; (c) hold equity in companies and/or receive major donations; or (d) have conflicting roles carried out by one institutional official (e.g., a vice-president who is responsible for the promotion of research activity and funding and also for oversight of research).

Acting in a professional role within the institution, individuals (e.g., institution president, vice-president, dean of a faculty or department head) are in a conflict of interest when they are subject to competing incentives or functions. These may significantly interfere with the impartial exercise of duties, including legal and ethical obligations within the institutional structure. The conflict may be chronic, relating to recurring situations resulting from the institutional structure, or it may be triggered by a unique situation that is not likely to recur.

Research Ethics Board Member Conflict of Interest

The individual REB members, and the REB as a whole, maintain relationships of trust with participants, research sponsors, researchers, and society. REB members must therefore be aware of their own potential for real or perceived conflicts of interest.

For example, REB members are in a conflict of interest when their own research projects are under review by their REB, when they are a co-investigator, or when they are in a supervisory or mentoring relationship with a graduate student applicant. REB members may also be in a conflict of interest situation when they have interpersonal or financial relationships with the researchers, or personal or financial interests in a company, labour union or not-for-profit organization that may be the sponsor of the research project, or that may be substantially affected by the research.

Conflicts of interest based on collaborations or disputes with colleagues, students or others may be ongoing or of limited duration. REBs have an obligation to ensure that the fairness and transparency of research ethics review are not compromised by real, potential or perceived conflicts of interest.

Researcher Conflict of Interest

Researchers and research students hold trust relationships, either directly or indirectly, with participants, research sponsors, institutions, their professional bodies and society. These trust relationships can be put at risk by conflicts of interest that may compromise independence, objectivity or ethical duties of loyalty. Although the potential for such conflicts has always existed, pressures on researchers (e.g., to delay or withhold dissemination of research outcomes or to use inappropriate recruitment strategies) heighten concerns that conflicts of interest may affect ethical behaviour.

Researchers' conflicts of interest may arise from interpersonal relationships (e.g., family or community relationships), financial partnerships, other economic interests (e.g., spin-off companies in which researchers have stakes or private contract research outside of the academic realm), academic interests or any other incentives that may compromise integrity or respect for the core principles of this Policy. Conflicts may arise from an individual's involvement in dual and multiple roles within or outside an institution. While it may not be possible to eliminate all conflicts of interest, researchers are expected to identify, minimize or otherwise manage their individual conflicts in a manner that is satisfactory to the REB.

B. Institutions and Conflicts of Interest

Article 7.1 Institutions shall develop and implement conflict of interest policies, including procedures to identify, eliminate, minimize or otherwise manage conflicts of interest that may affect research. All parties (e.g., researchers, administrators, REB members) should act in a transparent manner in identifying and addressing conflicts of interest. Institutions should make their written conflict of interest policies and procedures publicly available to all members of the research enterprise, including participants, REBs, researchers, administrators and research sponsors.

Application

To meet obligations to protect participants, institutional policies should address the roles, responsibilities and process for identifying, eliminating, minimizing or otherwise managing institutional conflicts of interest relevant to research, including disclosure to REBs. Management of conflicts of interest includes, but is not limited to, prevention, evaluation, disclosure and the application of appropriate remedies as defined by the institution.

When developing institutional policies and procedures on conflicts of interest, institutions should clarify roles and the distribution of responsibilities, and clarify associated potential for conflicts. This clarity should reduce or eliminate the possibility for confusion of roles that may ultimately lead to conflicting obligations. Ideally, institutional policies will organize roles, responsibilities, reporting lines and accountabilities to eliminate, minimize or otherwise manage conflicts of interest (Articles 6.1, 6.2 and 7.2).

Measures to manage conflicts of interest should reflect the inherent threat of conflicts of interest to participants, as well as to the scientific and scholarly integrity and credibility of research. These measures should also be commensurate with the risks. Institutions should consider the following measures to address conflicts of interest at the institutional level that are germane to research involving humans:

- creating central institutional mechanisms, such as a competent institutional authority, a conflict of interest committee, or other delegated bodies within the institution to help identify, eliminate, minimize or otherwise manage conflicts of interest;
- refining or redesign roles, responsibilities, and reporting lines to eliminate, minimize or manage the potential for conflict of interest;

- preventing or minimizing conflict of interest in institutional design and structuring when creating new roles, responsibilities or relationships;
- applying barriers to insulate potentially conflicting roles and responsibilities;
- requiring that individuals involved in the conduct of research withdraw from, or not participate in, roles or functions unduly compromised or disabled by any real, potential or perceived conflict.

Conflict of interest policies and procedures should be developed in a transparent manner. The goal of these policies is to eliminate conflict of interest where possible or, alternatively, to identify and disclose real, potential or perceived institutional conflicts of interest, to make them transparent and open to scrutiny, and to provide mechanisms to minimize or otherwise manage them.

Article 7.2 Institutions should ensure that real, potential or perceived institutional conflicts of interest that may affect research are reported to the REB through established conflict of interest mechanisms. The REB shall consider whether the institutional conflict of interest should be disclosed to prospective participants as part of the consent process.

Application

Any member of an institution, a senior administrator, researcher, REB member or any other individual who is aware of potential sources of institutional conflicts of interest that may affect research should refer to the institutional policy for the appropriate steps to inform the REB. Institutional policies shall address when disclosure of conflicts of interest to the REB is required and how these conflicts should be evaluated and managed.

Likewise, when a real, potential or perceived institutional conflict of interest is disclosed and brought to its attention, the REB may be guided by the prescribed institutional mechanisms for managing the conflict. However, it is the REB that is responsible for deciding how these conflicts shall be managed. This includes requiring that researchers disclose institutional conflicts of interest that are relevant to participant consent. These decisions must be documented in accordance with Article 6.17.

Community-based research involving small communities or community-based organizations with scarce human resources may present particular issues related to multiple roles of some individuals. In some cases, securing informed advice on cultural or other aspects of research rests with the researcher or the sponsoring institution, and requires engagement with a community advisor who may assume various roles in the research process. The same individual may be involved in providing preliminary information as well as reviewing the ethics of a research proposal at the community level and/or possibly co-managing the approved research. As outlined in Article 7.1, an approach relative to the level of risks, such as disclosure to the participants of the possible conflicts between multiple roles, may be sufficient to manage the conflict (see also Articles 9.6, 9.8 and 9.12).

C. Research Ethics Board Members and Conflicts of Interest

Article 7.3 When reviewing research proposals, REB members shall disclose real, potential or perceived conflicts of interest to the REB. When necessary, the REB may decide that some of its members must withdraw from REB deliberations and decisions.

Application

To maintain the independence and integrity of research ethics review, members of the REB must identify, eliminate, minimize or otherwise manage real, potential or perceived conflicts of interest. If an REB is reviewing a research project in which a member of the REB has a personal or financial conflict of interest (Section A of this chapter), the member must disclose the nature of the conflict and absent themselves from any discussion or decision regarding that research project. In the event that a member's conflict of interest and necessary withdrawal from the meeting will threaten the maintenance of quorum, the REB can ensure that a substitute member be in attendance to maintain quorum.

Conflict of interest policies should determine a reasonable time period during which an REB member is not allowed to review a proposal involving a recent collaborator, supervisor, student or other colleague (as defined by the institution). The purpose of these policies on time limits is to ensure adequate and continued access to competent expertise. In some cases, the scientific expertise of the REB member may still be sought when no other individuals with the scientific expertise relevant to the proposal under review are available to the REB. In such instances, the REB will record this explicitly in the minutes. The member should not be present when the REB makes its decision.

Research Ethics Boards and Senior Administrators

Institutional senior administrators (e.g., a vice-president of research or business development) should not serve on an REB, or directly or indirectly influence the REB decision-making process. The mere presence of an institutional senior administrator at REB meetings may undermine the independence of the REB by unduly influencing REB deliberations and decisions.

REBs and senior administrators should consider other venues to discuss policy issues, general issues arising from the REB's activities, or training and educational needs, to the benefit of the overall operation and mandate of the REB. In the discharge of their interdependent roles and duties to participants, effective communications processes should be established between REBs and the relevant officers of institutions. In cases where senior administrators interfere with the REB decision-making process, REBs should invoke the institution's conflict of interest policies.

Compensation for Research Ethics Board Members

Reasonable compensation by institutions for work done by REB members is appropriate. However, in some instances, individual members of the REB may have a conflict of interest in accepting undue or excessive honoraria for their participation in the REB. Institutions should define appropriate levels of compensation.

D. Researchers and Conflicts of Interest

Article 7.4 Researchers shall disclose in research proposals they submit to the REB any real, potential or perceived individual conflicts of interest, as well as any institutional conflicts of interest or community conflicts of interest of which they are aware that may have an impact on their research. Upon discussion with the researcher, the REB shall determine the appropriate steps to manage the conflict of interest.

Application

Managing conflict of interest is a process that begins with identification and is followed by disclosure. Upon disclosure of a conflict by a researcher to the REB, the steps taken by the REB to manage the conflict should be context-based and commensurate with the risks. In some cases, the REB might conclude that the identified conflict of interest does not warrant further action. REBs and researchers should be mindful of the fact that conflict of interest may also exist within a community where research is taking place (e.g., between the community leadership and its members), between a community and a researcher, or between the community and institutions.

The REB should require, consistent with Article 3.2(e), that the researcher disclose any real, potential or perceived conflict of interest to the participant. When disclosure to the REB is not enough to manage the conflict of interest, the REB, guided by established institutional policies, may require that the researcher withdraw from the research, or that others on the research team, who are not in conflict of interest, make research-related decisions. Where appropriate, disclosure to the sponsor, the institution, the community and any relevant professional body may also be necessary. In exceptional cases, the REB has the discretion to refuse approval of a research project where the REB decides that the conflict of interest has not been avoided or cannot be appropriately managed.

If there is a need for a researcher with a conflict of interest in a research project to be involved in some aspect of the project, the extent of the involvement should be reviewed and explicitly endorsed by the REB in its minutes. Participants should also be informed during the consent process of the conflict and the extent of the researcher's involvement. In line with the proportionate approach to REB review, and through the continued research ethics review process, REBs may impose additional control mechanisms if necessary.

Dual Roles

Dual roles of researchers and their associated obligations (e.g., acting as both a researcher and a therapist, health care provider, caregiver, teacher, advisor, consultant, supervisor, student or employer) may create conflicts, undue influences, power imbalances or coercion that could affect relationships with others and affect decision-making procedures (e.g., consent of participants). Article 3.2(e) reminds researchers of relevant ethical duties that govern real, potential or perceived conflicts of interest as they relate to the consent of participants.

To preserve and not abuse the trust on which many professional relationships rest, researchers should be fully cognizant of conflicts of interest that may arise from their dual or multiple roles, their rights and responsibilities, and how they can manage the conflict. When acting in dual or multiple roles, the researcher shall disclose the nature of the conflict to the participant in the consent process.

Financial Conflicts of Interest

Real, potential or perceived financial conflicts of interest may affect any type of research. Institutions, researchers and REBs should be aware of, and consider, the possibility of financial conflicts of interest. They should seek to ensure that financial considerations do not serve to diminish respect for the principles of this Policy or the scientific validity and transparency of research procedures.

Financial incentives have the potential to distort researchers' judgment in ensuring that the design and conduct of research is ethical. When researchers partner with organizations whose primary motive is profit, they must be aware of the potential for conflicts of interest. Consideration for the profitability of the research may threaten the ethical integrity of research design and conduct. Not all research sponsored by for-profit organizations gives rise to financial conflicts of interest. However, institutions should consider the potential for this type of conflict because its ability to undermine the ethical conduct of research has been empirically established.

As part of a research project submitted for institutional review of conflict of interest, researchers shall disclose all kinds and amounts of payment (financial or in-kind) to the researchers by sponsors, commercial interests, and consultative or other relationships, as well as any other relevant information that may affect the project (e.g., donation to an institution by a research sponsor). Researchers shall also supply all relevant documentation and identify strategies to prevent, disclose, minimize or otherwise manage conflicts.

Institutions should ensure that relevant documents, such as budgets and contracts, are reviewed in order to identify conflicts of interest and develop strategies for minimizing and managing them. Reviewers should look for issues such as inappropriate payments or other unexplained expenses that may raise questions about conflict of interest. Payment provisions should be scrutinized to ensure they do not create ethically inappropriate incentives to recruit quickly, at the expense of a careful review of the suitability of prospective participants. Unreasonable payments or undue inducements may place the researcher, and sometimes the institution, in a conflict between maximizing financial remuneration on the one hand and protecting participants and meeting the scientific requirements of the project on the other. Disclosure of the kinds and amounts of payments and other budgetary details encourages the researcher to identify and appropriately manage potential conflicts of interest and helps the institution to assess them. Management by institutions may include prohibiting certain forms of payment.

The perception of a conflict of interest may, in many cases, be as damaging as a real conflict. The REB and institution should assess the likelihood that the researcher's judgment may be inappropriately influenced, or perceived to be influenced, by private or personal interests. It should then determine the magnitude of harm that is likely to result from such influence or from the perception of undue influence. Institutions should make relevant documents available to the REB upon request.

In addressing conflicts of interest, disagreements between the REB or institution and the researcher may arise about the scope and reach of disclosure, including disclosure of new information to participants, or other aspects of managing the conflict. Resolution of disagreements should be guided by the paramount principles of Respect for Persons and Concern for Welfare of participants.

CHAPTER 8

MULTI-JURISDICTIONAL RESEARCH

Introduction

This chapter sets out options, procedures and considerations for the ethics review of multi-jurisdictional research either entirely within Canada, or in Canada and other countries. It is intended to facilitate the ethics review process and ethical conduct of such research while ensuring that all participants are afforded the same respect and protection in accordance with the core principles of this Policy.

Contemporary research often involves collaborative partnerships among researchers from multiple institutions or countries. It may call upon the participation of a number of local populations and involve multiple institutions and/or multiple research ethics boards (REBs).

Collaborations in research may require institutions to adopt policies and procedures that permit arrangements for REB review by REBs at other institutions or external or independent REBs. To be effective, these review arrangements should ensure that research involving humans is designed, reviewed and conducted in a way that is informed by the core principles of this Policy: Respect for Persons, Concern for Welfare, and Justice. These core principles should be balanced with a proportionate approach to the research ethics review process (described in Article 2.9) for research being undertaken in Canada or abroad. Multi-jurisdictional research should take into account other relevant policies and applicable laws and regulations.

A. Review Mechanisms for Research Involving Multiple Institutions and/or Multiple Research Ethics Boards

This section primarily addresses the ethics review mechanisms for research involving multiple institutions and/or multiple REBs. It is not intended to apply to ethics review mechanisms for research involving multiple REBs within the jurisdiction or under the auspices of a single institution (addressed in Article 6.3).

Research involving humans that may require the involvement of multiple institutions and/or multiple REBs includes, but is not limited to, the following situations:

a. a research project conducted by a team of researchers affiliated with different institutions;

b. several research projects independently conducted by researchers affiliated with different institutions, with data combined at some point to form one overall research project;

c. a research project conducted by a researcher affiliated with one institution, but that involves collecting data or recruiting participants at different institutions;

d. a research project conducted by a researcher who has multiple institutional affiliations (e.g., two universities, a university and a college, or a university and a hospital. See Application of Article 6.1);

e. a research project conducted by a researcher at one institution that requires the limited collaboration of individuals affiliated with different institutions or organizations (e.g., statisticians, lab or X-ray technicians, social workers and school teachers); or

f. a research project that researcher(s) working under the auspices of a Canadian research institution conduct in another province, territory or country.

Adoption of Alternative Review Models – An Institutional Responsibility

Article 8.1 An institution that has established an REB may approve alternative review models for research involving multiple REBs and/or institutions, in accordance with this Policy. The institution remains responsible for the ethical acceptability and ethical conduct of research undertaken within its jurisdiction or under its auspices irrespective of where the research is conducted.

Application

As described in Chapter 6, institutions are accountable for research conducted under their auspices, irrespective of the location where it takes place. Where research involving humans requires the involvement of multiple institutions and/or multiple REBs, an institution may establish one or more, or a mix of models for research ethics review as described below. Institutions may also establish other models or arrangements that are appropriate for the research under review within their jurisdiction or under their auspices. The ultimate responsibility for approving alternative research ethics review models for potential use by REBs and researchers remains with their individual institutions.

In consultation with its REB(s), an institution may authorize its REB to accept reviews undertaken by an external REB of the ethical acceptability of research. This authorization should be based on an official agreement that includes, but is not limited to, the following minimum components:

- All institutions or equivalent organization(s) involved agree to (1) adhere to the requirements of this Policy, (2) formalize the cross-institutional agreement, and (3) document the existence of this agreement in their institutional policies.
- The highest institutional level, the body that originally defined the jurisdiction of the REB and its relationship to other relevant bodies or authorities within the institution, makes the decision to allow an REB to recognize research ethics review decisions made by another REB (in accordance with Article 6.2).
- Approvals based on cross-institutional agreement should be documented and reported to the full REB, through the REB Chair, in each institution. The point in reporting is informational. It should not necessarily trigger a duplicate research ethics review.

Researchers and REBs should use the research ethics review models defined by their institutions (Article 8.2) and facilitate coordination of the research ethics review process. Whatever model is chosen, roles and responsibilities of all involved in the process should be defined and agreed to at the outset. Continuing ethics review of research involving multiple institutions and/or multiple REBs should follow the same process outlined in Article 6.14.

Research Ethics Review Models

The following models for the ethics review of research involving multiple REBs and/or multiple institutions are intended to provide flexibility and efficiency and to prevent unnecessary duplication of review without compromising the protection of participants. All other provisions of this Policy remain applicable.

1) Independent Ethics Review by Several Research Ethics Boards

This model follows the same research ethics review process as when the research only involves a single REB review. The REBs involved at each participating institution conduct an independent research ethics review and provide their separate decisions, either concurrently or sequentially. The level of ethics review for research that involves multiple REBs and/or institutions shall be proportionate to the risk involved in the research (Article 6.12).

Ethics review of the proposed research at each collaborating institution helps to ensure that local issues and values are taken into consideration. This approach may be particularly important, though often more challenging, when there are relevant social or cultural differences between the participating institutions. When several REBs consider the same proposal from their own institutional perspectives, they may reach different conclusions on one or more aspects of the proposed research, that reflect local issues and values. REBs may therefore wish to coordinate their ethics review of research projects requiring multiple REB involvement, including conducting their research ethics reviews in a timely manner and communicating any concerns that they may have with other REBs reviewing the same project. When multiple REBs are involved, the principal investigators should work with their REBs to formulate a strategy to address procedural inconsistencies or substantive disagreements that may arise among the participating REBs.

Where possible, researchers should provide their REBs with the name and contact information of the other REBs that will also review the project to facilitate direct communication between the REBs, and help resolve disagreements that may arise.

2) Research Ethics Review Delegated to an External, Specialized or Multi-Institutional Research Ethics Board

Institutions may allow research on specialized content or research methods to be reviewed by an external, specialized or multi-institutional REB, where such a body exists. External, specialized or multi-institutional REBs may be established regionally, provincially/territorially or nationally, as necessary. Two or more institutions may choose to create a single joint REB, or to appoint an external REB, to which they delegate research ethics review. This delegation of review may be based on geographical proximity or other considerations such as resources, volume of reviews or shared expertise.

Some provinces have introduced legislation or policies that designate one or more REBs for the review of certain types of research within the province (see References at the end of this chapter).

In the official agreement between the selected REB and the institutions submitting research for ethics review, the external, specialized, or multi-institutional REB shall agree to adhere to this Policy. Roles and responsibilities should be clearly defined in the official agreement between the institution(s) delegating the review, and the institution or equivalent organization of the REB that will review the ethical acceptability of the research, or in the relevant legislation or policies. The external, specialized

or multi-institutional REB may act as the responsible REB for any given review, if formally mandated as such by the institutions in question. Where relevant, agreements should specify how the external, specialized or multi-institutional REB will assure familiarity with particular populations that may be involved in the research. Review by an external, specialized or multi-institutional REB need not be preceded or followed by local REB review unless warranted to help ensure that local issues and values are taken into account.

3) Reciprocal Research Ethics Board Review

Multiple institutions may enter into official agreements under which they will accept, with an agreed level of oversight, the research ethics reviews of each other's REBs. This might involve specific agreements between institutions for sharing their workload. Alternatively, institutions may decide that reciprocity agreements should be established for the ethics review of each relevant research proposal on a case-by-case basis.

In either case, researchers shall ensure that the reviewing REB is provided with any relevant information about the local populations and circumstances that would ordinarily be available to the local REB, and that may have a bearing on its review. The reviewing REB might call upon local REBs to provide information in addition to that provided by the researchers.

Selection of a Research Ethics Review Model Relevant to the Research Project

Article 8.2 When planning a research project involving multiple institutions and/or multiple REBs, researchers and REBs should select the most appropriate research ethics review model from among those authorized by their institutions.

Application

Sensitivity to context is a key issue in the application of the core principles of this Policy to the ethics review of research involving multiple institutions and/or REBs. Researchers should consider the alternative research ethics review models at the planning and design stage of their research, and should consult with their REBs to facilitate the selection and coordination of the appropriate review model. In choosing the appropriate research ethics review model, the researcher and the REB should pay attention to the research context and the characteristics of the populations targeted by the research. The final decision regarding the selection of the appropriate model is the responsibility of the principal REB.

When selecting from among research ethics review models authorized by their institutions, researchers and REBs should consider the following:

- the discipline and content area of the research, and the availability to the reviewing REB of appropriate experience and expertise;
- the scope of the project to be reviewed and appropriateness of the proposed research ethics review model;
- the vulnerability of the study population overall and/or the particular characteristics of the local population at individual sites, differences in values and cultural norms, and the level of risk associated with the research under review;

- any relevant differences in laws and/or guidelines pertaining to the research in question if the institutions are in different provinces, territories and/or countries;
- relationships between institutions and REBs, and conflict resolution mechanisms related to REB decisions;
- the potential for conflicts of interest and undue influence, including those that may arise from funding sources;
- any differences in the standard of care normally followed, or access to services at the participating institutions that might be relevant to the conduct of the research; and
- any operational issues that might affect the research.

B. Ethics Review of Research Conducted Outside the Institution

Researchers affiliated with Canadian institutions are undertaking research at numerous sites within Canada and in countries around the world. Such research may be carried out with or without any collaboration with host institutions and local researchers. Most middle-income countries, and many low-income countries, have laws, policies or guidelines governing the ethical conduct of research involving humans, but some parts of the world do not have developed or widespread research ethics infrastructure.

National and international standards for research involving humans are evolving continually, but methods for comparing the precise levels of protection afforded participants in different countries or jurisdictions, and by different institutions within those countries and jurisdictions, have not yet been developed. In exercising its responsibilities for the initial and continuing ethics review of research conducted under its auspices, the Canadian REB shall satisfy itself that the requirements of this Policy are met, both within the Canadian institution, and within the other country or research site. The Canadian REB shall take appropriate steps to ensure researchers are responsive to ethically relevant aspects of the research context.

Article 8.3

a. Where research conducted under the auspices of a Canadian research institution and performed in whole or in part outside of Canada has been approved under a research ethics review model involving multiple institutions and/or REBs consistent with this Policy, the terms of that model apply.

b. Subject to Article 8.3(a), research conducted under the auspices of a Canadian research institution and conducted outside its jurisdiction, whether elsewhere in Canada, or outside Canada, shall undergo prior research ethics review by both:

   i. the REB at the Canadian institution under the auspices of which the research is being conducted; and

   ii. the REB or other responsible review body or bodies, if any, at the research site.

Application

An institution is responsible for the ethical conduct and ethical acceptability of research undertaken by its faculty, staff or students regardless of where the research is conducted (Article 6.1). Thus, for a Canadian research institution, review of the ethical acceptability of the research by the institution's REB is required, in addition to ethics review by an REB or other appropriately constituted review body with jurisdiction at the research site elsewhere in Canada, or outside Canada, if any. Approval of a research proposal by an REB at the research site does not constitute sufficient authorization to conduct the research without the approval of the relevant Canadian REB(s). Conversely, approval by the Canadian REB(s) is not sufficient authorization to begin the research without the approval of the REB or other appropriately constituted review body at the research site. Researchers shall obtain necessary approvals of the ethical acceptability of their research prior to the start of recruitment of participants, access to data, or collection of human biological materials, in accordance with Article 6.11.

Researchers may undertake research in Canada or abroad without formal collaboration with other academic institutions. In these cases, in addition to the REB review at their own institutions, researchers may need to obtain access to the site and prospective participants from a responsible agency, where one exists. They shall inform the REB whether, or how, they will seek permission to proceed with the research at that site and with the target participants. Some organizations or groups have established mechanisms or guidelines (e.g., school boards, Indigenous communities [Chapter 9], correctional services, service agencies and community groups) to review requests for research prior to allowing access to their members, or access to data about them that are under their authority. When designing their research, researchers should consider these provisions. This article does not apply to research involving critical inquiry about organizations or institutions (Article 3.6).

Researchers shall inform the REB of the absence of established ethics review mechanisms at the research site, and report their efforts to identify any other suitable review mechanisms in the other country.[1] When no appropriate mechanisms for research ethics review exist at the research site, researchers and REBs shall apply the core principles outlined in this Policy (Chapter 1).

REBs should not prevent research from proceeding solely because the research cannot be reviewed and approved through a formal REB review process in another country or jurisdiction. Under these circumstances, researchers should be aware and respectful of relevant cultural practices, such as those normally followed to seek entry into the relevant communities. Researchers shall inform the REB of their strategies to familiarize themselves with the relevant norms and cultural practices, and to minimize risks to individuals and communities participating in, or potentially affected by, the research.

Researchers and REBs should afford prospective participants in other countries no less protection and respect than what this Policy requires. Respect for Persons, Concern for Welfare, and Justice considered in the context of the particular research project and setting should guide researchers in the design of their research, and REBs in their research ethics review.

Article 8.4

a. The information to be provided to the researcher's home REB will be determined by the provisions of the research ethics review model.

b. When conducting research outside the jurisdiction of their home institutions, whether at a site abroad, or in Canada, researchers shall provide their home REBs with the:

   - relevant information about the rules governing research involving humans and the ethics review requirements at the research site, where any exist;
   - names and contact information for the relevant REBs or comparable ethics bodies, if known, that will review the proposal at the research site; and
   - relevant information about the target populations and circumstances that might have a bearing on the research ethics review by the researchers' home REB.

Application

Researchers and REBs should be aware of the research ethics requirements and the types of protections for research involving humans – including legal protection – afforded to participants at proposed research locations. Researchers and REBs should consult relevant reliable resources for details about governing laws or policies, and for information regarding appropriate REBs at the proposed research site in Canada or another country (see References at the end of this chapter). Applicable policies at the proposed site may differ considerably from this Policy, and therefore, it is the responsibility of the researchers and REB(s) to ensure that, at a minimum, the provisions of this Policy are followed.

Disagreements may arise when one of the REBs or an equivalent review body (Canadian or foreign) grants ethics approval while the other does not. Such disagreements require open communication among the researchers and the REBs or equivalent review bodies involved (see also Section A of this chapter). In keeping with the context-sensitive approach to research ethics review embodied in this Policy, the Canadian REB should ensure that it has a clear understanding of the differing rationales that might underlie divergent REB positions or decisions on a given proposal. Where the REB is uncertain about the appropriate course of action in a given research proposal, it should make contact with its counterpart REB in the research site or country. In the absence of formal reciprocity agreements between countries or institutions with respect to initial and continuing research ethics review, the REBs should engage in dialogue and may establish a specific mechanism, such as a joint subcommittee of the two REBs (e.g., for situations in which institutions collaborate regularly), to facilitate appropriate deliberation in order to reach a thoughtful and well-informed judgment on the ethical acceptability of a given research proposal (Article 8.1).

Endnote

1. See for example the United States Office for Human Research Protections (OHRP) registry of REBs (see References below), mainly in the area of health and biomedical research. It can serve as one resource for identifying research ethics review bodies around the world.

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CHAPTER 9

RESEARCH INVOLVING THE FIRST NATIONS, INUIT AND MÉTIS PEOPLES OF CANADA

Introduction

Preamble

This chapter on research involving Indigenous peoples in Canada, including Indian (First Nations[1]), Inuit and Métis peoples, marks a step toward establishing an ethical space for dialogue on common interests and points of difference between researchers and Indigenous communities engaged in research.

First Nations, Inuit and Métis communities have unique histories, cultures and traditions. They also share some core values such as reciprocity – the obligation to give something back in return for gifts received – which they advance as the necessary basis for relationships that can benefit both Indigenous and research communities.

Research involving Indigenous peoples in Canada has been defined and carried out primarily by non-Indigenous researchers. The approaches used have not generally reflected Indigenous world views, and the research has not necessarily benefited Indigenous peoples or communities. As a result, Indigenous peoples continue to regard research, particularly research originating outside their communities, with a certain apprehension or mistrust.

The landscape of research involving Indigenous peoples is rapidly changing. Growing numbers of First Nations, Inuit and Métis scholars are contributing to research as academics and community researchers. Communities are becoming better informed about the risks and benefits of research. Technological developments allowing rapid distribution of information are presenting both opportunities and challenges regarding the governance of information.

This chapter is designed to serve as a framework for the ethical conduct of research involving Indigenous peoples. It is offered in a spirit of respect. It is not intended to override or replace ethical guidance offered by Indigenous peoples themselves. Its purpose is to ensure, to the extent possible, that research involving Indigenous peoples is premised on respectful relationships. It also encourages collaboration and engagement between researchers and participants.

Building reciprocal, trusting relationships will take time. This chapter provides guidance, but it will require revision as it is implemented, particularly in light of the ongoing efforts of Indigenous peoples to preserve and manage their collective knowledge and information generated from their communities. The Agencies – the Canadian Institutes of Health Research (CIHR), the Natural Sciences and Engineering Research Council (NSERC), and the Social Sciences and Humanities Research Council (SSHRC) – are committed to the continued evolution of this Policy, as noted in the Introduction. As the Policy comes into effect, the approach of engaging communities will be applied not only to research projects but also to the further development of the Policy itself to ensure that it remains a living document.

This chapter forms an integral part of this Policy to which institutions eligible to administer and receive research funding from any of the three research agencies agree to adhere as a condition of funding. See the *Agreement on the Administration of Agency Grants and Awards by Research Institutions*.[2] It has drawn on prior work, both within Canada and internationally, that recognizes the interests of Indigenous peoples who participate in research and are affected by its results. Some of that work has been done by the three agencies responsible for this Policy. In particular, CIHR and its Institute of Indigenous Peoples' Health have engaged in extensive dialogue with community partners to develop the CIHR *Guidelines for Health Research Involving Aboriginal People*. The CIHR Guidelines remain an important source of additional guidance for health research involving Indigenous peoples in Canada.

SSHRC and NSERC, likewise, have developed program guidelines for research involving Indigenous peoples and issues. Indigenous entities at local, regional and national levels have published and implemented principles and codes governing research practice – including ethical protections – that emphasize collective rights, interests and responsibilities.

This Policy provides guidance for research involving humans, as defined in Chapter 2. Other guidelines specific to particular programs, research domains and community settings may elaborate on the processes set out herein, or may address ethical concerns of broader scope than those covered in this Policy. Researchers and research ethics boards (REBs) are advised to consult reference documents that apply to their research undertakings. Examples of relevant resources are listed under References at the end of this chapter.

While this chapter is designed to guide research involving First Nations, Inuit and Métis peoples of Canada, its discussion of respectful relationships, collaboration and engagement between researchers and participants may also be an important source of guidance for research involving other distinct communities. The need to respect a community's cultural traditions, customs and codes of practice may extend beyond First Nations, Inuit and Métis communities. REBs and researchers may draw on articles of this chapter that are of relevance for the particular community involved in the research.

Neither this Policy nor this chapter are meant to reflect or introduce any change to other Government of Canada policies with respect to the issues addressed in this chapter.

Context

The existing Indigenous and treaty rights of the Indigenous peoples of Canada, that is, the Indian, Inuit and Métis peoples of Canada, were recognized and affirmed in the *Constitution Act, 1982*.[3]

This chapter acknowledges the unique status of the Indigenous peoples of Canada. It interprets how the value of respect for human dignity and the core principles of Respect for Persons, Concern for Welfare, and Justice (as articulated in Chapter 1) apply to research involving Indigenous peoples. It accords respect to Indigenous peoples' knowledge systems by ensuring that the various and distinct world views of First Nations, Inuit and Métis peoples are represented in planning and decision making, from the earliest stages of conception and design of projects through to the analysis and dissemination of results. It affirms respect for community customs and codes of research practice to better ensure balance in the relationship between researchers and participants, and mutual benefit in researcher-community relations.

The purpose of this chapter specifically, and the Policy in general, is to provide guidance to researchers on the ethical conduct of research involving Indigenous peoples.

The desire to conserve, reclaim and develop knowledge specific to First Nations, Inuit and Métis communities, and to benefit from contemporary applications of traditional knowledge, is a motivating force in community initiatives to assume a decisive role in research. The guidance provided in this chapter is based on the premise that engagement with community is an integral part of ethical research involving Indigenous peoples.

This Policy acknowledges the role of community in shaping the conduct of research that affects First Nations, Inuit and Métis communities. The Policy also respects the autonomy of individuals to decide whether they will participate in research in accordance with Articles 3.1 to 3.6. Articles in this chapter give guidance for balancing individual and collective interests. In light of the diversity within and among First Nations, Inuit and Métis communities, and the ongoing development of community codes of research practice by these communities at the local, regional and national level, ethical review of a proposed project shall be attentive to the specific context of the project and the community involved (Articles 9.8 and 9.9).

A. Key Concepts and Definitions

Definitions of key concepts used in this chapter are provided to assist in applying the guidance in this Policy (see Chapter 1 regarding the scope of definitions used in this Policy) and to facilitate dialogue between researchers and Indigenous communities. Since there is not universal agreement on the meaning of some terms, the definitions provided are intended for the purposes of this Policy only. This terminology will require periodic revision, particularly in light of the ongoing debate on the terms of art used in international and domestic contexts. This is in keeping with a commitment to the continued evolution of this Policy.

- Aboriginal peoples – see Indigenous peoples.
- Community – describes a group of people with a shared identity or interest that has the capacity to act or express itself as a collective. In this Policy, a community may include members from multiple cultural groups. A community may be territorial, organizational, or a community of interest. “Territorial communities” have governing bodies exercising local or regional jurisdiction (e.g., members of First Nations who reside on reserve lands). “Organizational communities” have explicit mandates and formal leadership (e.g., a regional Inuit association or a friendship centre serving an urban Indigenous community). In both territorial and organizational communities, membership is defined and the community has designated leaders. “Communities of interest” may be formed by individuals or organizations who come together for a common purpose or undertaking, such as a commitment to conserving a First Nations language. Communities of interest are informal communities whose boundaries and leadership may be fluid and less well-defined. They may exist temporarily or over the long term, within or outside of territorial or organizational communities.

  An individual may belong to multiple communities, both Indigenous and non-Indigenous (e.g., as a member of a local Métis community, a graduate students’ society and a coalition in support of Indigenous rights). An individual may acknowledge being of First Nations, Inuit or Métis descent but not identify with any particular community. How individuals define which of their community relationships are most relevant will likely depend on the nature of the research project being proposed.

- Community customs and codes of research practice – may be expressed in written or oral form. Consistent with the world views of particular First Nations, Inuit and Métis peoples, community customs and codes of research practice may embody kinship networks and responsibilities that include multi-generational obligations to ancestors and future generations. Ethical obligations often extend to respectful relations with plant, animal and marine life.

- Community engagement – is a process that establishes an interaction between a researcher (or a research team) and the Indigenous community relevant to the research project. It signifies the intent of forming a collaborative relationship between researchers and communities, although the degree of collaboration may vary depending on the community context and the nature of the research. The engagement may take many forms including review and approval from formal leadership to conduct research in the community, joint planning with a responsible agency, commitment to a partnership formalized in a research agreement, or dialogue with an advisory group expert in the customs governing the knowledge being sought. The engagement may range from information sharing to active participation and collaboration, to empowerment and shared leadership of the research project. Communities may also choose not to engage actively in a research project, but simply to acknowledge it and register no objection to it.

- First Nations, Inuit and Métis lands – include Indian reserves, Métis settlements, and lands governed under a self-government agreement or an Inuit or First Nations land claim agreement.

- Indigenous knowledge – see Traditional knowledge.

- Indigenous peoples **–** a term used in international or scholarly discourse. In the Canadian context, the term "Indigenous peoples" typically refers to persons of Indian, Inuit or Métis descent, regardless of where they reside and whether their names appear on an official register. Self-identification is a fundamental criterion for defining Indigenous peoples.[4] The term "Indigenous" does not reflect the distinctions among First Nations, Inuit and Métis peoples, who have their own histories, cultures and languages, so an attempt has been made to limit use of the term in this Policy to instances where a global term is appropriate. Indian peoples commonly identify themselves by distinct nation names such as Mi'kmaq, Dene or Haida, and as First Nations. In Canada, a comparable term, "Aboriginal peoples," is also used in certain contexts.

- Traditional knowledge – the knowledge held by First Nations, Inuit and Métis peoples, the Indigenous peoples of Canada. Traditional knowledge is specific to place, usually transmitted orally, and rooted in the experience of multiple generations. It is determined by an Indigenous community's land, environment, region, culture and language. Traditional knowledge is usually described by Indigenous peoples as holistic, involving body, mind, feelings and spirit. Knowledge may be expressed in symbols, arts, ceremonial and everyday practices, narratives and, especially, in relationships. The word "tradition" is not necessarily synonymous with old. Traditional knowledge is held collectively by all members of a community, although some members may have particular responsibility for its transmission. It includes preserved knowledge created by, and received from, past generations and innovations and new knowledge transmitted to subsequent generations. In international or scholarly discourse, the terms "traditional knowledge" and "Indigenous knowledge" are sometimes used interchangeably.

B. Interpreting the Ethics Framework in Indigenous Contexts

Chapter 1 identifies three principles that express the core ethical value of respect for human dignity – Respect for Persons, Concern for Welfare, and Justice. The three core principles are interpreted in this chapter as follows:

Respect for Persons is expressed principally through the securing of free, informed and ongoing consent of participants. The concerns of First Nations, Inuit and Métis for their continuity as peoples with distinctive cultures and identities have led to the development of codes of research practice that are in keeping with their world views. Indigenous codes of research practice go beyond the scope of ethical protections for individual participants. They extend to the interconnection between humans and the natural world, and include obligations to maintain, and pass on to future generations, knowledge received from ancestors as well as innovations devised in the present generation.

Historically, the well-being of individual participants has been the focus of research ethics guidelines. In this Policy, the principle of **Concern for Welfare** is broader, requiring consideration of participants and prospective participants in their physical, social, economic and cultural environments, where applicable, as well as concern for the community to which participants belong. This Policy acknowledges the important role of Indigenous communities in promoting collective rights, interests and responsibilities that also serve the welfare of individuals.

Indigenous peoples are particularly concerned that research should enhance their capacity to maintain their cultures, languages and identities as First Nations, Inuit or Métis peoples, and to support their full participation in, and contributions to, Canadian society. The interpretation of Concern for Welfare in First Nations, Inuit and Métis contexts may therefore place strong emphasis on collective welfare as a complement to individual well-being.

Justice may be compromised when a serious imbalance of power prevails between the researcher and participants. Resulting harms are seldom intentional, but nonetheless real for the participants. In the case of Indigenous peoples, abuses stemming from research have included: misappropriation of sacred songs, stories and artefacts; devaluation of Indigenous peoples' knowledge as primitive or superstitious; violation of community norms regarding the use of human tissue and remains; failure to share data and resulting benefits; and dissemination of information that has misrepresented or stigmatized entire communities.

Where the social, cultural or linguistic distance between the community and researchers from outside the community is significant, the potential for misunderstanding is likewise significant. Engagement between the community involved and researchers, initiated prior to recruiting participants and maintained over the course of the research, can enhance ethical practice and the quality of research. Taking time to establish a relationship can promote mutual trust and communication, identify mutually beneficial research goals, define appropriate research collaborations or partnerships, and ensure that the conduct of research adheres to the core principles of Respect for Persons, Concern for Welfare – which in this context includes welfare of the collective, as understood by all parties involved – and Justice.

Research Involving Indigenous Peoples in Other Countries

Although the present chapter addresses research involving Indigenous peoples in Canada, researchers, REBs, participants and the research community at large may find the guidance articulated here useful when undertaking research or reviewing a proposal involving Indigenous peoples in other countries who endorse collective decision making as a complement to individual consent. It is critically important, however, to seek local guidance in the application or adaptation of this Policy to Indigenous peoples outside of Canada.

For considerations that apply to research conducted in another country, see Chapter 8, Section B.

C. Applying Provisions of This Policy in Indigenous Contexts

Requirement of Community Engagement in Indigenous Research

Article 9.1 Where the research is likely to affect the welfare of an Indigenous community, or communities, to which prospective participants belong, researchers shall seek engagement with the relevant community. The conditions under which engagement is required include, but are not limited to:

a. research conducted on First Nations, Inuit or Métis lands;

b. recruitment criteria that include Indigenous identity as a factor for the entire study or for a subgroup in the study;

c. research that seeks input from participants regarding a community's cultural heritage, artefacts, traditional knowledge or unique characteristics;

d. research in which Indigenous identity or membership in an Indigenous community is used as a variable for the purpose of analysis of the research data; and

e. interpretation of research results that will refer to Indigenous communities, peoples, language, history or culture.

Application

Paragraph (a) refers to First Nations, Inuit and Métis lands, which include Indian reserves, Métis settlements, and lands governed under a self-government agreement or an Inuit or First Nations land claim agreement. Researchers should become informed about formal rules or oral customs that may apply in accordance with a particular First Nations, Inuit or Métis authority. In different jurisdictions, research activities may be regulated in various ways.

Paragraph (c) refers to cultural heritage, which includes, but is not limited to, First Nations, Inuit and Métis peoples' relations with particular territories, material objects, traditional knowledge and skills, and intangibles that are transmitted from one generation to the next (e.g., sacred narratives, customs, representations or practices). Cultural heritage is a dynamic concept in that materials, knowledge and practices are continuously adapted to the realities of current experience.

Cultural heritage research such as archaeological research involving burial sites or sacred landscapes and handling of artefacts may raise ethical obligations important to the Indigenous community that may not be addressed in academic research proposals. Researchers and communities should agree in advance on how to reconcile or address these divergent perspectives (Articles 9.8 and 9.12).

Appropriation of collective knowledge, treatment of such knowledge as a commodity to be traded, or making unauthorized adaptations for commercial purposes, may cause offence or harm to communities from which the knowledge originates. Such conduct has prompted initiatives in various countries and international agencies to address unethical, unfair, and inequitable treatment of traditional knowledge and knowledge holders (Article 9.18).

Paragraph (e) refers to both primary collection of research data and secondary use of information collected originally for a purpose other than the current research purpose (Article 2.4 and Chapter 5, Section D). Articles 9.20 to 9.22 address community engagement and individual consent for secondary use of identifiable information and human biological materials for research purposes.

Nature and Extent of Community Engagement

Article 9.2 The nature and extent of community engagement in a project shall be determined jointly by the researcher and the relevant community and shall be appropriate to community characteristics and the nature of the research.

Application

Diversity among and within communities makes generalizations about the form of community engagement inappropriate. Diversity within Indigenous communities may encompass differences in levels of formal education and employment, mobility, generational differences and intermarriage with non-Indigenous persons. This diversity increases the importance of clarifying mutual expectations and obligations with the community and incorporating them into a research agreement.

Community engagement as defined in this Policy can take varied forms. In geographic and organizational communities that have local governments or formal leadership, engagement prior to the recruitment of participants would normally take the form of review and approval of a research proposal by a designated body. In less structured situations (e.g., a community of interest), a key consideration for researchers, prospective participants, and REBs is determining the nature and extent of community engagement required. In some situations, if the REB is satisfied that participants are not identified with a community or that the welfare of relevant communities is not affected, the REB may waive the requirement of a community engagement plan (Article 9.10). In these cases, consent of individuals is sufficient to participate.

Communities lacking the infrastructure to support pre-research community engagement should not be deprived of opportunities to participate in guiding research affecting their welfare (Article 9.14).

The following list, which is not exhaustive, provides examples to illustrate the forms of community engagement that might be appropriate for various types of research.

1. Research directly involving a community on First Nations, Inuit or Métis lands with a formal governance structure. For example, a project that examines the incidence of diabetes in Pond Inlet, Nunavut, or the impact on Inuit health of contaminants in animals and plants used for country food.

    - Permission of the Nunavut Research Institute that carries authority to approve research in Nunavut is required. Agreement of the hamlet council in Pond Inlet will normally be a condition of approval. The local health committee may co-manage the project.

2. Research involving Indigenous people who comprise a sizeable proportion of the study or community and where Indigenous-specific conclusions are intended. For example, a comparative study of access to public housing in Prince Albert, Saskatchewan.

- First Nations in the district, represented by their tribal council, the local Métis association, and urban Indigenous and women's organizations, may partner with the Prince Albert city council to sponsor, implement and use the results of the housing study.

3. Research focusing on a larger community that is known to include Indigenous people (regardless of their proportion), and where Indigenous-specific conclusions are anticipated. For example, a study of student retention in high schools in the Sault Ste. Marie district of Ontario.

    - A committee representing First Nations, Métis organizations and urban Indigenous people whose children may be affected by the study may be convened to advise the District Board of Education and the researchers involved.

4. Research involving First Nations, Inuit or Métis people who comprise a sizeable proportion of the larger community that is the subject of research—–even if no Indigenous-specific conclusions will be made. For example, research on employment development programs serving residents of the inner city of Winnipeg in Manitoba.

    - Indigenous service agencies or political organizations may be engaged to help recruit Indigenous participants and secure community representation on an oversight committee, and to ensure cultural sensitivity in collecting and interpreting data on employment program impacts.

5. Interviewing a sample of individuals of Indigenous ancestry across Canada on the impact of a policy on their lives, where the results are not attributable to, or likely to affect, the community or communities with which they may identify. For example, survey research on the implementation of *Indian Act* provisions requiring ministerial approval of an "Indian's" will.

    - First Nations, Inuit and Métis persons, whether or not they identify as members of an Indigenous community, enjoy freedom of expression, as does any citizen. They are free to consent and to participate in research projects that they consider to be of personal or social benefit. If the project is unlikely to affect the welfare of the individuals' communities, local community engagement is not required under this Policy. The necessity or desirability of engaging regional or national representatives of Indigenous communities in policy research may, however, be determined by other considerations.

6. Natural sciences research on First Nations, Inuit or Métis lands where Indigenous people may act as co-investigators or benefit from findings. For example, research focusing exclusively on contaminants in animals or plants in Nunavik that does not make inferences regarding food intake.

    - Research that involves the collection and analysis of tissue samples from animals or plants, and not involving human research participants, is not covered within the scope of this Policy and does not require institutional REB review. However, funding program guidelines and licensing requirements in the North may impose obligations to engage communities. Community customs or codes of research practice may require securing regional and local permission and reporting findings to communities (see NSERC literature on the Northern Research Program for professors and students/fellows, and Article 9.8).

7. Research that incidentally involves a small proportion of Indigenous individuals but is not intended to single out, or describe, characteristics of Indigenous people, for example, a study of therapies to control high blood pressure in a sample of hospital outpatients, which is not designed to collect Indigenous-specific data.

- Since Indigenous participation is incidental rather than scheduled, community engagement is not required. If Indigenous individuals self-identify during the collection of primary data, researchers should inquire whether culturally appropriate assistance is desired to interpret, or support compliance with, the research project. However, it should be noted that including markers of Indigenous identity in data collection may reveal anomalies that warrant further, more targeted research, which, if followed up, would require community engagement.

8. Research based on publicly available information as defined by this Policy, for example, historical, genealogical or analytic research based on public records, or data available or accessible in accordance with legislation.

    - Such research does not involve the collection of data from communities directly or from living persons and is not subject to REB review (Article 2.2). Community engagement is not required. Findings of such research nevertheless may have an impact on the identity or heritage of persons or communities. In order to minimize any harm, researchers should seek culturally informed advice before the use of such data to determine if harms may result and if other considerations, such as sharing of the research results, should be explored with the original source community (Article 9.15).

Respect for First Nations, Inuit and Métis Governing Authorities

Article 9.3 Where a proposed research project is to be conducted on lands under the jurisdiction of a First Nations, Inuit or Métis authority, researchers shall seek the engagement of leaders of the community, except as provided under Articles 9.5, 9.6 and 9.7.

Research ethics review by the institutional REB and any responsible community body recognized by the First Nations, Inuit or Métis authority (Articles 9.9 and 9.11) is required in advance of recruiting and seeking and obtaining consent of individuals.

Application

Formal leaders with governance responsibilities on First Nations, Inuit or Métis land are charged with protecting the welfare of the community. Article 8.3(b) applies in such cases, requiring ethics review of research proposals by both "(i) the REB at the Canadian institution under the auspices of which the research is being conducted, and (ii) the REB or other responsible review body or bodies, if any, at the research site." A local authority may approve research or delegate responsibility for reviewing research proposals to a local or regional body (e.g., the local health board or a body like the Mi'kmaq Ethics Watch).

Research involving multiple geographic communities raises complex issues of review and approval. Regional bodies or national organizations may facilitate research ethics review and make recommendations, but the decision to participate normally rests with the local communities.

Engagement with formal leadership is not a substitute for seeking consent from individual participants, as required by Chapter 3.

Engagement with Organizations and Communities of Interest

Article 9.4 For the purposes of community engagement and collaboration in research undertakings, researchers and REBs shall recognize Indigenous organizations, including First Nations, Inuit and Métis representative bodies, and service organizations and communities of interest, as communities. They shall also recognize these groups through representation of their members on ethical review and oversight of projects, where appropriate.

Application

Organizational communities and communities of interest may exist within the boundaries of territorial communities. Overlapping interests in these cases are considered in Articles 9.5 and 9.6. A majority of persons who self-identify as Indigenous live in rural and urban communities outside of discrete First Nations, Métis or Inuit communities. Political organizations, friendship centres, housing associations, health access centres and other groups operating in rural or urban centres have been created to enhance the welfare of their own members or the populations that they serve. Organizations and communities of interest are potential partners in research on issues relevant to their communities, and are to be recognized as communities for the purposes of community engagement under this Policy.

An organization may participate in research focusing on its members (e.g., the board and staff of a friendship centre), or it may facilitate ethical engagement with the population that it serves (e.g., the clientele of a health access centre). A community of interest (e.g., Indigenous youth who use an urban service program) may designate a local organization to provide advice and ethical protection for a project in which they participate.

Prospective participants may not necessarily recognize organizational communities or communities of interest as representing their interests. Where researchers and organizational communities or communities of interest collaborate in research (e.g., through a research agreement), prospective participants shall be informed about the extent of such collaboration (including how data will be shared) as part of the initial and ongoing consent process (Article 3.2[i]).

Complex Authority Structures

Article 9.5 Where alternatives to securing the agreement of formal leadership are proposed for research on First Nations, Inuit or Métis lands or in organizational communities, researchers should engage community processes and document measures taken, to enable the REB to review the proposal with due consideration of complex community authority structures.

Application

Researchers and REBs should not assume that approval of a project by formal leaders is the only avenue for endorsing a project. In some communities and some domains of knowledge, authority to permit and monitor research rests with knowledge keepers designated by custom rather than by election or appointment. In First Nations settings, a confederacy council spanning several communities may be recognized as having authority over its members' traditional knowledge. In an Inuit community, the hamlet council, an Elders' circle, and a hunters and trappers organization may have overlapping responsibility and expertise with respect to the knowledge being sought. Métis Elders dedicated to conserving Michif language may assert their autonomy from political leaders, but choose to collaborate with educational or cultural agencies (see also Article 9.15).

The preferred course is to secure approval for research from both formal leaders of a community and customary authority. This is especially important for outsiders to communities, whose presence or intentions might be challenged as inappropriate. Researchers should engage community processes, including the guidance of moral authorities such as Elders, to avert potential conflict. These measures should be documented to assist the REB in considering the community engagement processes proposed (Article 9.10). Where no agreement exists between formal community leadership and customary authority regarding the conduct of the proposed research, researchers should inform the REB. When alternative community engagement processes are followed to endorse a project, all other ethical safeguards set out in this chapter remain applicable.

Recognizing Diverse Interests within Communities

Article 9.6 In engaging territorial or organizational communities, researchers should ensure, to the extent possible, that they take into consideration the views of all relevant sectors – including individuals and subgroups who may not have a voice in the formal leadership. Groups or individuals whose circumstances make them vulnerable may need or desire special measures to ensure their safety in the context of a specific research project. Those who have been excluded from participation in the past may need special measures to ensure their inclusion in research.

Application

Groups or individuals whose circumstances may make them vulnerable or marginalized within territorial or organizational communities should not be deprived of opportunities to participate in, and influence, research affecting their welfare. For example, people living with HIV/AIDS, impoverished youth or women who have suffered abuse may experience barriers to participation.

Gender-based analysis is being applied in First Nations, Inuit and Métis organizations and communities to promote or restore recognition of women's responsibilities in the conduct of community life – including decision making that directly affects their welfare. The legacy of patriarchal governance structures continues to pose challenges to women's full participation. Approaches that are attentive to cultural considerations help to ensure the equitable participation and benefit of women throughout the life cycle of a research project (Article 4.2).

Research undertaken secretly or as a direct challenge to legitimate authority may increase risks to participants whose circumstances make them vulnerable, may deepen rifts within the community, and may actually impede the advancement of social justice. Strategies that have proven effective to secure the inclusion and promote the safety of diverse sectors within a community include: advocacy by moral authorities in the community; special measures to protect the identity of participants in small communities; identifying research questions that include rather than divide interest groups; or expanding the coverage of a project to multiple communities. In some cases, the risks to participants and communities involved with, or affected by, the proposed research outweigh the potential benefits likely to be gained, and the research should not be undertaken.

Critical Inquiry

Article 9.7 Research involving Indigenous peoples that critically examines the conduct of public institutions, First Nations, Inuit and Métis governments, institutions or organizations or persons exercising authority over First Nations, Inuit or Métis individuals may be conducted ethically, notwithstanding the usual requirement of engaging community leaders.

Application

Considerations in conducting critical inquiry are discussed more fully in Article 3.6. As in the case of research involving groups whose circumstances make them vulnerable, or communities of interest within an Indigenous community (Article 9.6), researchers undertaking critical inquiry research will need to adopt appropriate approaches to ensure that cultural norms are respected, that the safety of participants is protected, and that potential harms to the welfare of the larger community are minimized to the extent possible. Researchers may need to consult culturally relevant regional or national Indigenous organizations for guidance.

For example, the Sisters in Spirit project of the Native Women's Association of Canada (NWAC) that was launched in 2005 for a five-year period illustrates research of a national scope that incorporated a critical dimension. The project involved interviewing families of missing and murdered First Nations, Métis or Inuit women in urban and rural settings, and on First Nations territory. It examined, among other matters, the adequacy of public institutions and services, Indigenous and non-Indigenous, to protect the women's well-being and support families in their efforts to deal with their losses. The objective was to effect policy change and improve the safety and well-being of Indigenous women in Canada. NWAC has published its commitment to participatory research and the principles and practices that protect the privacy and well-being of participants. The project built on NWAC's ongoing efforts to develop meaningful research relationships reflecting Indigenous ways of knowing.

Respect for Community Customs and Codes of Practice

Article 9.8 Researchers have an obligation to become informed about, and to respect, the relevant customs and codes of research practice that apply in the particular community or communities affected by their research. Inconsistencies between

community custom and this Policy should be identified and addressed in advance of initiating the research, or as they arise.

Application

First Nations, Inuit and Métis codes of research practice derive from procedures and customs of predominantly oral cultures. While some rules may be in written form, their interpretation is dependent on experiential knowledge acquired through interactions in the community. An example is the strict limitation on making publicly available sacred knowledge that might be revealed within a trusting relationship. In academic culture, rules regarding limits on disclosure of information would reasonably be incorporated into a research proposal and should be integrated into research agreements between communities and researchers where such exists.

The absence, or perceived absence, of a formal local research code or guidelines does not relieve the researcher of the obligation to seek community engagement in order to identify local customs and codes of research practice.

First Nations, Inuit and Métis customs and codes of behaviour distinguish among knowledge that can be publicly disclosed, disclosed to a specific audience, or disclosed under certain conditions. Determination of what information may be shared, and with whom, will depend on the culture of the community involved. Any restrictions on access to, or use of, traditional or sacred knowledge shared in the course of the research project should be addressed in the research agreement.

In Indigenous communities, custom may restrict the observation, recording, or reporting of ceremonies or certain performances and require approval of appropriate individuals. Article 10.3 addresses the requirement for ethics review of research involving naturalistic and participant observational studies, and associated ethical implications, which may include infringement on consent and privacy.

Many First Nations communities across Canada have adopted an ethics code originally developed to govern practice in the First Nations Regional Longitudinal Health Survey. The code asserts ownership of, control of, access to, and possession (OCAP) of research processes affecting participant communities, and the resulting data. OCAP addresses issues of privacy, intellectual property, data custody and secondary use of data, which are also covered later in this chapter.

Inuit communities and organizations are considering addressing similar concerns, including adoption or adaptation of OCAP. For example, possession agreements, which are distinct from research agreements, are set out in a memorandum of understanding between the researcher's institution and the community (usually represented by the land claim organization). The possession agreement covers the control and use of data and human biological materials collected over the course of the research. The agreement may continue to exist long after the research is completed, to allow control and use of data and human biological materials for Inuit-initiated research.

Researchers should consult their own institutions to ensure that the application of OCAP or other community-based ethics codes is consistent with institutional policies. Where divergences exist, they should be addressed and resolved prior to the commencement of the research.

First Nations, Inuit and Métis scholars attached to academic institutions as faculty members, students or research associates are increasingly engaged in research involving their own communities, and sometimes their own family members. They are generally exempt from restrictions on physical access

to territory or personal access to community members. However, as members of institutions that adhere to this Policy, they are subject to the ethical duty to respect community customs and codes of research practice when conducting research in their own local or cultural communities, and to engage the relevant community as required by this Policy. In these cases, institutional REBs may be concerned about researchers being in a conflict of interest and should manage the conflict of interest in accordance with Articles 7.2 and 7.4.

Life history and language research are examples of research areas where insider relationships and cultural competencies provide unique opportunities to extend the boundaries of knowledge. Although it can be argued that recording the life history of an elderly relative is a family matter rather than a community matter, when undertaken as research, community engagement is important to ensure that the following considerations are reviewed: the potential impact of such research on the wider community; conflicts between the individualist norms of the academic environment and the norms of the community; and the possibility of unclear or mistaken assumptions on the part of participant and researcher. During the consent process, researchers should give the participant the opportunity to identify the relevant form of community engagement, and at what stage such engagement should occur. This may include engaging with extended family members, peers of the participant with whom the researcher's interpretations can be validated, or Elders knowledgeable about cultural rules governing disclosure of privileged information.

Institutional Research Ethics Review Required

Article 9.9 Research ethics review by community REBs or other responsible bodies at the research site will not be a substitute for research ethics review by institutional REBs and will not exempt researchers affiliated with an institution from seeking REB approval at their institution, subject to Article 8.1. Prospective research and secondary use of data and human biological materials for research purposes is subject to research ethics review.

Application

Applying this Policy in a way that accommodates the diversity of First Nations, Inuit and Métis cultures and mixed Indigenous communities in urban centres is complex. For example, the fit between institutional policies and community customs and codes of research practice may be unclear, requiring researchers to adapt conventional practice or negotiate a resolution. Consistent with Article 8.3(b), research conducted outside the jurisdiction of the researcher's institution shall undergo prior research ethics review by both "(i) the REB at the Canadian institution under the auspices of which the research is being conducted, and (ii) the REB or other responsible review body or bodies, if any, at the research site."

Article 8.1 permits review models for multi-site research that do not require separate research ethics review by each site involved in a research project. In cases where the community is the direct recipient of funding and has constituted a local REB that is party to an agreement with the researcher's institution, review by the institution's REB may not be required.

In accordance with Article 8.4, communication between the institutional REB and the responsible agency in the community may assist in resolving inconsistencies between institutional policy and community customs and codes of research practice. Where a community research ethics review is required in

addition to the mandatory institutional REB review, reconciling differences may require resubmission to one or both review bodies.

Researchers and REBs should recognize that research ethics review by community bodies will often pursue purposes and apply criteria that differ from the provisions of this Policy. The express purpose of most Indigenous community codes of research practice is to ensure the relevance of research undertakings to community needs and priorities, and respect for First Nations, Inuit and Métis identities, cultures and knowledge systems. While community codes of practice and research agreements typically share many of the goals of institutional policies, the approaches to achieving those goals may differ significantly. It is therefore inappropriate to insist on uniformity between community practices and institutional policies. For example, when researchers seek to interview Elders willing to share their knowledge according to traditional customs of consent, REBs should not impose language and processes that may be experienced as culturally inappropriate or awkward (Article 3.12).

In cases where REB review of research on topics related to Indigenous peoples or affecting Indigenous communities is regularly required, the REB membership should be modified to ensure that relevant and competent knowledge and expertise in Indigenous cultures are available within its regular complement. Indigenous scholars or members drawn from First Nations, Inuit or Métis communities may fill this role (Article 6.4). For occasional review of Indigenous research that is likely to affect the welfare of a community or communities, consultation with ad hoc advisors or delegation to a specialized or multi-institutional REB may be appropriate (Articles 6.5 and 8.1).

The membership of community review bodies of First Nations, Inuit or Métis communities will not necessarily duplicate the membership criteria set out in this Policy. In the context of scarce resources in community organizations, the same personnel may be involved in reviewing the ethics of a proposal and co-managing the research project. An expectation that conflicts of interest will be managed by separating research ethics review and project management functions may impose unsupportable demands on small communities. In these circumstances, researchers and participating Indigenous communities should address the ethical safeguards of the community and its members that can be best achieved in circumstances when multiple roles are assumed by the same person (Chapter 7 and, in particular, Article 7.2).

Requirement to Advise the Research Ethics Board on a Plan for Community Engagement

Article 9.10 When proposing research expected to involve First Nations, Inuit or Métis participants, researchers shall advise their REBs how they have engaged, or intend to engage, the relevant community. Alternatively, researchers may seek REB approval for an exception to the requirement for community engagement, on the basis of an acceptable rationale.

Application

In order for REBs to consider whether the form of community engagement chosen by the researcher is appropriate, they will require evidence in the form of one or more of the following: (a) a preliminary or formal research agreement between the researcher and the responsible body at the research site; (b) a written decision or documentation of an oral decision made in a group setting to approve the

proposed research or to decline further participation; and (c) a written summary of advice received from a culturally informed advisory group or ad hoc committee (e.g., an urban community of interest). Where community engagement is not being proposed, perhaps due to the nature of the research and the community context (Articles 9.1 and 9.2), researchers shall provide a rationale acceptable to the REB.

Provision of a research agreement is particularly emphasized in health research funded by CIHR (see CIHR *Guidelines for Health Research Involving Aboriginal People* in References at the end of this chapter).

Where a researcher has an ongoing relationship with a community, a letter from formal or customary leaders in the relevant community may signal approval, and suffice to proceed with the research.

Where, under the provisions of Articles 6.11 and 10.1, a community signals during preliminary discussions with researchers, prior to REB review, that the research may proceed but that it does not want further community engagement, researchers shall document and present to the REB the steps they took to invite and facilitate engagement by the community. See Article 9.14 on how researchers may assist in capacity building.

Although researchers shall offer the option of engagement, a community may choose to engage nominally or not at all, despite being willing to allow the research to proceed. A community may, for example, support a research project carried out independent of community influence, or without any further collaboration of the community in the actual implementation of the research, in order to use scientifically defensible results to validate a negotiating position.

Research Agreements

Article 9.11 Where a community has formally engaged with a researcher or research team through a designated representative, the terms and undertakings of both the researcher and the community should be set out in a research agreement before participants are recruited.

Application

Research agreements serve as a primary means of clarifying and confirming mutual expectations and, where appropriate, commitments between researchers and communities. Research agreements, where applicable, shall precede recruitment of individual participants and collection of, or access to, research data. The scope of the agreement will depend on the level of engagement that the community desires and on the availability of resources to support community participation.

At a minimum, the agreement should address the ethical protections that would apply to securing individual consent for a comparable project, and should specify any commitments regarding collective community participation and decision making, sharing of benefits and review, and updating of the agreement. Expanding on information normally provided to an individual participant (Article 3.2), agreements typically set out the purpose of the research and detail mutual responsibilities in project design, data collection and management (Article 5.3); analysis and interpretation; credit due to knowledge holders; protection (and non-disclosure) of restricted knowledge; sharing of benefits or royalties flowing from intellectual property where applicable; production of reports; co-authorship; dissemination of results; and a conflict resolution process. Provisions for any anticipated secondary use of the information or human biological material, and associated data collected, should also be addressed at that time, and

documented in the research agreement (Article 9.20). Where a community has adopted or adheres to a code of research practice, the agreement may set out responsibilities in accordance with that code and the specific requirements of the research project. In less formal circumstances, the agreement may be relatively brief, and subject to clarification as the project unfolds. The CIHR *Guidelines for Health Research Involving Aboriginal People* provide examples of elements that may be included in research agreements (see References at the end of this chapter).

Research agreements are increasingly being recognized by academic institutions (and the researchers associated with them) as providing reference points for research ethics review process and approval on such elements as consent, confidentiality, and access to and use of information. Agreements that specify procedures for community research ethics review, included as part of the institutional ethics application, can provide contextual information and guidance for REBs conducting initial review of applications, and continuing research ethics review throughout the project. Researchers should check with their institutions regarding signing authority for research agreements (Article 9.18).

Building relationships, clarifying the goals of a project, and negotiating agreements requires substantial investment of time and resources on the part of the community and the researcher. Development and participation costs incurred by the community and the researcher should be factored into proposals to the extent possible within funding guidelines.

Community agreement that a research project may proceed is not a substitute for securing the consent of individuals recruited to participate in that project, in accordance with Chapter 3. Consent of prospective participants shall precede collection of, or access to, data or human biological materials. Consistent with the provisions of Article 3.12, if signed written consent is not culturally appropriate, the researcher shall inform the REB of alternative processes employed for seeking and documenting consent.

Consent shall be given in accordance with the research agreement where one exists. Where research agreements provide that community partners will have limited or full access to identifiable personal data, the consent of participants to this disclosure shall form part of the consent process. Access to confidential information provided by an individual is subject to privacy law.

Researchers should be aware of the first language of Indigenous participants, and if it is an Indigenous language, researchers should make available translation by a knowledgeable person during the consent process, and during the conduct of research in accordance with the wishes of the participant (Article 4.1). Researchers should be aware of the official status of Inuit languages in Inuit regions.

Collaborative Research

Article 9.12 As part of the community engagement process, researchers and communities should consider applying a collaborative and participatory approach as appropriate to the nature of the research, and the level of ongoing engagement desired by the community.

Application

While community engagement is appropriate in any research that affects Indigenous communities, the nature and degree of collaboration between the researcher and the community will depend on the nature of the research, and the community context. Collaborative approaches in research with Indigenous communities are a means of facilitating mutually respectful and productive relations (Article 9.2).

Collaborative research is generally understood to involve respectful relationships among colleagues, each bringing distinct expertise to a project. Collaboration often involves one of the partners taking primary responsibility for certain aspects of the research, such as addressing sensitive issues in community relations, or scientific analysis and interpretation of data.

In general, community-based research takes place at community sites. Some forms of research are community-centred in that the research focuses not only on individuals but also on the community itself and may become a project conducted by, for and with the community.

Participatory research is a systematic inquiry that includes the active involvement of those who are the subject of the research. Participatory research is usually action-oriented, where those involved in the research process collaborate to define the research project, collect and analyze the data, produce a final product and act on the results. It is based on respect, relevance, reciprocity and mutual responsibility.

Where participatory research is adopted, the terms and conditions should be set out in a research agreement (Article 9.11).

Mutual Benefits in Research

Article 9.13 Where the form of community engagement and the nature of the research make it possible, research should be relevant to community needs and priorities. The research should benefit the participating community (e.g., training, local hiring, recognition of contributors, return of results), as well as extend the boundaries of knowledge.

Application

To benefit the participating community, a research project should be relevant to community priorities and have the potential to produce valued outcomes from the perspective of the community and its members.

Relevance and community benefit can take a number of forms depending on the type of research being conducted, and the forms of community engagement. For example, genetic research on diabetes in a First Nations community is unlikely to benefit the community in the short term, but collaboration may facilitate increased knowledge of the condition, and what changes can be made to improve health outcomes. Collaborative research can thus accommodate basic, as well as applied, research, and include short-term and long-term benefits. In another example, a community invites a researcher to collaborate in a research project about housing and homelessness in an Inuit community. Using participatory research methods and social science tools, the nature, extent and consequences of the local housing shortage are documented, enabling the community to effectively communicate its needs to non-Inuit (*Qallunaat*) authorities. Other benefits include training workshops that provide employment and transfer skills to

Inuit youth involved in data collection, field experience in community-based research for university student assistants, and materials useful to other Inuit communities in subsequent research.

Collaborative research approaches provide the community with the opportunity to discuss risks and potential benefits, and to minimize risks. Where participatory research is undertaken, the research report might also formulate recommendations on how to implement interventions resulting from the research for the benefit of the participating community.

A possible outcome of collaborative research, and in particular participatory research, is increased capacity to carry out research that can more readily be conducted in Indigenous languages and oral modes. The exploration, articulation and application of knowledge specific to a community or communities are thus advanced, potentially benefiting other First Nations, Inuit or Métis communities through knowledge transfer.

Researchers should provide communities access to research data that will allow them to address pressing issues through community-generated policies, programs, and services (Article 9.8 and the Application of Article 9.11). Territorial and organizational communities and communities of interest may also seek to share in the benefits of research activities, which may include direct research grants, release time for project personnel, overhead levies on shared projects and commercialization of research discoveries.

Strengthening Research Capacity

Article 9.14 Research projects should support capacity building through enhancement of the skills of community personnel in research methods, project management, and ethical review and oversight.

Application

Collaborative research approaches provide for reciprocal learning and for transfer of skills and knowledge between the community and the researcher. Researchers should foster education and training of community members to enhance their participation in research projects. Employing Indigenous research assistants and translators is already common practice in community-based projects. Extending skills transfer through a program of training will support collaboration with institutions, and advance the capacity of communities to initiate and implement their own research. Collaborative research can also support building capacity of the research community to conduct culturally relevant research.

Lack of engagement by communities may be due to inadequate financial or human resources. Communities vary widely in the level of human and material resources they have available to collaborate with research initiatives. Structural barriers may prevent access to, and participation in, research. For example, small, remote communities and many urban communities of interest have limited organizational resources to advise or collaborate in research. The least organizationally developed communities are the most vulnerable to exploitation. Research undertaken in these circumstances should strive to enhance capacity for participation.

Funding programs that target the development of Indigenous research and capacity building seek to generate significant research training opportunities. Funding criteria allow researchers to include in their grant applications stipends for undergraduate, master's or doctoral students, or post-doctoral researchers, as appropriate, with priority given to Indigenous candidates. The time required to establish

collaborative relationships may be difficult to accommodate in the programs of students. Mentorship by experienced researchers who introduce students to communities and monitor their ethical practice can facilitate the trust-building process and advance student progress.

Recognition of the Role of Elders and Other Knowledge Holders

Article 9.15 Researchers should engage the community in identifying Elders or other recognized knowledge holders to participate in the design and execution of research, and the interpretation of findings in the context of cultural norms and traditional knowledge. Community advice should also be sought to determine appropriate recognition for the unique advisory role fulfilled by these persons.

Application

Within First Nations, Inuit and Métis communities, persons with special gifts carry varied roles and responsibilities in conserving and transmitting traditional knowledge and expressions of culture. They often are fluent in their traditional language. They model respectful relationships and may conduct ceremonies, pass on oral history, and offer guidance in community affairs. Their gifts are normally refined over a lifetime. Thus, Elders who have followed a rigorous path of learning over a long period are highly respected. Younger persons may also gain recognition as gifted knowledge holders.

High regard by the community that knows the Elder or other knowledge holder is the most reliable indicator of an individual's authority. Each community or nation has particular ways of approaching Elders or knowledge holders respectfully. In many First Nations, this involves the presentation and acceptance of tobacco to symbolize entering into a relationship. In some communities, feasting or gift-giving is appropriate.

Elders are now being recognized in research proposals and grant applications as providers of access to community networks, ethical guidance to researchers, and advice in interpreting findings in the context of traditional knowledge (Article 9.17). Researchers should seek advice from the community and the Elders regarding the appropriate recognition of the contribution of Elders and knowledge holders, which may include providing honoraria, acknowledging contributions by name or, as directed, withholding the Elder's identity in reports and publications.

Privacy and Confidentiality

Article 9.16 Researchers and community partners shall address privacy and confidentiality for communities and individuals early on in the community engagement process. Research agreements, where they exist, shall address whether part or all of the personal information related to the research will be disclosed to community partners.Researchers shall not disclose personal information to community partners without the participant's consent, as set out in Article 3.2(i).

Application

Researchers and community partners should consider early in the design of the research how community codes of research practice fit with provisions for privacy and confidentiality as set out in Chapter 5. Where inconsistencies exist, they should be resolved in advance of starting the research. The research agreement should address how inconsistencies will be addressed if they arise over the course of the conduct of the research project.

In First Nations communities, privacy and confidentiality of identifiable personal and community information may be affected by the application of the principles of ownership, control, access and possession (OCAP). The First Nations Regional Longitudinal Health Survey administered by regional First Nations organizations has addressed balancing confidentiality and access by having communities designate a regional organization to hold data, while local authorities make decisions on who can access the data, and under what conditions. In practice, the organization that serves as data steward evaluates requests for information, and its recommendations to community authorities have considerable influence.

Whatever the nature of the research, it shall be designed to include safeguards for participant privacy and measures to protect the confidentiality of any data collected. Small Indigenous communities are characterized by dense networks of relationships. As a result, coding individual data is often not sufficient to mask identities, even when data are aggregated. Some Indigenous participants are reluctant to speak to interviewers from their own community because of privacy concerns. Communities themselves have distinguishing characteristics, which in some cases has compromised efforts to disguise the research site, and has led to the stigmatization of entire communities.

On the other hand, in some social sciences and humanities research, the significance of information is tied to the identity of the source. In these cases, individual attribution, with consent, is appropriate. When individual participants waive anonymity, researchers should ensure that this is documented (Application of Article 5.1 and Article 9.11). Communities partnering in research may wish to be acknowledged (e.g., in the research report) for their contribution to the research effort.

Research undertaken with participants who have suffered traumatic experiences (e.g., former residential school students) poses a risk of re-traumatizing participants. Researchers should anticipate such risks in the research design, and adhere to cultural protocols for determining participant needs and access to trauma counselling.

Privacy protections in research are evolving. Respect for, and accommodation of, First Nations, Inuit and Métis priorities on joint ownership of the products of research and maintaining access to data for community use should guide research practices – with appropriate deference to applicable federal, provincial and territorial privacy legislation.

Interpretation and Dissemination of Research Results

Article 9.17 Researchers should afford community representatives engaged in collaborative research an opportunity to participate in the interpretation of the data and the review of research findings before the completion of the final report, and before finalizing all relevant publications resulting from the research.

Application

Where collaborative approaches are followed, researchers should ensure continuing communications with the participating community. Territorial or organizational communities or communities of interest engaged in collaborative research may consider that their review and approval of reports and academic publications are essential to validate findings, correct any cultural inaccuracies, and maintain respect for community knowledge (which may entail limitations on its disclosure). Researchers should integrate suggestions from the community representatives in the publication. If disagreement about interpretation arises between researchers and the community and it cannot be resolved, researchers should either (a) provide the community with an opportunity to make its views known, or (b) accurately report any disagreement about the interpretation of the data in their reports or publications. This should not be construed as giving the community the right to block the publication of findings. Rather, it gives the community the opportunity to contextualize the findings.

Final reports shall be made available to the territorial or organizational community or community of interest participating in the research. Researchers and communities should clarify the extent to which research findings will require translation, plain language summaries or oral presentations to community members, in order to make the research findings accessible to the community.

An Indigenous community, and those who participated in the research, should have the option to participate in deciding how collective or individual contributions to the research project will be acknowledged and credited in the dissemination of results (e.g., acknowledgement of co-authorship in research reports or at conferences and seminars).

Intellectual Property Related to Research

Article 9.18 In collaborative research, intellectual property rights should be discussed by researchers, communities and institutions. The assignment of rights, or the grant of licences and interests in material that may flow from the research, should be specified in a research agreement (as appropriate) before the research is conducted.

Application

Researchers, communities and institutions should be aware that all knowledge and information is not necessarily protected under the existing law. Existing intellectual property legislation generally protects works and inventions. Strict criteria are used to define intellectual property rights. It is the joint responsibility of communities, researchers and institutions to understand and communicate what qualifies as intellectual property for the purposes of research under this Policy.

When undertaking research guided by community engagement, researchers, institutions and communities may need to first address issues regarding access to data, and the use of data for the purpose of the research or in the dissemination of research findings. Regarding access to and use of data, a research agreement may set out any limits on the disclosure of personal or privileged information (subject to applicable legal and regulatory requirements and the guidance in Chapter 5. It might include provisions to review reports and publications regarding the research prior to publication, or limits on the release of, or access to, research results (subject to applicable laws). Provisions for any anticipated secondary use

of information or human biological materials, and associated data collected, should also be addressed and documented in this agreement. It may also set out any interests, licences or assignments in copyright flowing from publications about, or based on, the research (Articles 9.8, 9.11 and 9.16).

Some knowledge collected as a result of the research may have commercial applications and lead to the development of marketable products. With respect to commercialization of results of collaborative research, researchers and communities should discuss and agree on the use, assignment or licensing of any intellectual property (e.g., any patents or copyright), resulting from the marketable product, and document mutual understandings in an agreement. If the proposed research has explicit commercial objectives, or direct or indirect links to the commercial sector, researchers and communities may want to include provisions related to anticipated commercial use in research agreements. These provisions should be clearly communicated to all parties in advance, consistent with the consent process.

Researchers should consult the research office of their institution before entering into a research agreement that includes intellectual property provisions. Researchers should also consult the program literature or policies on intellectual property and copyright adopted by the federal research agencies CIHR, NSERC and SSHRC (available on their websites) and seek legal advice where appropriate.

Collection of Human Biological Materials Involving First Nations, Inuit and/or Métis Peoples

Article 9.19 As part of community engagement, researchers shall address and specify in the research agreement the rights and proprietary interests of individuals and communities, to the extent such exist, in human biological materials and associated data to be collected, stored and used in the course of the research.

Application

Canadian law does not provide clear recognition of property rights in human biological materials. Researchers should be aware, however, that Indigenous people and communities may seek to maintain control over, and access to, data and human biological materials collected for research. This is in accordance with Indigenous world views about "full embodiment," in which every part and product of the human body is sacred and cannot be alienated. Consistent with Articles 9.8 and 9.11 and Chapter 12, researchers and communities should address and specify in the research agreement:

- the objectives for collection, use and storage of human biological materials;
- the roles and responsibilities regarding custodianship of the data and the human biological materials; and
- any future use of these human biological materials and associated data, including material transfer agreements to third parties, and any subsequent requirements for community engagement.

Researchers must seek consent, in accordance with Articles 12.1 and 12.2, from individuals who are invited to donate their biological materials.

Secondary Use of Information or Human Biological Materials Identifiable as Originating from First Nations, Inuit and/or Métis Communities or Peoples

Ongoing sensitivity about secondary use of data collected for approved purposes arises from experiences with misrepresentation of Indigenous peoples; use of data or human biological materials without appropriate engagement with the source community or consent of participants; and lack of reporting to communities on research outcomes. For example, members of Nuu-chah-nulth communities in British Columbia provided blood samples for research on rheumatic disease. They vigorously protested the use of their blood components for subsequent unauthorized genetic research. In addition, there are fears in First Nations communities that access to health data for purposes other than treatment will facilitate unauthorized government surveillance.

When seeking to undertake research involving secondary use of data identifiable as originating from a specific First Nations, Inuit and/or Métis community or segment of the Indigenous community at large, researchers shall, through community engagement as appropriate, address any potential inadvertent identification of communities, or misuse of traditional knowledge. Requirements regarding the participant's consent for secondary use of identifiable information are addressed in Articles 9.20 and 9.21.

Article 9.20 Secondary use of data and human biological material identifiable as originating from an Indigenous community or peoples is subject to REB review.

Researchers shall engage the community from which the data or human biological materials and associated identifiable information originate, prior to initiating secondary use where:

a. secondary use has not been addressed in a research agreement and has not been authorized by the participants in their original individual consent; or

b. there is no research agreement; and

c. the data are not publicly available or legally accessible.

Individual consent for the secondary use of identifiable information is required unless the REB agrees that one of Articles 5.5A or Article 12.3A applies.

Application

Where the researcher can satisfy the REB that secondary use is consistent with an existing research agreement, the REB may require that the researcher engage the community from which the data or human biological materials and associated identifiable information originate – in accordance with the terms of the research agreement. New consent from individuals for secondary use is not required where the proposed secondary use is authorized by the REB in accordance with this Policy.

Article 9.21 Where research relies only on publicly available information that is protected by law, or on information that is in the public domain with no expectation of privacy as defined in Article 2.2, community engagement is not required. Where the information can be identified as originating from a specific community or a segment of the Indigenous community at large, seeking culturally informed advice

may assist in identifying risks and potential benefits for the source community.

Application

Research based only on publicly available information that is protected by law or on information that is in the public domain with no expectation of privacy as defined by this Policy, does not involve the collection of data from communities directly, or from living persons. As indicated in Chapter 2, REB review for this type of research is not required. Community engagement is not required. Examples are historical or genealogical research or statistical analysis.

In these cases, researchers may not have any direct relationship with communities, but their findings may, nevertheless, have an impact on the identity or heritage of persons or communities.

In order to minimize any harm, researchers should seek culturally informed advice before the use of such data to determine if harms may result and if other considerations, such as sharing of the research results, should be explored with the original source community (Article 9.15).

Where access to publicly available information that is protected by law or information that is in the public domain with no expectation of privacy leads to new research initiatives to collect additional information from identified communities or individuals, REB review is required. The provisions set out in Article 5.6 apply for new initiatives of this kind.

Article 9.22 REB review is required where the researcher seeks data linkage of two or more anonymous data sets or data associated with human biological materials and there is a reasonable prospect that this could generate information identifiable as originating from a specific Indigenous community or a segment of the Indigenous community at large.

Application

The REB may determine that community engagement is required to seek guidance on secondary use. Articles 5.5A and 5.6 or Articles 12.3A and 12.4 may apply.

Consistent with Article 2.4, REB review is not required for research involving only anonymous data sets or anonymous human biological materials, and associated data, that cannot be identified as originating from a specific Indigenous community or a segment of the Indigenous community at large. Community engagement is not possible given that the data or human biological materials cannot be linked to a specific Indigenous community or specific individuals. Where the researcher seeks data linkage of two or more anonymous sets of information or human biological materials, and there is a reasonable prospect that this could generate identifiable information, then REB review is required.

Endnotes

1. The *Constitution Act, 1982* contains the following definition: "In this Act, *'aboriginal peoples of Canada'* includes the Indian, Inuit and Métis peoples of Canada." (35[2])
   Indian peoples commonly identify themselves as "First Nations"; a term that came into common usage

in the 1970s to replace the word "Indian," which some people found offensive. Although the term "First Nation" is widely used, no legal definition of it exists. Among its uses, the term "First Nations peoples" refers to the Indian peoples in Canada, both Status and non-Status. Some Indian peoples have also adopted the term "First Nation" to replace the word "band" in the name of their community.

2. Government of Canada, *Agreement on the Administration of Agency Grants and Awards by Research Institutions*, Effective April 1, 2018 to March 31, 2023. http://www.science.gc.ca/eic/site/063.nsf/eng/h_56B87BE5.html?OpenDocument, Retrieved on May 31, 2018.

3. *Constitution Act, 1982*, s. 35.

4. United Nations, Permanent Forum on Indigenous Issues, *Who are Indigenous Peoples?* Factsheet. http://www.un.org/esa/socdev/unpfii/documents/5session_factsheet1.pdf, Retrieved on August 2, 2018.

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CHAPTER 10

QUALITATIVE RESEARCH

Introduction

Researchers in social sciences and humanities – such as anthropology, sociology, philosophy, psychology, criminology, business administration, political science, communications, education and history – have a common belief in the desirability of trying to understand human action through systematic study and analysis. Some researchers use quantitative research approaches, others opt for qualitative research methods, and some use a combination of both.

Qualitative research has a long history in many established disciplines in the social sciences and humanities, as well as many areas in the health sciences (e.g., nursing, occupational therapy). The use of qualitative approaches is increasing, whether in health research or in social sciences and humanities disciplines. Within specific disciplines, ethics guidelines have been created to address the issues inherent in the use of, for example, particular methods, technologies and settings. Qualitative research approaches are inherently dynamic and may be grounded in different assumptions than those that shape quantitative research approaches. Many of the research practices and methodological requirements that characterize qualitative research approaches parallel those that characterize quantitative approaches, such as concerns regarding research quality. However, as is the case with all research involving humans, the criteria are adapted to the specific subject matter, context and epistemological assumptions about the nature of knowledge in the specific area of research of the specific project.

This chapter seeks to provide specific guidance on some issues that are particularly germane to qualitative research, although such guidance may also be applicable to research using quantitative or mixed methods. In particular, it addresses issues of consent, privacy and confidentiality that may have unique manifestations in qualitative research. Some procedural issues related to the dynamics and characteristics of qualitative research that affect the timing and scope of the research ethics review process are detailed below. Note that subject to applicable laws, the articles in this Policy relating to consent, privacy and confidentiality equally apply in the context of qualitative research.

Researchers and research ethics boards (REBs) should also consult other relevant chapters of the Policy for additional guidance on principles, norms, and practices applicable to qualitative research.

A. Nature of Qualitative Research

Qualitative research aims to understand how people think about the world and how they act and behave in it. This approach requires researchers to understand phenomena based on discourse, actions and documents, and how and why individuals interpret and ascribe meaning to what they say and do, and to other aspects of the world (including other people) they encounter.

Some qualitative studies extend beyond individuals' personal experiences to explore interactions and processes within organizations or other environments. Knowledge at both an individual and a cultural level is treated as socially constructed. This implies that all knowledge is, at least to some degree, interpretive, and hence, dependent on social context. It is also shaped by the personal perspective of the

researcher as an observer and analyst. As a result, qualitative researchers devote a great deal of attention to demonstrating the trustworthiness of their findings using a range of methodological strategies.

The section below provides a summary description of the general approach, as well as methodological requirements and practices, of qualitative research, some of which may also apply to quantitative or other types of research involving humans.

General Approach and Methodological Requirements and Practices

a. Inductive Understanding: Many forms of qualitative research entail gaining an inductive understanding of the world of participants to acquire an analytic understanding of how they view their actions and the world around them. In some projects, this approach also applies to the study of particular social settings, processes and experiences.

To the extent that the methods involve direct interaction with participants, there is often an emphasis on gaining insights into participants' perceptions of themselves and others, and into the meanings that participants attach to their thoughts and behaviours.

b. Diversity of Approaches: There is no single approach in qualitative research. Different fields or disciplines, and even individual scholars within a discipline, have different perspectives on, and approaches to, the use of qualitative methods. Qualitative research uses a variety of theoretical approaches, questions that guide the research, methodologies, epistemological approaches, and techniques that allow researchers to enter the participants' world or to engage with particular social environments. Methodological approaches include, but are not limited to, ethnography, participatory action research, oral history, phenomenology, narrative inquiry, grounded theory and discourse analysis. The term "qualitative research" covers a wide range of overlapping paradigms or perspectives.

c. Dynamic, Reflective and Continuous Research Process: The emergence during the course of the research itself of questions, concepts, strategies, theories and ways to gather and engage with the data (e.g., emergent design research [Article 10.5]) requires a constant reflective approach and questioning by the researcher. Such flexibility, reflexivity and responsiveness contribute to the overall strength and rigour of data collection and analysis.

d. Diverse, Multiple and Often Evolving Contexts: Qualitative research takes place in a variety of contexts, each of which presents unique ethical issues. As knowledge is considered to be context-contingent in qualitative research, these studies tend to focus on particular individuals, sites or concepts that are empirically derived from other social settings. The researcher's priority is to answer the research question stemming from the study of those individuals in a specific social setting at a specific time.

Researchers sometimes engage in research that questions social structures and activities that create, or result in, inequality and injustice. Studies may involve participants whose circumstances make them highly vulnerable in the context of research because of the social and/or legal stigmatization that is associated with their activity or identity, and who may have little trust in the law, social agencies or institutional authorities. Regardless of the methodological approach, researchers who question social structures or deal with the disempowered may face pressures from authority figures. Research may also involve participants, such as business executives or government officials, who may be more powerful than the researchers.

e. **Data Collection and Sample Size:** There is generally a greater emphasis placed on depth of research than on breadth. Most qualitative researchers would emphasize gathering diverse but overlapping data on a limited number of cases or situations to the point of data saturation or thematic redundancy. Samples and research sites in these studies are chosen because they are viewed as particularly useful or rich sources of information for furthering one's understanding of phenomena of interest, and not because the results may prove statistically significant. Participants are selected for their potential to inform theory development, and often selection of participants is guided by emerging patterns over the course of the data collection.

   A researcher may rely on multiple sources of information and data gathering strategies to enhance data quality. Researchers use a variety of methods for data gathering, including interviews, participant observation, focus groups and other techniques. In some cases, gathering of trustworthy data is best achieved by closeness and extended contact with participants. In other cases, researchers and participants may continue research exchanges through electronic or other means, after collection of data in the field. Qualitative studies of textual and image-based materials, such as published books, websites, interview transcripts, photographic images or video, use a variety of content analysis techniques.

   Appropriate treatments of data after they are gathered may vary greatly (Articles 10.5 and 5.3). At the time of the initial consent discussion, researchers inform prospective participants about the confidentiality of the data and discuss the expectations of participants (Articles 3.2 and 5.2).

f. **Research Goals and Objectives:** The aims of qualitative research are very diverse, both within and across disciplines. The intended goals of qualitative projects may include "giving voice" to a particular population, engaging in research that is critical of settings and systems or the power of those being studied, affecting change in a particular social environment, or exploring previously understudied phenomena to develop new theoretical approaches to research.

g. **Dynamic, Negotiated and Ongoing Consent Process:** Entry into a particular setting for research purposes sometimes requires negotiation with the population of interest; sometimes the researcher cannot ascertain the process in advance of the research, in part because the relevant contexts within which the research occurs evolve over time.

   In some cases, participants hold equal or greater power in the researcher-participant relationship, such as in community-based and/or organizational research when a collaborative process is used to define and design the research project and questions, or where participants are public figures or hold other positions of power (e.g., research involving economic, social, political or cultural elites). In other cases, researchers themselves may hold greater power when access to prospective participant populations is gained through gatekeepers with whom the researcher has established a relationship (e.g., when a researcher engages with the police to do research in relation to a problem population, or when researchers engage with prison authorities to do research with offenders).

h. **Research Partnerships:** Access to particular settings and populations is sometimes developed over time, and the relationships that are formed may well exist outside the research setting per se, which sometimes makes it difficult to determine exactly where the "research" relationship begins and ends. In many cases, despite in-depth, advance preparation, a researcher may not

know until the actual data collecting starts just where the search will lead. Indeed, the emergent nature of many qualitative studies makes the achievement of rapport with participants and feelings of interpersonal trust crucial to the generation of questions considered important or interesting by both parties, and to the collection of dependable data. Research often becomes a collaborative process negotiated between the participant(s) and the researcher, requiring considerable time spent initially simply figuring out the focus of the research.

In certain cases, contacts between researchers and participants can extend over a lifetime, and these individuals may engage in a variety of relationships over and above their specific "research" relationship.

i. **Research Results:** Generalizability of the results to other contexts and the representativeness of the sample may or may not be a concern in qualitative research. Transferability of results from one setting to another is often viewed as more of a theoretical issue than a procedural or a sampling issue.

B. Research Ethics Review of Qualitative Research

This section provides guidance on issues particularly germane to REB review of research employing qualitative methods. Qualitative research is also subject to the general guidelines that are applicable to research involving humans. The requirement for consent and the protection of privacy and confidentiality do not change with the nature of the research.

Qualitative research may pose special ethical issues around gaining access, building rapport, using data and publishing results. Researchers and REBs should consider issues of consent, confidentiality and privacy, and relationships between researchers and participants in the design, review and conduct of the research. Some of these may be identified in the design phase. Others will emerge during the research itself, which will require the exercise of discretion, sound judgment and flexibility commensurate with the level of risk and potential benefit arising from the research. It will also require the consideration of the welfare of the participants, individually or collectively.

Timing of the Research Ethics Board Review

Article 10.1 Researchers shall submit their research proposals, including proposals for pilot studies, for REB review and approval of their ethical acceptability prior to the start of recruitment of participants, data collection or access to data. Subject to the exceptions in Article 10.5, REB review is not required for the initial exploratory phase (often involving contact with individuals or communities) intended to discuss the feasibility of the research, establish research partnerships, or the design of a research proposal (Article 6.11).

Application

It is sometimes difficult to ascertain the beginning and end of a qualitative research project. Access to particular settings and populations often develops over time, and it is not unusual for researchers to be passive observers, or simply passively interested in a setting for some time, before any formal effort is made to establish a "research" relationship. Preliminary activities may include note taking, diary writing and observation long before the researcher formalizes a research project. These types of preliminary activities are not subject to REB review (Article 6.11). However, if researchers later wish to use material from this phase, they shall say so in their research proposal and include any plan to seek consent from those interviewed in the exploratory phase to use their remarks.

Researchers need to have the opportunity to engage in preliminary visits and dialogue to explore possible research relationships, and to define research collaborations with particular settings or communities. Activities may include, but are not limited to, determining research questions, methods, targeted sample and sample size, and addressing community-based concerns in the project design and data collection. REBs should be aware that dialogue between researchers and communities at the outset, and prior to formal REB review, is an integral component of the research design. Researchers may need to consult the REB informally when ethics issues arise prior to the data collection, or inform the REB of such issues over the course of the research.

Qualitative research approaches involving a community, group or population of interest (e.g., marginalized or privileged groups) usually follow a process of prior dialogue, exchanges and negotiation of the research, which precedes the formal data collection involving participants. In community-based collaborative research, it may be desirable to engage the community before seeking REB review. For instance, in research in Indigenous communities, it may be desirable to obtain permission to proceed from community leaders, Elders or representatives (Chapter 9). Similarly, when designing community-based research involving individuals whose legal status is compromised, it may be desirable to consult with social service providers serving that population.

Modalities of Expression of Consent

Article 10.2 Researchers shall explain in their research design the proposed procedures for seeking consent and the strategies they plan to use for documenting consent.

Application

As part of their research ethics reviews, REBs should consider the range of strategies for documenting the consent process that may be used by researchers using qualitative research approaches (Article 3.12). Under a variety of circumstances, signed written consent is not appropriate in qualitative research. However, where there are valid reasons for not recording consent through a signed written consent form, the procedures used to seek and confirm consent must be documented.

The consent process should be based on mutual understanding of the project goals and objectives between the participants and the researcher. The participant may perceive attempts to legalize or formalize the process as a violation of that trust. Qualitative researchers use a range of procedures to seek and document consent, including oral consent documented in field notes, and other forms of recording (a consent log, audio or video recordings, or other electronic means). Evidence of consent

may also be documented via completed questionnaires (in person, by mail, or by email or other electronic means).

REBs may need to consider the power relationship that might exist between researchers and participants, and whether a waiver of the requirement for signed written consent may affect the welfare of the participants. In certain cases, consent can be inferred by the participant's agreeing to interact with the researcher for the purposes of research. This would be true in cases where the participant holds a position of power or routinely engages with those involved in the research by virtue of their position or profession (e.g., a communications officer or spokesperson for an organization). For example, some political science research focuses on power structures and individuals in positions of power (e.g., a senior partner in a law firm, a cabinet minister or a senior corporate officer). In this type of research, where a prospective participant agrees to be interviewed on the basis of sufficient information provided by the researcher, it may be sufficient for the participant to signify consent to participate in the research. The researcher should record this in an appropriate way. Researchers shall demonstrate to the REB that the participant will be informed about the research and about the options to withdraw from the study at any time or not to participate at all. Nothing in this article should be interpreted to mean that prospective participants need not be informed about the study prior to their participation.

Researchers and REBs should consult Chapter 3, and Articles 3.1, 3.2, 3.3 and 3.12 in particular, for additional details and considerations on consent, and how to document consent.

Observational Studies

Observation may be used in qualitative studies to study acts or behaviours in a natural environment. It often takes place in living, natural and complex communities or settings, in physical environments, or in virtual settings. Observational studies may be undertaken in publicly accessible spaces (e.g., a stadium, library, museum, planetarium, beach, park), in virtual settings (e.g., online groups), or in private or controlled spaces (e.g., private clubs or organizations).

There are two kinds of observational research addressed in this article. In "non-participant" observational research, the researcher observes the activity, but does not intervene in any way. This is also known as "naturalistic observation." In "participant" observational research, the researcher participates in the activity in some way and also observes.

Participant observation is often identified with ethnographic research, in which the researcher's role is to gain a holistic overview of the studied context through engagement in, and observation of, the setting to describe its social environments, processes and relationships. Participant observation may or may not require permission to observe and participate in activities of the setting studied. In some situations, researchers will identify themselves and seek consent from individuals in that setting; in others, researchers will engage in covert observation and not seek consent.

A matter that is publicly accessible may, nevertheless, be considered private in a prospective participant's culture. There may be a reasonable expectation of privacy by some groups, or for some activities. For example, individuals involved in religious services or practices, or online groups, may assume that participants and observers will accord the proceedings some degree of privacy. Observing sacred ceremonies without approval from the appropriate individuals or groups (e.g., Elders or traditional knowledge holders in Indigenous research) and without engaging them about the subsequent use or interpretation of the data may have unintended negative implications (Articles 9.5, 9.6 and 9.8).

Consideration of the nature of the research, its aims and its potential to invade sensitive interests may help researchers improve the design and conduct of such research.

Observational studies in public places where there is no expectation of privacy may be exempt from REB review (Article 2.3).

Article 10.3 In research involving observation of human acts or behaviours in natural environments or virtual settings where people have a reasonable or limited expectation of privacy, the researcher shall explain the need for an exception to the general requirement for consent. The REB may approve research without requiring that the researcher obtain consent from individuals being observed on the basis of the justification provided by the researcher and appropriate privacy protection.

Application

Observational studies raise concerns for the privacy of those being observed. In observational research, breaches of privacy may arise from identification of individuals, groups or communities in the publication or dissemination of research results.

Naturalistic or participant observational research that does not allow for the identification of the participants in the dissemination of results, that is not staged by the researcher, and that is non-intrusive should normally be regarded as being of minimal risk.

REBs and researchers need to consider the methodological requirements of the proposed research project and the ethical implications associated with observational approaches, such as the possible infringement of privacy. They should pay close attention to the ethical implications of such factors as the nature of the activities to be observed, the environment in which the activities are to be observed, whether the activities are staged for the purpose of the research, the expectations of privacy that prospective participants might have, the means of recording the observations, whether the research records or published reports involve identification of the participants, and any means by which those participants may give permission to be identified. REBs shall ensure that the proposal contains measures to protect the privacy of the individual in accordance with the law.

Researchers and REBs should consult Chapters 3 and 5 for additional details and considerations regarding consent, and privacy and confidentiality.

For naturalistic and participant observational research in which consent is not sought, researchers shall demonstrate to the REB that necessary precautions and measures have been taken to address privacy and confidentiality issues.

Because the knowledge that one is being observed can be expected to influence behaviour, research involving non-participant or covert observation generally requires that the participants not know that they are being observed for research purposes. Typically, the researcher has no direct interaction with the individuals being observed, and therefore their consent is not sought. Covert observation of queuing behaviours in shopping malls is one example of a study where the research could not be completed if shoppers knew that they were being observed. Some forms of qualitative research seek to observe and study criminal behaviours, violent groups, or groups with restricted membership or access using covert participant observation. For example, some social science research that critically probes the

inner workings of criminal organizations might never be conducted if the participants know in advance that they are being observed. These methodological approaches may require the researcher to seek an exception to the requirement of prior consent.

Where no personal information is collected, consent is not required. Where personal information will be collected, researchers must explain whether the need for such covert research justifies an exception to the requirement to seek prior consent, and REBs should exercise their judgment taking into consideration the methodological requirements (Article 3.7A). Researchers and REBs shall take the necessary steps to ensure that the privacy of the individual is protected in accordance with the law in the absence of consent. Where no consent is sought, researchers and REBs may also consider whether debriefing is possible, practicable and appropriate (Article 3.7B). Chapter 5 on privacy and confidentiality provides additional information.

Researchers and REBs should also be aware that, in some jurisdictions, publication of identifying information may be interpreted as an invasion of privacy in a civil suit – for example, a photograph taken in a public place but focused on a private individual who was not expecting this action.

This article applies to naturalistic and participant observational research. It does not generally apply to epidemiological observational research. Certain types of observational research may qualify for an alteration to the general consent requirements (Article 3.7A).

Privacy and Confidentiality in the Dissemination of Research Results

Article 10.4 In some research contexts, the researcher may plan to disclose the identity of participants. In such projects, researchers shall discuss with prospective participants or participants whether they wish to have their identity disclosed in publications or other means of dissemination. Where participants consent to have their identity disclosed, researchers shall record each participant's consent.

Application

In some types of qualitative research (e.g., oral history, a biographical study or a study involving specific personalities), respect for the participant's contribution is shown by identifying the individual in research publications or other means of dissemination of the results from the research. For instance, in an interview study with visual artists concerning some aspect of the way they work, it might be appropriate and respectful to identify the respondents. If failing to identify participants would be unethical because of any disrespect it would represent, or if informed participants assert their desire to be named, then researchers should do so, according to the practices of their discipline. For example, social historians seek to document and archive the lives of individuals or highlight the contributions that ordinary people make in social and political life. In oral history, anonymity is the exception. Researchers make the option for anonymity known to participants as part of the discussion around the nature and conditions of their consent.

In some types of critical inquiry, anonymity would result in individuals in positions of power not being held accountable for their actions and for how their exercise of power has implications for others. The safeguards for those in the public arena are through public debate and discourse, and through action in the courts for libel.

In much other social science and some humanities research, it is primarily the harm that can result from violations of confidentiality that REBs and researchers need to address. This can pose a particular challenge in qualitative research because of the depth, detail, sensitivity and uniqueness of information obtained. The default approach is to maintain confidentiality of the research data. In some instances, participants may waive anonymity (e.g., if they wish to be identified for their contributions to the research). The researcher may accept the waiver of anonymity by the participant as long as such a waiver does not compromise the welfare of other participants (Article 3.2[f] and the Application of Article 5.1). In some cases, the researcher may decide to maintain the anonymity of the participant in publications or dissemination of research results to ensure confidentiality of the data and anonymity of other participants.

REBs need to be sensitive to whether anonymity, confidentiality or identification is relevant in any given research context, and acknowledge that individuals may want to be credited for their contribution by being named.

See Chapters 3, 5 , and 9 for additional details and considerations.

Qualitative Research Involving Emergent Design

In qualitative research, emergent design involves data collection and analysis that can evolve over the course of a research project in response to what is learned in earlier parts of the study. Specific questions or other elements of data collection may be difficult to anticipate, identify and articulate fully in the research proposal in advance of the project's implementation.

Article 10.5 In studies using emergent design in data collection, researchers shall provide the REB with all the available information to assist in the review and approval of the general procedure for data collection.

Researchers shall consult with the REB when, during the conduct of the research, changes to the data collection procedures may present ethical implications and associated risks to the participants.

Application

Although initial research questions may be outlined in the formalized research proposal, REBs should be aware that it is quite common for specific questions (as well as shifts in data sources or discovery of data sources) to emerge only during the research project. Due to the inductive nature of qualitative research and the emergent design approach of the research, some of these elements may evolve as the project progresses.

Researchers using emergent design shall provide the REB with all the available information to allow for a proportionate approach to research ethics review of the research project. In cases where final versions of a questionnaire or interview schedule have not been developed at the time of the ethics review of the research project, researchers should submit a draft set of sample questions, thematic categories or other outlines of the procedures to be followed in data collection. Final versions should be submitted as soon as they become available. REBs should not require researchers to provide them with a full questionnaire schedule in advance of data collection. Rather, REBs should ensure that the data

collection is conducted according to methodological requirements and acknowledge that questionnaires or interview guides may change to adapt to emerging data or circumstances in the field.

In emergent design, changes that do not significantly alter the approved research design will not require additional REB review. Consistent with Article 6.15, where changes of data collection procedures would represent a change in the level of the risk that may affect the welfare of the participants, researchers shall seek approval from the REB prior to implementing such changes. Additional REB review and approval may be required (Chapter 2 and Articles 6.14 and 6.15).

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CHAPTER 11
CLINICAL TRIALS

Introduction

This chapter focuses on the ethical issues involved in the design, review and conduct of clinical trials. In particular, it addresses ethical issues associated with clinical trial design, therapeutic misconception, safety, reporting new information, and registration. Clinical trials are, perhaps, the most regulated type of research and are subject to provincial, national and international regulatory bodies. However, the emphasis in this chapter is on ethics guidance, grounded in the core principles of this Policy: Respect for Persons, Concern for Welfare, and Justice. As is the case throughout this Policy, the welfare of participants takes precedence over the interests of researchers, institutions, and sponsors.

For the purposes of this Policy, a clinical trial is any investigation involving participants that evaluates the effects of one or more health-related interventions on health outcomes. Interventions include, but are not restricted to, drugs, radiopharmaceuticals, cells and other biological products, surgical procedures, radiologic procedures, devices, genetic therapies, natural health products (NHPs), process-of-care changes, preventive care, manual therapies, and psychotherapies. Clinical trials may also include questions that are not directly related to therapeutic goals (e.g., drug metabolism) in addition to those that directly evaluate the treatment of participants. The terms "clinical trial" and "study" are used interchangeably in this chapter.

Clinical trials are most frequently undertaken in biomedical research, although research that evaluates interventions, usually by comparing two or more approaches, is also conducted in related disciplines such as psychology. The researcher leading a clinical trial is often, but not always, a clinician, that is, a health care provider (e.g., physician, dentist, naturopath, nurse, physiotherapist). The ethics principles articulated in this chapter apply to all clinical trials, irrespective of their type, form, or methodology.

Other types of research may benefit from the guidance in this chapter, particularly when they involve greater than minimal risk. Prospectively assigning participants to receive a potentially harmful intervention carries with it a heightened responsibility to protect participant welfare because the risks to which participants are exposed are caused by the research. While this chapter is intended to guide clinical trials, its discussion of justifying control groups and monitoring participant safety may be an important source of guidance for other types of research.

A. Key Concepts

Proportionate Approach

Clinical trials, like other research covered in this Policy, are subject to a proportionate approach to research ethics review; trials that pose greater foreseeable risk to participants should receive proportionately greater scrutiny (Article 2.9). Not all clinical trials are high risk, and care should be taken to avoid an automatic classification of this nature. However, some clinical trials may involve the risk of serious harm or death and may involve large numbers of people or participants whose circumstances may make them vulnerable in the context of research.

Systematic Review

As discussed in Chapter 2, Section B, the evaluation of possible harms that participants may experience due to their involvement in research is of primary importance. Clinical trials should not be conducted unnecessarily on questions that have already been definitively answered. For this reason, the researcher has a responsibility to present the proposed research in the context of a systematic review of the literature on that topic. The systematic review should be carried out according to professional standards of the relevant disciplines(s) or field(s) of research. In all clinical trials, the research ethics board (REB) should carefully evaluate previous relevant research summarized by the researcher (e.g., laboratory, animal and human research with a drug or other therapy), to ensure that the foreseeable risk is justified by the potential benefits to be gained and appropriately minimized. REBs may consult ad hoc advisors as needed (Article 6.5).

Intervention

An intervention is the planned imposition of a condition or set of conditions on participants for the purposes of research. The conditions may be such things as a task, an activity, a treatment, exposure to stimuli, or a change to environment. The purpose of the research may be to describe, measure, evaluate, explain, or observe participants' reactions or responses to one or more of the imposed conditions.

Prospective Assignment of Participants

When a study involves one or more interventions and the study design or the principal investigator (PI) determines which intervention each participant will experience, this is known as "prospective assignment." Prospective assignment may be randomized or based on specific criteria relevant to the study conditions. This assignment normally takes place before data collection, though it may be preceded by a screening process to help researchers determine whether prospective participants meet the inclusion criteria for the study. This screening process may require participant consent.

Prospective assignment may also take place at different stages of a study. For example, a study may begin with all participants in the same group (or assigned to multiple groups), and after a period of observation or testing, the participants may be re-assigned to different groups.

Prospective assignment may be conducted at the level of individuals, groups or populations. For example, a comparison of the effects of vitamin D on the general health and mood of seniors could be carried out by randomizing individual participants to receive either vitamin D supplements or placebos. Or, it could be carried out by assigning some clinics to give high dose vitamin D injections to their senior patients and other clinics to give lower doses.

Alterations to consent requirements that may be necessary for studies conducted at the group and population level are discussed in Article 3.7A.

Clinical Equipoise

Clinical equipoise means a genuine uncertainty exists on the part of the relevant expert community about what interventions are most effective for a given condition. This uncertainty necessitates the conduct of research to determine the comparative therapeutic merits of different interventions (not

all of which may be represented in a given clinical trial). Clinical equipoise provides a link between the duty of care of a clinician and the need to do research to ensure that the therapies or interventions offered are demonstrably safe and effective.

In trials where participants are prospectively assigned to different interventions (e.g., treatment A; treatment B; no treatment), ethical issues relevant to the principle of Justice arise when one group may fare better or worse than another (see Article 11.4 on use of placebos). For this reason, clinical equipoise should be considered as a starting point for the design and review of clinical trials.

Duty of Care

The duty of care in a medical context is the obligation of clinicians to act in the best interests of patients. In the context of clinical trials, researchers are concerned with the welfare of individual participants, but are also focused on the generation of new knowledge that may or may not confer direct benefits on participants. Nevertheless, researchers have a duty of care to ensure that the foreseeable risks to participants are justified by the potential benefits, and that the safety of participants is an integral part of the research design and conduct. Duty of care may also include the researchers' responsibility to have a plan to communicate any information relevant to individual participants' health to their primary clinician. Clinician-researchers (clinicians who also conduct research) need to manage any conflict that may arise from their dual role and they must also be particularly sensitive to the issue of therapeutic misconception (Articles 7.4 and 11.5).

Therapeutic Misconception

Although clinical trials may provide benefits to some participants, the purpose of a clinical trial is to evaluate an experimental therapy or intervention, not to provide therapy. Therapeutic misconception occurs when trial participants do not understand that research is aimed primarily at producing knowledge and may not provide any therapeutic benefit to them. It also occurs when participants enter trials without understanding the ways in which elements of a clinical trial design may interfere with their own health care objectives.

Clinical trials often involve individuals in need of treatment, for whom the experimental therapy is hoped to be effective. Even when foreseeable risks, potential benefits and treatment alternatives are explained to them, it is common that clinical trial patient-participants do not fully appreciate the differences between clinical care and research participation. As a result, some patient-participants may assume that there must be therapeutic value in the research procedures they are undergoing, or that they have been invited to participate because their clinicians believe it would contribute to their health (Article 11.5).

Dual Roles of Clinician-Researchers

Research has shown that clinician-researchers may conflate their clinical practice with their clinical trial research. Some may be overly optimistic about the prospects of an experimental intervention and overstate potential benefits or understate foreseeable risks to prospective participants. This can foster therapeutic misconception among patients and influence the recruitment and consent process

(Articles 11.5 and 3.1). Clinicians must take care not to create unrealistic expectations among participants with respect to the potential benefits of the research.

To preserve the trust on which their professional relationships with patients and colleagues reside, researchers should take all necessary measures to separate their role as researcher from their role as clinician (e.g., enlist associates to recruit participants, rely on colleagues to determine when a patient should be withdrawn). It is important that REBs appreciate the potential conflicts between these roles and the possible impact on the welfare of participants (Article 7.4).

Principal Investigator

In studies involving more than one researcher, a principal investigator (PI) is the researcher who has responsibility for the ethical conduct of the study, and for the actions of any member of the research team at a local site. In a multi-site study, a lead principal investigator (lead PI) is a designated PI who is responsible for the ethical conduct of the study for all sites. The lead PI is responsible for communicating any changes to the study, new information, and/or unanticipated events to the REB, to the sponsor (if any), and to local site PIs. PIs must inform their local REBs in situations where no alternative review model for research involving multiple institutions has been established.

Stopping Rules

In the context of balancing foreseeable risks and potential benefits, researchers and REBs must consider the need for mechanisms to:

a. stop all or part of the study due to evidence of greater than expected harms or greater than expected benefits in any of the study conditions;

b. remove individual participants from a study for their own safety.

These mechanisms are most commonly referred to as “stopping rules.” A study condition could be an experimental intervention, a standard of care, or a control condition.

Stopping rules are pre-determined rules that consist of one or more safety and efficacy criteria (end points) that, if met, warrant a temporary or permanent stop to all or part of the study or a participant’s involvement in the study. Study-wide stopping rules identify when a study should be stopped due to compelling evidence that:

- a study condition is more or less efficacious or effective than another;
- a study condition is more or less safe than another; or
- the study is futile because:
    - the data are invalid or unreliable (e.g., due to insufficient numbers of participants);
    - it is unlikely that the findings will be able to address the research question based on the collected data.

For example, in a study comparing an experimental drug for a disease with the standard treatment, an end point may be the onset of remission in a pre-set percentage of participants in any arm of the

study. If the experimental intervention is achieving higher rates of remission than the standard of care, then this may trigger a decision to pause or stop the trial for reasons of superior efficacy. If the severity of side effects is greater than expected among participants receiving the experimental intervention, then the study may be stopped, and then either amended or closed, for reasons of inferior safety. If a study cannot attract enough participants to yield valid results or if the design of the study was compromised in some way (e.g., repeated equipment malfunctions), then the researcher may decide to end the study for reasons of futility.

Stopping rules may specify what actions should be taken and must be disclosed to participants (Article 3.2). To avoid conflicts of interest, researchers may have an independent Data and Safety Monitoring Board (DSMB) assess whether the interim analyses of a study meet the criteria that might trigger a stopping rule. Stopping rules may be applied to one or more arms of the study.

Participants may be removed from a study for efficacy and safety reasons. For example, a study comparing an experimental drug with a standard treatment for participants with weakened immune systems may have an end point of the onset of an infection. This end point may be used to remove participants from the study for their own safety, but may not warrant stopping the entire study. Sometimes participants may stop receiving the experimental intervention but may continue to be involved in the study. It may also be a precondition of the study that participants who are not complying with the study requirements can be removed from the study by the researcher.

Control Groups

To distinguish the effect of an intervention, researchers may assemble participants into a group that receives the intervention and a group that does not receive the intervention. The group that does not receive the intervention of interest is called the control group, or control arm. The choice of control arm may range from currently approved treatments to placebo, placebo add-on, or no treatment.

B. Ethical Issues for Clinical Trial Design and Review

This section discusses ethical issues associated with the design and review of specific types of clinical trials. Though not all possible clinical trial designs are represented in this section, the guidance provided can be applied and adapted as needed. Researchers and REBs should also consider how applicable regulations affect the design and conduct of clinical trials.

Article 11.1 Guidance regarding a proportionate approach to research ethics review, consent, privacy, confidentiality, dissemination of findings, conflicts of interest and research involving human biological materials and other ethical guidance described in other chapters of this Policy apply equally to clinical trials.

Application

In developing and reviewing proposals involving clinical trials, researchers and REBs should refer to other chapters in this Policy. This chapter does not reiterate guidance set out in other chapters. Rather, it focuses on issues that arise specifically in the context of clinical trials and provides guidance for ethics issues associated with control groups, the use of placebos, safety monitoring, reporting new information, and trial registration.

Article 11.2 In the design and review of a clinical trial, researchers and REBs shall consider the type of trial, its phase (if appropriate), and the corresponding particular ethical issues associated with it, in light of the core principles of this Policy.

Application

Each type of clinical trial has specific ethical issues that correspond to the risks faced by the participants. In a proposal submitted for research ethics review, the researcher shall clearly specify the type of trial proposed and, where relevant, its phase. REBs reviewing clinical trials need to be familiar with the ethical issues raised by different phases, and by different types of clinical trials.

Pharmaceutical Trials

Clinical trials involving pharmaceutical products are commonly categorized into four phases, each of which gives rise to particular ethical issues. Detailed descriptions of the phases of clinical trials are provided in other guidance documents, for example Health Canada's guidance documents. The ethical concerns described are most likely to arise in a specific phase of a clinical trial. Some issues may arise at any phase of a clinical trial. Ethical issues raised by the different phases of pharmaceutical trials may also arise in other types of clinical trials.

Phase I

Safety concerns are particularly acute in phase I research because it may be the first time participants are exposed to the new drug ("first-in-human" trials), and there may be little or no experience with the drug. Phase I trials often depend on healthy participants who are offered incentives for their participation, or they may include participants with specific diseases for whom conventional therapy has failed. The combination of clinical risk with uncertain or no likelihood of clinical benefit, and the often substantial incentives offered to participants, raises ethical concerns about safety, the selection and recruitment of participants, and the consent process. For safety, it is important to ensure that the drug is initially given to a small number of participants and that dosing is increased in clearly defined increments only after participants' responses to the initial dose is known. Recruitment and consent procedures shall ensure that participants are aware of the untested nature of the therapy and that participants do not accept, because of the incentives being offered, risks they would otherwise refuse. Consideration should be given to minimizing the possibility of therapeutic misconception.

Phase II

Phase II, or combined phase I/II clinical trials, raise particular ethical concerns, because they are often conducted with populations whose therapeutic options have been exhausted. Examples include patients with cancer that is incurable by standard therapies, or people with conditions that cause them acute or chronic pain. These circumstances may affect the perceptions of patients and their families as to the balance between the risks and potential benefits of the trial and thus may affect their decision whether to participate. Consideration should be given to minimizing the possibility of therapeutic misconception. Participants in phase II trials may include patients who are unwell. Participants and their families may be financially impacted. The REB should ensure that incentives for research participation are not coercive and that patients or authorized third parties do not accept risks they would otherwise refuse because

of the incentives being offered. Researchers are encouraged to consult informally with the REB about any recruiting, consent or safety issues that arise.

During the course of a phase II clinical trial, participants will have access to a new drug that may or may not provide clinical benefit. Researchers shall: (a) provide details on access to the new drug upon trial completion as part of the consent process; and (b) make reasonable efforts to secure continued access to the drug following the phase II trial for those patient-participants for whom the drugs appear to be beneficial.

Phase III

REBs should carefully examine phase III clinical trials to ensure that the care of patient-participants is not compromised in the assignment to any arm of the trial. Researchers should provide a plan for interim analysis of data, early unblinding of clinicians and/or participants, and/or ending the trial if the drug should prove efficacious or harmful. The REB should evaluate such plans with due consideration for the welfare of the participants and the group that is the focus of the research (Article 3.2[l]).

Phase III trials are normally conducted with participants in need of treatment and may involve clinicians in dual roles as researchers. Researchers in dual roles should explain how they will eliminate, minimize or manage their involvement with any of their patients recruited to the trial (Article 7.4, Chapter 11, Section A).

Researchers and the REB should address the issue of continuing access to the experimental therapy after the trial closes. If the treatment benefits participants and is safe, the proposal should state whether it will continue to be provided and under what conditions. REBs should be concerned about what provisions are possible to ensure that participants continue to receive adequate treatment.

Phase IV

Phase IV trials are conducted after a drug has been approved by the regulator for the market. They are conducted to assess the long-term safety and effectiveness of marketed drugs and devices through the identification of side effects, toxicities, drug interactions and overall tolerance that may only emerge over time. Phase IV trials may be surveillance studies or they may involve interventions (e.g., a comparison of two approved drugs).

In some cases, phase IV trials may be designed to serve primarily as marketing initiatives to encourage the prescription and continued use of an approved drug. For example, a clinician may be paid a per capita fee by a sponsor to collect data on the side effects and acceptance by patients of a drug being marketed by that drug's sponsor. REBs should carefully consider any financial terms between sponsors and investigators (Articles 6.24 and 7.4) that may create problems such as inappropriate prescription practices, billing practices and/or inappropriate utilization of public resources (e.g., diagnostic services and medical imaging). Researchers and REBs must ensure that trials are undertaken for a bona fide scientific purpose. This includes ensuring that the design and objectives are scientifically, and not only commercially, driven.

Natural Health Product Trials

A common public misconception about natural health products (NHPs) is that they are safe simply because they are natural. Some NHPs, however, can pose serious health risks. NHPs may also be part

of a multi-treatment therapeutic approach (e.g., an herbal medicine added to a conventional medicine or to a complementary alternative therapy). A research proposal for an NHP clinical trial shall clearly identify the known effects of the product under investigation and its possible contraindications. REBs should ensure that NHP clinical trial proposals are reviewed with the appropriate level of scrutiny as indicated by the foreseeable risks to the participants.

In evaluating the research design, REBs should consider the history of the NHP as provided in the literature review contained in the researcher's brochure and/or in a monograph, such as those published by Health Canada setting out approved uses and cautionary information. For NHPs with an established safe history of human use, the researcher does not have to present the findings of prior testing with animals if the proposed conditions of use in the trial do not differ from approved uses. However, if the NHP is a new product without an established safe history of human use, prior animal testing may be necessary before it can be approved for first-in-human trials.

Some NHPs do not fall under the jurisdiction of Health Canada, and their efficacy may not have been rigorously tested. Researchers and REB members should know how applicable legal and regulatory requirements affect the design and conduct of NHP clinical trials.

Medical Device Trials

Medical devices may take many forms (e.g., magnetic resonance imaging machine, cardiac pacemaker, hip implant). The term "medical device" covers a wide range of instruments used in the prevention, diagnosis, mitigation, or treatment of a disease or abnormal physical condition, or in the restoration, correction or modification of body function or structure.

Researchers are responsible for seeking appropriate bioengineering input and providing up-to-date information about the device, such as any feasibility studies the device has been subject to in Canada or in other countries, and its risk classification. If an REB does not have enough safety information about the device to consider in its review of the trial, the researcher should be advised to work with the manufacturer of the device to provide appropriate risk information in the research proposal.

Surgical Trials

Some of the issues surrounding the comparison of different surgical techniques are: whether the technique is appropriate for the participants; whether the technique has been validated; whether the tools required have been approved for use in Canada; whether it is appropriate to employ a control group that undergoes sham surgeries; and how well the experimental procedures will have been explained to prospective participants.

When there is a crossover from non-surgical to surgical treatment, it can be difficult to assess whether participants' health outcomes were due to the surgical intervention. In these situations, it may be appropriate to use a placebo surgical comparator. The risk of subjecting participants to a potentially scientifically inconclusive trial needs to be weighed against the risk of subjecting them to a potentially harmful placebo intervention. REBs should be satisfied that the research question cannot be addressed in any other way. To ensure participants are fully aware that they may be undergoing unnecessary surgery, REBs should examine the consent process for clear explanations of the experimental procedures, rationale, risks and potential benefits in language that is appropriate for the participant group (Article 3.2).

REBs should be aware that it is possible that the principal investigators of surgical clinical trials need not, themselves, be surgeons or technicians trained in the procedure. For example, a biomechanical engineer who has developed a new type of skin graft material to aid in surgical repair may conduct a surgical clinical trial, with the assistance of a surgical team, to compare the new material with an existing material.

Psychotherapy Trials

A psychotherapy trial tests a psychotherapeutic approach in populations with the same psychological diagnosis. It may compare the outcomes of those receiving the therapy to those on a wait list. Often, a trial will compare a psychotherapeutic approach to a pharmaceutical approach or to some combination of both.

REBs should be aware that trials involving psychotherapy may be more focused on effectiveness in practice than on efficacy under tightly controlled conditions. For example, the research question may be how participants undergoing a particular therapy are functioning in their daily lives. The duration of these trials may be longer as a function of the therapeutic approach and the characteristics of the condition to which it is applied. Researchers must clearly identify any risk of a negative impact on participants' mental health and how they intend to minimize and/or manage these risks.

Issues of participant privacy and confidentiality may receive closer scrutiny in cases where people with specific psychological profiles are being recruited from the same institution as the researchers. Researchers shall indicate how recruitment, data collection and management, and compensation procedures have been designed to protect participant confidentiality (Chapter 5).

Pilot Trials

Pilot trials, also known as "feasibility trials" or "vanguard trials," are smaller versions of a main trial (Articles 2.1 and 6.11).

Cluster Randomized Trials

Cluster randomized trials (CRTs) involve the prospective assignment to one or more interventions at the level of a group or population (e.g., hospital wards, schools, communities) rather than at the level of individual participants. CRTs may involve outcome evaluation at the level of group or "cluster," or the individual cluster members.

CRTs raise issues of participant autonomy depending on whether the design is based on an exception to the requirement to seek prior consent from individual participants. Researchers and REBs need to consider whether:

- the randomization of clusters will take place before it is possible to identify participants and seek consent;
- individuals who are in the cluster but who are not the primary focus of the trial may be directly or indirectly affected by any intervention applied to the cluster; and
- cluster-level trial interventions may be difficult or impossible for individuals to avoid, removing the possibility of refusing to participate.

Where individual consent is possible in CRTs, it shall be sought, and the process of prospective assignment shall be explained so that individual participants are aware that they may or may not receive an intervention. When this approach would render the trial impossible or impracticable to carry out, the researcher must be able to justify an alteration to, or a waiver of, the consent requirements to the satisfaction of the REB (Article 3.7A). It may be feasible to seek consent for some aspects of the study but not for others. For example, a cluster-level intervention may make it impossible to seek participant consent for the intervention, but it may still be possible to seek consent for data collection.

Researchers should seek engagement to establish an interaction between the research team and the community that is relevant to the trial. They must use a reasonable process to identify individuals who legitimately represent the community and provide details of this process to the REB. In their research proposals, researchers must also clearly identify risks to individuals, to the cluster as a whole, and to any sub-groups within the cluster.

Adaptive Design Trials

Adaptive design trials are also known as "multi-stage design," "flexible/dynamic design," or "data-driven design." They typically include a prospective adaptation of some design features according to decision points based on accrued data. For example, analysis of trial arm outcomes after one month will determine which participants stay in their assigned arm and which will be moved to another arm. They may include changes to sample size, allocation ratio, stopping rules, the trial objective or hypothesis (e.g., from superiority to non-inferiority), the primary outcome, the population, or dropping or adding an intervention or control arm. Adaptations to trial design may affect informed consent, clinical equipoise, and the fair distribution of risks and benefits throughout the trial. Researchers should set criteria for adaptation decision points regarding exposure of greater numbers of participants to possible undetected risks of an intervention. These criteria should be justified. There should be a plan to manage or minimize the involvement of clinician-researchers in research decisions that may affect their patients (e.g., prospective assignment, data-driven changes to trial design).

The possible advantages of adaptive design trials are shorter trials with fewer participants and earlier identification of the most and least promising interventions, particularly for interventions that cannot be tested with a conventional approach. For example, to test the safety and efficacy of an experimental intervention for a rare disease in a conventional clinical trial, researchers would have to recruit far more participants than the number of people who actually have the disease. Using an adaptive design, it could be possible to achieve the same statistical power with fewer participants participating in a sequence of interventions. An advantage of adaptive design trials is that they provide opportunities for participants to affirm their ongoing consent in a formal manner.

However, adaptive designs also raise particular ethical issues. Participants joining a trial in a later phase might experience fewer risks and greater benefits than those who were involved in the earlier phases of the same trial. The re-assignment of more participants to an intervention that looks more promising could inadvertently expose more participants to side effects that take longer to emerge. Smaller numbers of participants may reduce the ability to do more, focused analyses (e.g., subgroups). This may increase the possibility of false negative or false positive results.

Registry-Based Trials

Registry-based trials use health registries as platforms for different aspects of trial operations such as recruitment, data collection, randomization, and/or follow-up. Health registries are collections of patient health information. In registry-based trials, researchers seek access to registries in order to recruit participants and prospectively assign interventions, which may include the standard of care. The intervention, measurement and/or analysis may be at the group or individual level. Different levels of intervention, measurement, and analysis can present different issues of consent and privacy. This type of research may benefit from guidance regarding secondary use of identifiable information for research purposes, including issues related to linkage of records in different registries (Chapter 5, Section D). Although registry-based trials are relatively recent, it appears that the ethics issues they present are not novel and are currently addressed by the principles of this Policy.

Registry-based trials are efficient because they offer researchers access to a pool of participants within an existing infrastructure for recruitment, data collection or follow-up. Such trials require coordination with registry administrators, as aspects of their roles may overlap with the roles of the researchers (e.g., safeguarding privacy or monitoring safety).

Justification for Control Groups

As with other aspects of the trial design, the choice of including a control arm must be justified based on scientific, ethical, medical and methodological reasons and must meet an acceptable risk/benefit ratio. Risks to the safety of participants can come from lack of efficacy or from undesirable side effects. These risks must be assessed for each treatment arm, including the experimental and control arm(s).

It is important to avoid the error of equating the absence of a potential benefit conferred by the intervention to participants who are assigned to a control group – to a risk. For example, in a study comparing the addition of a new treatment for heroin addiction to the standard treatment, some participants will be prospectively assigned to receive this intervention, and some will not. Those who are assigned to the control group are no better or worse off than if no research were taking place. It is the intervention group that is exposed to any harms or benefits of the intervention. For example, the intervention may or may not work, or it may have unforeseen side effects. The role of the researcher is to address the research question in the context of clinical equipoise – to discover if a particular intervention is beneficial or less harmful than the status quo – and to disseminate the findings. It is the role of advocates, policy makers, and service providers to use the findings of research to ensure the equitable distribution of potential benefits for the welfare of society.

Article 11.3 addresses the considerations required of researchers and REBs to assess whether a particular control group design is ethically acceptable. Article 11.4 deals specifically with the ethical issues pertaining to the use of placebos.

Article 11.3 In clinical trials, researchers shall justify their choice of control group(s) to the REB by demonstrating that the choice is:

- relevant to the research question;
- appropriate for the population of interest; and
- consistent with the criteria for clinical equipoise.

Application

The use of prospective assignment of participants to different groups may result in one group of participants experiencing greater benefits or greater harms than another. Prospective assignment must be justified by the research question. It is important that the researcher take into account relevant characteristics of the participant population when choosing the type of control group. For example, a wait-list control group may not be appropriate for investigation of a behavioural approach to anxiety due to the increased anxiety participants in the wait-list condition may experience.

In the context of studies that involve interventions intended to have a beneficial effect upon participants, there must exist a genuine uncertainty (i.e., clinical equipoise) on the part of the relevant expert community about which interventions are most effective.

Use of Placebos

The term "placebo" traditionally refers to an inactive substance or treatment (e.g., a pill, an injection) given to participants to simulate an active substance or treatment. Often, the purpose of using a placebo as a comparator in a clinical trial is to control for the reaction participants may have to any kind of intervention and their beliefs about its possible effects. This may be done in order to distinguish the effects of the intervention of interest from the effects caused by participant belief. It may also be used as a control to distinguish effects of the intervention of interest from the natural background rate of symptoms or variability in a disease that occurs in a population.

A clinical trial in which one or more intervention arms are compared with a placebo control group raises specific ethical issues. Where there is an established effective treatment, use of a placebo may deprive participants of needed therapy. It is the responsibility of the researcher or sponsor to provide justification to the REB for the choice of a placebo control group, as opposed to the other possible choices of control group (e.g., active control, wait-list control, dose-response, and combination therapies). The following article sets out criteria for the use of a placebo control group to ensure that this type of clinical trial design is used only in situations that do not compromise the safety and welfare of participants.

Article 11.4 A new therapy or intervention should generally be tested against an established effective therapy. A placebo control is ethically acceptable in a randomized controlled clinical trial only if:

a. its use is scientifically and methodologically sound in establishing the efficacy or safety of the test therapy or intervention;

b. it does not compromise the safety or health of participants;

c. the researcher articulates to the REB a compelling scientific justification for the use of the placebo control; and

d. the general principles of consent are respected and participants or their authorized third parties are specifically informed (Article 3.2) about any:

- intervention or therapy that will be withdrawn or withheld for purposes of the research; and
- of the anticipated consequences of withdrawing or withholding the intervention or therapy.

Application

Researchers must justify the decision to use placebo control instead of other possible options. The design must be methodologically sound to be ethically acceptable research. The use of placebos must be necessary to address the research question. For example, in a study comparing a combination of two therapies against two therapies normally administered singly, the research design would call for an intervention group to receive the combined therapy. One control group would receive one therapy plus a placebo. A second control group would receive the other therapy plus a placebo. This design preserves the integrity of blinding and protects the scientific validity of the study without posing unnecessary additional risks to participants.

The use of an active treatment comparator in a clinical trial of a new therapy is generally the appropriate trial design when an established effective therapy exists for the population and clinical indication under study.

Great care should be taken to avoid abuse of placebo comparators. However, they are acceptable in any of the following situations:

1. There are no established effective therapies for the population or for the indication under study.
2. Existing evidence raises substantial doubt within the relevant expert community regarding the net therapeutic benefit of available therapies.
3. Available therapies are known to be ineffective for patients by virtue of their past treatment history or known medical history.
4. The trial involves adding a new investigational therapy to established effective therapies: established effective therapy plus new therapy vs. established effective therapy plus placebo.
5. Patients with decision-making capacity have provided an informed refusal of established effective therapy, and withholding such therapy will not cause serious or irreversible harm.

The determination of response satisfaction and refusal of treatment must take place outside the context of recruitment for the clinical trial and prior to offering trial participation to the prospective participant, and both must be documented.[1]

The use of a placebo comparator in situation (5) is permitted because prospective trial participants are not using established therapies and therefore are not benefiting from therapy. For that reason, such participants would not be further disadvantaged if enrolled in a placebo-controlled trial than participants in a trial for whom there are no established effective therapies for the indication under study. This justification would be included in the research proposal submitted to the REB.

Use of Placebos in Superiority and Non-Inferiority Studies

A superiority study is one in which researchers empirically test whether an experimental intervention is more efficacious or beneficial than a control intervention. A superiority study may be placebo-controlled when the control intervention is a placebo or sham intervention, or it may be actively controlled when the control intervention is an established effective intervention.

A non-inferiority trial compares a control intervention with an experimental intervention that offers

some additional advantage (e.g., easier to administer, fewer side effects). The goal of the trial is to demonstrate that the experimental intervention is not inferior to the control intervention with regard to a specified end point. From an ethical perspective, a critical component in such trials is defining, in advance of the trial, the maximal lowering of efficacy that would be acceptable in order to justify use of the experimental treatment. An advantage of a non-inferiority trial is that placebos are not used and both groups receive an active intervention.

For example, consider a trial of an experimental medication for cancer. The experimental medication offers one or more advantages over the established treatment, such as fewer side effects, lower cost, or easier administration. Physicians and patients would like to capitalize on these advantages and use the experimental medication, but only if this does not come at the cost of significantly lowering survival. In such an instance, one would conduct a non-inferiority trial to show that the experimental medication is not inferior to the established treatment with respect to survival.

To properly assess the ethics of placebo-controlled superiority design vs. active controlled non-inferiority design, an appreciation of the interplay of ethics and science is required (Article 2.7). There may also be regulatory considerations. A low and/or variable response to the existing treatment can make it difficult to carry out a successful non-inferiority trial. The researcher must provide adequate justification for the use of a non-inferiority design.

Therapeutic Misconception

Article 11.5 REBs and clinical trial researchers should be conscious of the phenomenon of therapeutic misconception. They should ensure that procedures for recruitment and consent emphasize which specific elements of a clinical trial are required for research purposes, as well as the differences between research and the standard clinical care patients might otherwise receive.

Application

When treating clinicians conduct research with their patients, special efforts may be required, as part of the consent process, to distinguish between their dual role as clinician and researcher – and to ensure that patients who become participants understand the differences between the goals of health care and the goals of research.

It is important that clinician-researchers take care not to overplay the benefits of research participation to patients in vulnerable circumstances, who may be misled to enter trials with false hopes. Research has shown that clinicians can affect how well their patients appreciate the uncertainty of research, the seriousness and magnitude of risks, and the possibility that participation may not result in any direct benefits to their own health status.

Article 3.2 describes the requirements for consent to research participation. It indicates that participants shall be provided with relevant information, including a clear description of those elements of participation that are experimental in nature and those not primarily intended to benefit the participant directly.

In general, therapeutic misconception can be minimized by ensuring that the clinicians who provide the patient's regular care are involved as little as possible in the recruitment and the consent process. Ideally, treatment and research functions should be performed by different people. However, there

may be instances in which participants' best interests are served by having their primary care clinicians involved in recruitment and consent, for example, because of the degree of expertise needed to compare the standard of care with that of the clinical trial. In these cases, the research proposal shall indicate what other measures will be taken to minimize therapeutic misconception. For example, a consent discussion may be conducted by the clinician-researcher, and the agreement to participate in research may be sought by an individual who is not involved in the clinical care of the patient.

C. Safety Monitoring and Reporting New Information

In accordance with the core principle of Concern for Welfare, it is a key responsibility of researchers to ensure that, as clinical trials proceed, the risks to participants remain within the acceptable range, and the safety of participants is monitored. Articles 11.6 and 11.7 address researchers' responsibility to include a safety monitoring plan in their research proposals for REB review, and their responsibility to ensure that any new information that may affect participant welfare or consent is shared with the REB and participants. See also Articles 6.15 and 6.16. Article 11.9 addresses the REB's responsibility to have procedures in place to receive and respond to reports of new information, including, but not limited to, safety data, unanticipated issues and newly discovered risks.

In the case of clinical trials, there are provincial, national and international guidelines that govern safety monitoring and reporting of new information. It is the responsibility of researchers to be aware of the guidelines that apply to their research and to adhere to them for the safety and benefit of participants.

Article 11.6 Researchers shall provide the REB with an acceptable plan for monitoring safety, efficacy/effectiveness (where feasible) and validity. This plan shall describe:

a. how participant safety will be monitored and what actions will be taken in the event of a threat to participant safety;

b. how intervention efficacy will be monitored (where feasible) and what actions will be taken if efficacy is found to be greater than expected;

c. the criteria by which participants may be removed from a study for safety reasons;

d. the study-wide stopping rules (if any) by which studies may be stopped or amended due to evidence of inferior safety, superior efficacy or futility; and

e. the reporting procedure that will be followed to ensure any information relevant to participant welfare or consent is reported clearly and in a timely fashion to the REB.

A data and safety monitoring plan may (but need not) include the establishment of an independent DSMB (Article 11.7).

Application

The responsibility for establishing a data and safety monitoring plan lies with the researcher or the research sponsor. The REB must assess whether the plan sufficiently addresses the foreseeable risks and potential benefits for study participants.

Paragraphs (c) and (d) require that the data and safety monitoring plan describe any mechanisms for

removing participants for safety reasons and/or for stopping a study for reasons of safety, efficacy, or futility. Stopping rules are the most common mechanism for making these decisions. All clinical trials that pose more than minimal risk to participants should have criteria by which participants who are experiencing harm can be removed from the study.

Paragraph (e) requires the data and safety monitoring plan to describe the reporting procedure that will be followed. In order to fulfill their mandate to safeguard the interests of participants, REBs require sufficient information about the study design, stopping rules, and monitoring mechanisms at the point of initial review, as well as reports of unanticipated events and any proposed changes to approved study design (Articles 6.16 and 11.9).

Researchers are responsible for ensuring that the results of any interim analyses that affect participant welfare or consent are provided to REBs. This summary report should be provided promptly and should include information about the context and significance of reported data to permit a fair interpretation and meaningful review by the REB. When the REB requires additional information, the researcher shall provide it. If necessary, the REB may require that an evaluation be conducted by a qualified source who has no conflict of interest and who is independent of any sponsor, such as an independent DSMB.

Independent Data and Safety Monitoring Boards

Independent Data and Safety Monitoring Boards (DSMBs) are known by a variety of names, including "data monitoring committees," "data safety committees," and "data and safety monitoring boards." They are comprised of people with the relevant scientific, ethical and/or community expertise to oversee the data and procedures of one or more ongoing trials with respect to participant safety, intervention effects and data validity. The duties of independent monitoring boards are typically described in a charter based on a trial design approved by an REB. These duties may include applying stopping rules and recommending changes to the trial design.

An independent DSMB normally conducts regular monitoring of the data from all sites (in the case of multi-site studies) at pre-set intervals. In the case of blinded studies, independent DSMBs can unblind data for the purpose of making recommendations based on the results of interim analyses. Information pertaining to the welfare or consent of participants must be reported by the researcher to any REBs that have approved the study (Articles 6.15 and 11.8). Not every study is required to have an independent DSMB. Factors to consider when making this decision appear in Article 11.7.

The appointment of an independent DSMB does not alter the responsibility of researchers to monitor safety, efficacy, and validity throughout the conduct of the study. In the context of multi-site research, when new information at one site could be relevant to participant welfare and consent at other sites, principal investigators must ensure that this information is shared with researchers at each site and with REBs (Article 11.8). The REB must be prepared to act upon these reports, especially where urgent action is required (Article 11.9).

Article 11.7 The following factors should be considered to determine whether a study, with or without stopping rules, should have an independent DSMB:

- the magnitude of foreseeable research-attributable harms to participants;
- whether the circumstances of the participants make them vulnerable in the context of research;
- the feasibility of interim data analysis;
- the complexity of the study; and
- conflicts of interest.

Application

Not all clinical trials require an independent DSMB, but it is important to consider the factors listed in this article before making this decision. As participants in a clinical trial may be prospectively assigned to an intervention that poses more than minimal risk, the magnitude of foreseeable harm is a primary consideration even if the probability is low. If the possible outcomes for participants in a clinical trial are severe (e.g., irreversible harm or death), the study is more likely to need an independent DSMB and stopping rules than a study in which the possible outcomes are moderate (temporary, non-life-threatening conditions). For example, a study assessing the efficacy of a non-toxic remedy for the relief of cold symptoms may be less likely to need stopping rules than a study assessing the effect of a highly toxic drug on rates of lung cancer mortality. Researchers and REBs should also consider the invasiveness of the intervention involved and whether there is prior evidence of high risk to participant safety.

Clinical trials in which the intended participant population is already at risk due to their existing circumstances (e.g., weakened mental state, weakened immunity, lack of access to support) may need stopping rules to ensure that researchers and/or independent DSMBs can recognize when incidents of harm to participants require a reconsideration of the study design. It is important to distinguish between idiosyncratic incidents of harm that are limited to a small number of participants and incidents of harm that indicate a general problem with the study design or procedures.

For a stopping rule to be effective, there must be sufficient data available for analysis prior to the conclusion of the study. Studies of short-term interventions or studies of small participant groups may not generate enough data to permit the use of a study-wide stopping rule. However, in short-term studies in which participants are at high risk of severe outcomes, researchers and REBs should consider whether a staged enrolment design, with pauses to permit interim analyses and application of stopping rules, is warranted. In studies of interventions that may not reveal their effects on participants until long after the intervention has ended, interim analyses are not practicable. If the study design does not permit timely interim data analyses that could have an impact on participants' safety or well-being, there may be no use in establishing study-wide stopping rules.

Studies that involve multiple data collection sites, blinded data, long-term data collection and/or large numbers of participants may need an independent DSMB regardless of whether study-wide stopping rules are indicated. The interim analysis of all available data is necessary to determine whether measures of harm or benefit to participants meet the study-wide stopping rules. Individual site researchers without the same level of access to data and the expertise to conduct the necessary analyses may not be able to make informed decisions in the best interests of participants. Conversely, a single-site study with unblinded data collection and clear stopping rules may not require an independent DSMB.

The use of independent DSMBs is one way to manage studies in which conflicts of interest within the research team or among research partners are a concern. Safety can be maximized and futility minimized by having an independent DSMB conduct interim analyses of data. The DSMB can also make recommendations about the study design and conflicts of interest that could affect decisions about the validity of data or evidence for efficacy/effectiveness. The membership of the DSMB should be free of inappropriate influence. Conflicts of interest should be resolved in accordance with the DSMB charter.

Reporting New Information

Article 11.8 Researchers shall promptly report new information revealed during the conduct of the trial that might affect the welfare or consent of participants to the REB (Article 6.15), to a publicly accessible registry (Article 11.10) and to other appropriate regulatory or advisory bodies. When new information is relevant to participants' welfare, researchers shall promptly inform all participants to whom the information applies (including former participants). Researchers shall work with their REBs to determine which participants must be informed, and how the information should be conveyed.

Application

In the course of any type of clinical trial, new information may arise that is relevant to participants' welfare or their ongoing consent to participate (Articles 2.8, 3.3, 6.15 and 6.16). This new information might arise from unanticipated issues (e.g., adverse reactions to interventions) or from routine evaluations of participant health that occur in the context of the trial. It might pertain to all participants, to those in one arm of an intervention, or only to one participant with a particular issue. It might be information that arises from other related research that has repercussions for ongoing trials.

New information thus covers a range of matters that includes, but is not limited to, the following:

- changes to the research design;
- evidence of any new risks;
- unanticipated issues that have possible health or safety consequences for participants;
- new information discovered in the course of the trial before the end-of-study date that decisively shows that the benefits of one intervention exceed those of another;
- new research findings, including relevant non-trial findings discovered before the end-of-study date;
- unanticipated problems involving lack of efficacy/effectiveness, recruitment issues or other matters determined to be serious enough to warrant disclosure; or
- closure of trials at other sites for reasons that may be relevant to the welfare or consent of participants in the ongoing trial.

Article 11.8 outlines the continuing duty of researchers to share new and relevant information regarding clinical trials with the REB, the publicly accessible registry, and other appropriate bodies. This information may also need to be shared with participants and, possibly, other relevant third parties (e.g., circle

of care), as indicated by the nature of the information. The more relevant, serious and urgent the information, the more promptly it should be disclosed. To understand the particular relevance of new information, it should be considered from the perspective of the participant.

Researchers should also promptly share new information about an intervention with other researchers or health professionals administering it to participants or patients, and with the scientific community – to the extent that it may be relevant to the general public's welfare.

The duty to report new information to the REB, along with the necessary analysis and evaluation to make the new information interpretable, lies with the researcher. It is incumbent upon the researcher to keep abreast of reports of findings from studies investigating similar interventions (e.g., through professional journals, online reports, conferences, contact with colleagues). New findings that are reported during the conduct of a trial may affect the assumption of equipoise between the interventions/control groups made during the design phase of that trial. For example, if a trial reported that intervention A was conclusively safer or more effective than intervention B, any researchers testing either of these two interventions in a clinical trial would need to report this finding to their REBs (and DSMBs, where in use). Researchers should also consider the impact of this finding on equipoise, participant welfare, and participants' ongoing consent.

In the case of newly discovered risks or unanticipated issues, the researcher's report shall include a plan to eliminate or mitigate any increased risks to participants. Researchers should raise potentially relevant developments with the REB at an early stage to better determine the appropriate scope and timing of information sharing with participants and regulatory authorities.

The welfare of participants must also be considered when a trial is unexpectedly discontinued. When a researcher, a sponsor or other body stops or unblinds all or part of a clinical trial, the principal investigator has an ethical and a regulatory responsibility to inform both study participants and the REB of the discontinuance or unblinding and the reasons for it. Researchers must ensure that the publicly accessible trial registry is updated with any changes to the trial that require REB review and approval, adverse events that occur during a trial, and decisions to end a trial early. Any risks to participants that may arise from the unexpected closing of the study must be communicated to the REB and the participants. The researcher shall indicate any measures that will be taken to mitigate these risks.

Former participants

Former participants are those who have withdrawn from the study, those who have been removed from the study and those whose participation in the study has ended. When new information is relevant to the welfare of all participants, researchers and REBs have a duty to ensure that all participants are informed, including former participants. Where new information affects only participants actively involved in the trial, the REB may decide that former participants need not be informed. However, researchers may choose to voluntarily share this information with all participants.

Completion of study

The obligation to report new information ends with the completion of the study. The conditions for study completion are set out in the research protocol approved by the REB. Typically, the study is complete when the final data analysis is complete. Study completion may also be defined as the last contact with the last participant for the purposes of collecting data or human biological materials, or for the purposes of follow-up monitoring.

Article 11.9 REBs shall develop procedures to review and respond appropriately to reports that arise during the trial concerning safety, efficacy and/or validity and other new information arising from clinical trials that may affect the welfare or consent of participants.

Application

As noted in the preceding articles and elsewhere in the Policy (e.g., Articles 6.15, 6.16), REBs can expect to receive reports of safety, efficacy, and new information, including but not limited to, unanticipated issues, proposed changes to the research design, and newly discovered benefits or risks. It is the REB's responsibility to establish procedures for reviewing these reports that will be used to determine how to respond to evidence of increased risks or benefits to participants, and to be ready to implement these responses as needed. Responses shall be relative to the magnitude and likelihood of the risk or benefit to the welfare of participants. REBs may advise researchers as to the steps to take to eliminate or mitigate newly reported risks, or to equitably distribute benefits, and how this information should be shared with participants. In exceptional cases, REBs may decide to suspend recruitment, or to suspend all participant involvement in a study pending further investigation.

D. Registration of Clinical Trials

There are compelling ethical reasons for the registration of all clinical trials. Registration improves researchers' awareness of similar studies so that they may avoid unnecessary duplication and thereby reduce the burden on participants. Registration also improves researchers' ability to identify potential collaborators and/or gaps in research so that they may pursue new avenues of inquiry with potential benefits to participants and to society. Another reason to register is to prevent researchers or sponsors from reporting only those studies with favourable outcomes. When all studies must be registered, it is easier to identify those studies where outcomes have not been reported or findings have been withheld.

The registration of clinical trials upholds the principles of Respect for Persons, Concern for Welfare, and Justice, by ensuring that the efforts of all participants in clinical trials are acknowledged, and by reducing the potential for endangerment of others through publication bias.

Article 11.10 All clinical trials shall be registered before recruitment of the first trial participant in a publicly accessible registry that is acceptable to the World Health Organization (WHO) or the International Committee of Medical Journal Editors (ICMJE).

Application

Clinical trial registries are intended to increase transparency and accountability by providing a record of clinical trials at the recruitment stage that can be used to locate publication of trial results. This helps prevent publication bias, that is, the selective publication of only those trials that yield results in support of an intervention. These registries, in addition to agency policies, editorial policies, and national and institutional ethics policies and results disclosure requirements, contribute to a multi-faceted approach to eliminate non-disclosure. The collective goal is to reduce publication bias and prevent the suppression of data in clinical research.

All fields outlined in the WHO Trial Registration Data Set (TRDS) must be completed in order for a trial to be considered fully registered. Researchers shall provide the REB with evidence of registration (e.g., registration number).

Article 11.11 Following registration of their study in accordance with Article 11.10, researchers are responsible for ensuring that the registry is updated in a timely manner with:

- new information (Article 11.8);
- safety and, where feasible, efficacy reports (Article 11.6);
- reasons for stopping a trial early; and
- the location of findings.

Application

Researchers shall promptly update the study registry with any new information that may affect the welfare or consent of participants and with reports of findings or information about where to access findings (e.g., lists of publications, links to publications or to the trial website).

Endnotes

1. These conditions are drawn from the recommendations of the *Final Report of the National Placebo Working Committee on the Appropriate Use of Placebos in Clinical Trials in Canada* (July 2004), with minor amendments approved by the Canadian Institutes of Health Research (CIHR) Standing Committee on Ethics.

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CHAPTER 12

HUMAN BIOLOGICAL MATERIALS INCLUDING MATERIALS RELATED TO HUMAN REPRODUCTION

Introduction

The use of materials originating from human bodies for research contributes greatly to the advancement of knowledge. The sources of these materials can be from patients following diagnostic or therapeutic procedures, autopsy specimens, donations of organs or tissue from living or dead humans, body wastes (including urine, saliva, sweat) or abandoned tissue. Biological materials may also be sought from individuals for use in a specific research project. Once collected, biological materials may be held in biobanks to serve as a research resource for many years.

Ethical considerations raised by research involving human biological materials centre on acceptable access to, and use of, the materials, potential privacy concerns arising from the handling of information derived from such materials, and the special status some individuals and groups accord to the human body and its parts. Because the significance of biological materials varies among individuals and groups, it is important to assess the ethics of research involving such materials with an awareness of and sensitivity to the known values, beliefs and attitudes of those from whom the materials originated.

Sections A to D of this chapter provide guidance on research involving human biological materials. For the purposes of this Policy, human biological materials include tissues, organs, blood, plasma, skin, serum, DNA, RNA, proteins, cells, hair, nail clippings, urine, saliva and other body fluids. Section E addresses research involving the subset of biological materials that are related to human reproduction. Section F addresses research involving the subset of human biological materials known as "human pluripotent stem cells."

As noted in Chapter 2, an individual whose data and/or biological materials are used in research becomes a participant. In regard to human biological materials, individuals may become participants by agreeing to provide a biological sample for use in a particular project. Individuals may also choose to donate organs, tissue or their entire body for research that occurs after their death. In this way, they become participants through their donation. Researchers may seek access to human biological materials for secondary use in research, and in accordance with Section C of this chapter, a research ethics board (REB) may waive a requirement for individual consent.

A. Key Concepts

Identifiable Human Biological Materials

Human biological materials that may reasonably be expected to identify an individual, alone or in combination with other available information, are considered identifiable biological materials for the purposes of this Policy. Identifiability of human biological materials has to be assessed relative to the current state of science and the availability of othe r sources of identifying information about participants and increasingly sophisticated methods of re-identification. The assessment of whether

human biological materials are identifiable is made in the context of a specific research project.

Types of Human Biological Materials

The following categories, similar to those found in Chapter 5, provide guidance for assessing the extent to which human biological materials could be used to identify an individual:

- Identified human biological materials – the materials are labelled with a direct identifier (e.g., name, personal health number). Materials and any associated information are directly traceable back to a specific individual.
- Coded human biological materials – direct identifiers are removed from the materials and replaced with a code. Depending on access to the code, it may be possible to re-identify specific individuals (e.g., a principal investigator retains a key that links the coded material with a specific individual if re-linkage is necessary).
- Anonymized human biological materials – the materials are irrevocably stripped of direct identifiers, a code is not kept to allow future re-linkage, and risk of re-identification of individuals from remaining indirect identifiers is low or very low.
- Anonymous human biological materials – the materials never had identifiers attached to them, and risk of identification of individuals is low or very low.

Due to continuing technological development in genetics, individuals with access to stored human biological materials are increasingly able to use genetic markers to link a non-identifiable sample with an identified sample. For this reason, genetic analysis has made it more difficult to categorize human biological materials as anonymous or anonymized. The definitions above relate to identification of individuals; however, some research involving human biological materials, especially genetic research, may involve identification of groups, even though the human biological materials are non-identifiable at an individual level. Researchers and REBs should be aware of, and guard against, threats to individual privacy and autonomy that arise from re-identification risks, as well as risks to groups, particularly where sensitive research findings will be linked to specific groups.

To maintain confidentiality, it may seem desirable to use anonymized or anonymous human biological materials. However, the scientific requirements of many studies may necessitate use of identifiable human biological materials, to link materials with information about participants, and to avoid using different samples from the same individual. Use of anonymized or anonymous human biological materials has the disadvantage of making it impossible to offer the benefits of research findings to participants and their families, or to alert them to relevant clinical findings. This is particularly significant when research may disclose a previously undiagnosed condition, such as HIV infection or an inherited predisposition to breast cancer, for which potentially effective treatments are available. Use of non-identifiable human biological materials also precludes withdrawal of a participant's material from research use, even at the participant's request.

B. Collection of Human Biological Materials

Human biological materials may be obtained in different ways:

1. They may be collected expressly for a specific research purpose.

2. They may be collected incidentally to medical or diagnostic procedures with no initial intent to be used in research.

3. They may be collected for research or medical or diagnostic purposes with some expectation that they may, or will, also be used in future research, although the precise research project(s) may not be known at the time.

The first category above refers to the initial collection of human biological materials for research, which is described in this section. The latter two categories are relevant to subsequent, secondary uses of human biological materials for research that may not have been conceived at the time the tissue was taken. Secondary use of biological materials is described in Section C.

Article 12.1 Research involving collection and use of human biological materials requires REB review and:

a. consent of the participant who will donate biological materials; or

b. consent of an authorized third party on behalf of a participant who lacks decision-making capacity, taking into account any research directive that applies to the participant; or

c. consent of a deceased participant through a donation decision made prior to death, or by an authorized third party.

Application

Article 12.1 applies prospectively, that is, prior to the collection of human biological materials for research purposes. It applies the general elements of consent in Chapter 3 to the collection and use of human biological materials. During the consent process, a clear distinction should be made between consent to research participation and consent for any clinical procedure or test. In practice, this may mean separate consent information and forms, but in any event the different uses must be clearly explained. Individuals who do not wish to contribute human biological materials for research are free to withhold consent without penalty, and without prejudicing access to any treatment they would otherwise receive. For individuals who lack decision-making capacity, the guidance developed in Chapter 3 regarding authorized third parties shall be observed.

Where a participant has expressed preferences for future research participation in a research directive before losing decision-making capacity, researchers and authorized third parties shall take such directives into account during the consent process. Chapter 3 provides guidance on research directives. REBs and researchers should be aware that provincial human tissue gift laws may provide a legal framework for the donation of tissue upon death.

Article 12.2 To seek consent for use of human biological materials in research, researchers shall provide prospective participants or authorized third parties with applicable information as set out in Article 3.2 as well as the following details:

a. the type and amount of biological materials to be taken;

b. the manner in which biological materials will be taken, and the safety and invasiveness of the procedures for acquisition;

c. the intended uses of the biological materials, including any commercial use;

d. the measures employed to protect the privacy of and minimize risks to participants;

e. the length of time the biological materials will be kept, how they will be preserved, the location of storage (e.g., in Canada, outside Canada), and the process for disposal, if applicable;

f. any anticipated linkage of biological materials with information about the participant; and

g. the researchers' plan for handling results and findings, including clinically relevant information and incidental findings.

Application

Chapter 3, especially Article 3.2, provides detailed guidance on the need for consent to participation in research. Article 12.2 provides additional guidance on information that prospective participants generally require to make an informed decision to donate biological materials for use in research. While all the basic guidelines of Chapter 3 regarding consent apply to research involving human biological materials, some deserve special attention. For example, explaining the potential for commercialization or financial conflict of interest is important, as some research with human biological materials may involve the possibility of significant commercial gain for researchers or sponsors. The process for requesting withdrawal of human biological materials from research shall also be clearly explained, along with an explanation of the conditions under which researchers would not be able to remove a participant's data from the project. For instance, where participants request the withdrawal of their biological materials, information already derived from the materials and aggregated into findings cannot be withdrawn. Anonymization of human biological materials may also preclude subsequent withdrawal. Chapter 3 provides further guidance on handling incidental findings.

C. Consent and Secondary Use of Human Biological Materials for Research Purposes

Chapter 5 provides detailed guidance on secondary use of information for research purposes (in particular, see Articles 5.5A, 5.5B and 5.6). The following section adapts the provisions in Chapter 5 to the specific context of research involving secondary use of human biological materials. As researchers who seek to use human biological materials for research will often also seek access to information about individuals from whom the materials originate, this section and Chapter 5 should be read together.

Secondary use refers to the use in research of human biological materials originally collected for a purpose other than the current research purpose. A researcher may seek to use human biological materials left over from a diagnostic examination or surgical procedure, or materials that were collected for an earlier project. Reasons to conduct secondary analyses include: avoidance of duplication in primary collection and the associated reduction of burdens on participants; corroboration or criticism of the conclusions of the original research; comparison of change in a research sample over time; application of new tests of hypotheses that were not available at the time of original collection; and confirmation that the data or materials are authentic. Privacy concerns and questions about the need to seek consent arise, however, when human biological materials provided for secondary use in research can be linked

to individuals, and when the possibility exists that individuals can be identified in published reports, or through linkage of human biological materials with other data (Article 5.7).

Article 12.3A Researchers who have not obtained consent from participants for secondary use of identifiable human biological materials shall only use such material for these purposes if they have satisfied the REB that:

a. identifiable human biological materials are essential to the research;

b. the use of identifiable human biological materials without the participant's consent is unlikely to adversely affect the welfare of individuals from whom the materials were collected;

c. the researchers will take appropriate measures to protect the privacy of individuals and to safeguard the identifiable human biological materials;

d. the researchers will comply with any known preferences previously expressed by individuals about any use of their biological materials;

e. it is impossible or impracticable to seek consent from individuals from whom the materials were collected; and

f. the researchers have obtained any other necessary permission for secondary use of human biological materials for research purposes.

If a researcher satisfies all the conditions in Article 12.3A(a) to (f), the REB may approve the research without requiring consent from the individuals from whom the biological materials were collected.

Application

In the case of the secondary use of identifiable human biological materials, researchers must obtain consent unless the researcher satisfies all the requirements in Article 12.3A.

The exception to the requirement to seek consent in this article is specific to secondary use of identifiable human biological materials. The terms of Article 3.7 address alteration of consent in other circumstances and do not apply here.

Secondary use of human biological materials identifiable as originating from a specific First Nations, Inuit or Métis community, or a segment of the Indigenous community at large, is addressed in Articles 9.20 to 9.22.[1]

"Impracticable" refers to undue hardship or onerousness that jeopardizes the conduct of the research; it does not mean mere inconvenience.[2] Consent may be impossible or impracticable when the group is very large or when its members are likely to be deceased, geographically dispersed or difficult to track. Attempting to track and contact members of the group may raise additional privacy concerns. Financial, human and other resources required to contact individuals and seek consent may impose undue hardship on the researcher. In some jurisdictions, privacy laws may preclude researchers from using personal information to contact individuals to seek their consent for secondary use of information.

At the time of initial collection, individuals may have had an opportunity to express preferences about future uses of their biological materials, including research uses. See paragraphs (d) and (i) in

the Application of Article 3.2). Custodians that hold human biological materials have an obligation to respect the individual's expressed preferences. Where an individual does not want biological materials used for future research, custodians should remove these biological materials from any collections used or made available for research. Alternatively, individuals may have made an express donation of biological materials for research in accordance with human tissue gift legislation.

In cases where the proposed research involves issues of greater sensitivity (e.g., research involving stigmatizing conditions), an REB may require that researchers engage in discussion with people whose perspectives can help identify the ethical implications of the research, and suggest ways to minimize any associated risks. Discussion is not intended to serve as proxy consent. Rather, a goal of discussion is to seek input regarding the proposed research, such as the design of the research, measures for privacy protection, and potential uses of findings. Discussion may also be useful to determine whether the research will adversely affect the welfare of individuals from whom the biological materials were collected. Researchers shall advise the REB of the outcome of such discussions. The REB may require modifications to the research proposal based on these discussions.

Article 12.3B Researchers shall seek REB review, but are not required to seek participant consent, for research that relies exclusively on the secondary use of non-identifiable human biological materials.

Application

The onus will be on the researcher to establish to the satisfaction of the REB that, in the context of the proposed research, the human biological materials to be used can be considered non-identifiable for all practical purposes. For example, the secondary use of coded human biological materials may identify individuals in research projects where the researcher has access to the key that links the participants' codes with their names. Consent would be required in this situation. However, the same coded human biological materials may be assessed as non-identifiable in research projects where the researcher does not have access to the key. Consent would not be required in this situation.

Article 12.4 When secondary use of identifiable human biological materials without the requirement to seek consent has been approved under Article 12.3A, researchers who propose to contact individuals for additional biological materials or information or for reasons related to the welfare of the participant shall, prior to contact, seek REB approval of the plan for making contact.

Application

In certain cases, a research goal may be achieved only through follow-up contact with individuals to collect additional biological materials or information. In rare cases, during the course of analysis, a researcher may discover a finding that has a potential impact on an individual's welfare. If the researcher suspects that welfare implications to the participant may be significant, the researcher and REB should refer to the guidance in Article 3.4, which addresses material incidental findings. Under Article 12.3A, the REB may have approved secondary use without the requirement to seek consent based, in part, on the impossibility or impracticability of seeking consent from all individuals whose biological materials are proposed for use in research. Where contact with a subgroup is feasible, researchers may subsequently wish to attempt to make contact with some individuals to obtain additional information or biological

materials. Contact with individuals whose previously collected biological materials have been approved for secondary use in research raises privacy concerns. Individuals might not want to be contacted by researchers or might be upset that identifiable biological materials were disclosed to researchers without their consent. The potential benefits of follow-up contact must clearly outweigh the risks to individuals of follow-up contact, and the REB must be satisfied that the proposed manner of follow-up contact minimizes risks to individuals. The proposed plan should explain who will contact individuals to invite their participation in the research (e.g., a representative of the organization that holds the individual's biological materials) and the nature of their relationship with those individuals. Researchers must also ensure that a plan for follow-up contact complies with applicable privacy legislation; for example, some privacy laws prohibit researchers from contacting individuals unless the custodian of the information has first obtained individuals' consent to be contacted. Whenever possible, it is preferable that re-contact with participants be carried out by the organization or the custodian holding the biological materials. Researchers will need to seek consent from individual participants for any new collection of data or biological materials. Article 3.1 provides further guidance on consent and approaches to recruitment.

D. Storage and Banking of Human Biological Materials

The collection and retention of human biological materials in biobanks creates an ongoing resource for research. Biobanks vary widely in their characteristics: some are very small, while others hold biological materials from thousands of individuals; they may be disease-specific or contain materials from a wide population base. Different types of human biological materials may be stored in biobanks, such as blood, tumour or tissue samples. Biobanks may include, or be linked with, databases of identifiable or non-identifiable information. Materials held in a biobank may be intended only for use in a specific project, or a biobank may be established to provide access to biological materials for numerous projects over many years. Researchers engaged in multi-site research may seek access to materials held in biobanks in different jurisdictions (see Chapter 8 for additional guidance).

Biobanking facilitates research with human biological materials and offers potential benefits to society. Access to stored human biological materials – and associated information about individuals whose materials are banked – can be particularly useful in helping researchers understand diseases that result from complex interactions between our genetic makeup, environmental exposure and lifestyles. Banking of human biological materials may also present risks to individuals whose biological materials and other personal information are stored, accessed, used, retained and disclosed through a biobank. Research involving such materials may also implicate the interests of biological relatives and others with shared genetic characteristics.

Article 12.5 Institutions and researchers that maintain biobanks:

a. shall ensure that they have or use appropriate facilities, equipment, policies and procedures to store human biological materials safely, and in accordance with applicable standards; and

b. shall establish appropriate physical, administrative and technical safeguards to protect human biological materials and any information about participants from unauthorized handling.

Application

Safe storage of human biological materials is important to maintain their scientific value, and to protect materials and associated information about participants. Procedures for storage and record keeping shall include effective measures to ensure that participants' identities are protected. Such measures include the security of facilities and effective procedures for data handling, record keeping and regulating access to human biological materials and information. Appropriate governance of biobanks is also important for managing access to and use of stored biological materials. The appropriate governance structure and management of a biobank will vary depending on its size and usage.

Organizations that maintain biobanks may have their own policies on privacy of, confidentiality of and access to materials. Researchers should be aware of requirements for compliance with such policies. For example, researchers may be required to apply to the organization for permission to access biological samples, and they may be required to enter into an agreement with the organization that sets out conditions for research access to and use of materials in the biobank.

Identifiable data derived from human biological materials may be linked to other research or public databases. Such data linking can be a powerful research tool and a valuable resource for monitoring the health of populations, understanding factors influencing disease, and evaluating health services and interventions. However, data linkage also raises separate privacy issues, discussed in Section E of Chapter 5.

E. Research Involving Materials Related to Human Reproduction

Researchers who conduct research involving human biological materials related to human reproduction shall follow applicable guidance expressed in other chapters of this Policy. This section provides further guidance for research involving embryos, fetuses, fetal tissue and reproductive materials. For the purposes of this Policy, the following definitions apply:[3]

- Embryo means a human organism during the first 56 days of its development following fertilization or creation, excluding any time during which its development has been suspended, and includes any cell derived from such an organism that is used for the purpose of creating a human being.
- Fetus means a human organism during the period of its development beginning on the 57th day following fertilization or creation, excluding any time during which its development has been suspended, and ending at birth.
- Fetal tissue includes membranes, placenta, umbilical cord, amniotic fluid and other tissue that contains genetic information about the fetus.
- Human reproductive materials means a sperm, ovum or other human cell, or a human gene, and includes a part of any of them.

While research involving materials related to human reproduction has great promise for assisting the development of healthy pregnancies, curing illness, and repairing or rebuilding tissue, it raises special ethical considerations. Accordingly, this research has provoked vigorous debate. Discussion and reflection should continue as our scientific understanding develops.

Significant ethical issues include consent to research involving materials related to human reproduction, privacy concerns, the risk of harm to those who provide reproductive materials, an embryo or fetus, and potential commodification of reproductive capabilities and materials related to reproduction. Researchers and REBs have a continuing duty to remain mindful of the public interest in these issues, and to respect policy, legal and regulatory requirements. In particular, researchers and REBs shall be aware of the detailed requirements and prohibitions set out in the *Assisted Human Reproduction Act.*

Article 12.6 In addition to requirements in this chapter that apply to all research involving human biological materials, the following guidelines apply to research involving materials related to human reproduction:

a. Research using materials related to human reproduction in the context of an anticipated or ongoing pregnancy shall not be undertaken if the knowledge sought can reasonably be obtained by alternative methods.

b. Materials related to human reproduction for research use shall not be obtained through commercial transaction, including exchange for services.

Application

Because of the risk of harm to the woman or the fetus, Article 12.6(a) requires that the use of these materials be avoided where pregnancy is anticipated or ongoing, if research goals may be accomplished in some other way.

Article 12.6(b) reflects concerns about the commercialization or commodification of human reproduction. Exchange for services refers, for instance, to trading a service, such as a medical treatment, for an in vitro embryo or gamete.

Research Involving Human Embryos

Article 12.7 Research on in vitro embryos already created and intended for implantation to achieve pregnancy is acceptable if:

a. the research is intended to benefit the embryo;

b. research interventions will not compromise the care of the woman, or the subsequent fetus;

c. researchers closely monitor the safety and comfort of the woman and the safety of the embryo; and

d. consent was provided by the gamete donors.

Application

Research potentially altering the embryo by chemical or physical manipulation shall be distinguished from research directed at ensuring normal fetal development. For example, the evaluation of potential teratogens and their effects on certain cell lineages may use early embryos, but those embryos must not be implanted for an ongoing pregnancy.

The *Assisted Human Reproduction Act* prohibits the creation of a human embryo specifically for research purposes, with the limited exception of creating an embryo for the purpose of improving, or providing instruction in, assisted reproduction procedures.

Article 12.8 Research involving embryos that have been created for reproductive or other purposes permitted under the *Assisted Human Reproduction Act*, but are no longer required for these purposes, may be ethically acceptable if:

a. the ova and sperm from which they are formed were obtained in accordance with Article 12.7;

b. consent was provided by the gamete donors;

c. embryos exposed to manipulations not directed specifically to their ongoing normal development will not be transferred for continuing pregnancy; and

d. research involving embryos will take place only during the first 14 days after their formation by combination of the gametes, excluding any time during which embryonic development has been suspended.

Application

Research on embryos requires the consent of the gamete donors. The REB may not waive the requirement for such consent. In particular, researchers and REBs should be aware of the *Assisted Human Reproduction (Section 8 Consent) Regulations* under the *Assisted Human Reproduction Act.*[4]

Research Involving Fetuses and Fetal Tissue

Article 12.9 Research involving a fetus or fetal tissue:

a. requires the consent of the woman; and

b. shall not compromise the woman's ability to make decisions regarding continuation of her pregnancy.

Application

Research may be undertaken on methods to treat, in utero, a fetus with genetic or congenital disorders. Because the fetus and the woman cannot be treated separately, any intervention to one involves an intervention to the other. Research involving a fetus or fetal tissue shall be guided by respect for the woman's autonomy and physical integrity. Guidance provided in other chapters of this Policy (e.g., consent, privacy and confidentiality, inclusion and exclusion) will also apply. Researchers should ensure that a clear distinction is made between consent to research and consent for any clinical procedures or testing. In practice, this may mean separate consent information and documents, but regardless of the process employed, the differences between research and clinical procedures must be clearly explained.

Where the fetus has been born alive and viable, research involving human biological materials associated with the child must meet the conditions of Article 3.9. A fetus that has been born alive and viable is a child with its own independent interests.

F. Research Involving Human Pluripotent Stem Cells

Guidance regarding a proportionate approach to research ethics review, consent, privacy, confidentiality, and research with human biological materials and other ethical guidance described in earlier chapters of this Policy apply equally to research involving human pluripotent stem cells. This section provides further guidance for research involving human pluripotent stem cells. In addition to following the guidance provided in this Policy, researchers are responsible for compliance with all applicable legal and regulatory requirements (e.g., the *Assisted Human Reproduction Act* and its Regulations and the *Food and Drugs Act* and its Regulations).

Stem Cell Oversight Committee (SCOC)

In recognition of the complex ethical issues associated with research involving pluripotent stem cells, a Stem Cell Oversight Committee (SCOC) was created by CIHR in 2003. SCOC reviews research involving human pluripotent stem cells that:

- have been derived from an embryonic source; and/or
- will be transferred into humans or non-human animals.

Applications that receive SCOC approval shall then be submitted to local REBs as part of the local research ethics review process. SCOC does not review research involving human pluripotent stem cells that come from somatic (non-embryonic) tissue and that are not going to be transferred into humans or non-human animals.

Article 12.10 Research involving human pluripotent stem cells that have been derived from an embryonic source and/or that will be grafted or transferred in any other form into humans or non-human animals requires review and approval by SCOC and an REB. The researcher shall provide evidence of SCOC approval to the REB.

Application

1) Research Conforming to this Policy and Requiring SCOC Review

The following types of stem cell research conform to this Policy and require SCOC review:

a. Research for the purpose of deriving or studying human embryonic stem cell lines or other cell lines of a pluripotent nature from human embryos, provided that:

   i. the embryos used, whether fresh or frozen, were originally created for reproductive purposes and are no longer required for such purposes; and

   ii. consent was provided by the persons for whom the embryos were originally created for reproductive purposes. Where third party donor gametes were used to create the embryo, the third party gamete donor(s) shall have given, at the time of donation, consent to the unrestricted research use of any embryos created, when these embryos are no longer required for reproductive purposes. Where the third party gamete donors referred to in this paragraph are anonymous, it is not possible to seek their consent for embryo use. In such

cases, the responsibility of consent for embryo use has, in effect, been transferred to the persons for whom the embryos were created for reproductive purposes; and

iii. neither the ova nor the sperm from which the embryos were created, nor the embryos themselves, were obtained through commercial transactions (i.e., were acquired by payment of money in excess of costs actually incurred, or in exchange for services).

b. Research on anonymized or coded human embryonic stem cell lines that have been created in Canada, or created elsewhere and imported for research purposes, provided that:

   i. those created in Canada were developed in compliance with this Policy or, prior to December 9, 2014, the *Guidelines for Human Pluripotent Stem Cell Research*. It is incumbent on the recipient of such cell lines to ensure that this is the case. The recipient shall provide satisfactory evidence to SCOC and the local REB that the cell lines fulfill the consent provisions before research can begin;

   ii. the recipient of stem cell lines created in a country other than Canada provides SCOC with satisfactory evidence that the manner in which the stem cell lines were created in the country of origin, including the embryo donors' consent, satisfies the laws and policies of that country. Should SCOC find that the manner of creation of these stem cell lines and the consent provisions vary significantly from the principles of this Policy, or, prior to December 9, 2014, the *Guidelines for Human Pluripotent Stem Cell Research*, it may not approve the use of these cell lines in stem cell research in Canada.

c. Research involving the grafting or any other form of transfer of human embryonic stem cells, embryonic germ cells, induced pluripotent stem cells, cells derived from those cells, or other human cells that are likely to be pluripotent into non-human animals, from birth to adulthood, provided that:

   i. the research is designed to reconstitute a specific tissue or organ to derive a pre-clinical model or to demonstrate that the cells are pluripotent (e.g., teratoma formation); and

   ii. these non-human animals grafted with human stem cells will not be used for reproductive purposes.

d. Research involving the grafting or any other form of transfer of human embryonic stem cells, embryonic germ cells, induced pluripotent stem cells, cells derived from those cells, or other human cells that are likely to be pluripotent into humans with legal capacity shall be in compliance with the *Food and Drugs Act* and its Regulations, including the Safety of Human Cells, Tissues and Organs for Transplantation Regulations.

2) Research Not Conforming to this Policy

The following types of stem cell research do not conform to this Policy:

a. Research involving the creation of human embryos specifically to derive stem cell lines or other cell lines of a pluripotent nature;

b. Research involving somatic cell nuclear transfer into human oocytes (cloning) or involving

stimulation of an unfertilized egg to produce a human embryo (parthenogenesis) for the purposes of developing human embryonic stem cell lines or other cell lines of a pluripotent nature;

c. Research involving the directed donation of human embryos or human embryonic stem cell lines to particular individuals;

d. Research in which human or non-human embryonic stem cells, embryonic germ cells, induced pluripotent stem cells, or other cells that are likely to be pluripotent are combined with a human embryo;

e. Research in which human or non-human embryonic stem cells, embryonic germ cells, induced pluripotent stem cells, or other cells that are likely to be pluripotent are grafted or transferred in any other form to a human fetus;

f. Research in which human embryonic stem cells, embryonic germ cells, induced pluripotent stem cells, or other cells that are likely to be pluripotent are combined with a non-human embryo; or

g. Research in which human embryonic stem cells, embryonic germ cells, induced pluripotent stem cells, or other cells that are likely to be pluripotent are grafted or transferred in any other form to a non-human fetus.

Consent

Chapter 3, especially Articles 3.1 to 3.5, provides detailed guidance on the need to seek consent for participation in research. The following articles provide additional guidance for situations that are unique to stem cell research.

Article 12.11 Embryos no longer needed for reproductive purposes may be donated for use in research (including research to derive and study human embryonic stem cells). Embryo donors and gamete donors, if these are different individuals, shall be advised of all available options in respect of the use of the embryos and their consent sought prior to the use.

Article 12.12 At the time when the embryos are to be used for research to derive and study embryonic stem cells (and other human cells or cell lines of a pluripotent nature), consent of the embryo donors shall be sought again. Research shall not proceed unless consent is obtained.

Application

This requirement affirms the right of the donors to withdraw consent and is necessary because of the possible lengthy delay between the time at which the original consent is given and the time at which the embryos are utilized for research purposes. Members of the health care team treating and/or counselling prospective participants should not be the persons to seek consent from the embryo donors at the time of re-consent. If the gamete donors are not the same individuals as the embryo donors, and appropriate consent for the unrestricted research use of the embryos was given at the time of gamete donation, then a renewal of the consent provided by the gamete donors is not required.

Article 12.13 When seeking consent for human embryonic stem cell research, in addition to the information outlined in Article 3.2, researchers shall provide to prospective research participants the following. An:

a. explanation that the cell line(s) will be anonymized or coded;

b. assurance that prospective research participants are free to not participate and have the right to withdraw at any time before an anonymized or coded cell line is created;

c. explanation that the research could result in the production of a stem cell line that could be maintained for many years, distributed to other parts of the world, and used for various research purposes;

d. explanation that the research participants will not benefit directly financially from any future commercialization of cell lines; nor will there be any personal benefit in terms of dispositional authority over any embryonic cell lines created (i.e., there will be no directed donation of the cells or cell lines to particular individuals).

Application

Article 12.13(b) refers to the withdrawal of both consent and human biological materials. Once an anonymized or coded cell line is created, it may have a wide distribution, making withdrawal of materials almost impossible.

Creation of Excess Embryos

Article 12.14 Researchers shall not ask, encourage, induce or coerce members of the health care team to generate more embryos than necessary for the optimum chance of reproductive success. This is tantamount to creating embryos for research, which is prohibited under the *Assisted Human Reproduction Act*.

National Registry

SCOC maintains an electronically accessible national registry of human pluripotent stem cell lines derived from an embryonic source, generated in Canada. Induced human pluripotent stem cell lines are not listed with the registry, as they are not derived from embryonic sources.

Article 12.15 All human pluripotent stem cell lines derived directly from embryos under the auspices of an institution that is eligible to receive Agency funds shall be listed with the national registry of human embryonic stem cell lines and made available by the researcher to other researchers, subject to reasonable cost-recovery charges.

Privacy and Confidentiality

The secondary use of human biological materials for research purposes must meet the requirements of Articles 12.3A and 12.4, which provide detailed guidance on protecting personal information of participants. The following articles provide additional guidance for situations that are unique to stem cell research. In these cases, all human cells or cell lines should be delivered in an anonymized or coded form, and, if coded, the key code should be accessible only to a custodian or trusted third party who is independent of the researcher who receives the cells (Chapter 5, Section A, Types of Information).

Article 12.16 All human pluripotent stem cell lines shall be anonymized or coded unless the research only involves the directed donation of induced pluripotent stem cells.

Application

While research involving the directed donation of human embryonic stem cell lines is not permitted under this Policy (Article 12.10.2[c]), research involving the directed donation of induced pluripotent stem cells is permitted, as induced pluripotent stem cells are not derived from human embryos.

Article 12.17 All researchers who make stem cell lines available to other academics shall ensure that the cell lines are anonymized or coded.

Conflicts of Interest

Chapter 7 (in particular Articles 7.2 and 7.4) provides guidance on conflicts of interest. The following articles provide additional guidance for situations that are unique to stem cell research.

Article 12.18 Stem cell research teams shall not include members of the health care team treating and/or counselling prospective participants who could influence the prospective participants' decisions to donate their embryos.

Application

This article seeks to minimize the risk that, for the purposes of stem cell research, women will feel pressured to create more embryos than needed for reproductive purposes or be pressured to donate embryos no longer needed for reproductive purposes. There may be a risk of undue influence where health care team members are also members of the stem cell research team (Article 3.1).

Article 12.19 When researchers or their institutions have, or acquire, financial interests in the outcome of the stem cell research, including but not limited to income from commercial firms supporting their research, stock holdings in corporations supporting their research, or patents in products produced through their research, they shall disclose this information to SCOC, the REB and current and prospective research participants (see Articles 7.2 and 7.4 regarding institution and researcher conflicts of interest). In some instances, disclosure may not be a sufficient response to concerns about actual, perceived or potential conflicts of interest. Researchers and/or their institutions may be asked to remedy any possible distortion of proper procedures attributable to such conflicts.

Article 12.20 Copies of contracts between researchers, institutions and industry sponsors and any relevant budgetary information shall be provided to SCOC and the REB to examine and evaluate any potential or actual conflicts of interest and to ensure the right to publish in a timely manner without undue restriction.

Endnotes

1. See also Canadian Institutes of Health Research, *CIHR Guidelines for Health Research Involving Aboriginal People*, 2007. http://www.cihr-irsc.gc.ca/e/29134.html, Retrieved on June 29, 2018.

2. For discussion of factors relevant to assessing impracticability of consent, see, for example, Canadian Institutes of Health Research, CIHR Best Practices for Protecting Privacy in Health Research, Section 3.3, Secondary Use, 2005. www.cihr-irsc.gc.ca/e/29072.html#Element2, Retrieved on June 29, 2018.

3. The definitions of embryo, fetus and human reproductive materials are taken from the *Assisted Human Reproduction Act* (2004, c. 2).

4. *Assisted Human Reproduction (Section 8 Consent) Regulations* (SOR/2007-137).

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CHAPTER 13
HUMAN GENETIC RESEARCH

Introduction

Human genetic research involves the study of genetic factors responsible for human traits and the interaction of those factors with each other, and with the environment. Research in this area includes the identification of genes that comprise: the human genome; functions of genes; the characterization of normal and disease conditions in individuals, biological relatives, families, communities and groups; and studies involving gene therapy. Participants in clinical trials are increasingly being asked to participate in genetic studies in addition to the primary clinical trial. With the growth of genetic research, especially whole-genome research, researchers, research ethics boards (REBs) and participants should be aware of the ethical issues that this research raises.

Genetic research may have profound social impacts, both positive and negative. As genetic research advances, genes and their alleles (versions) are being identified, but the function of each gene and its relationship to disease conditions or other characteristics may not be clear. In single-gene disorders, for example, an allele of a single gene is directly related to a hereditary disease. More commonly, diseases or personal characteristics are influenced by multiple genes, as well as environmental factors.

Research may help us better understand the human genome and genetic contributions to health and disease. It may lead to new approaches to preventing and treating disease. Individuals may benefit from learning about their genetic predispositions, if intervention strategies are available to prevent or minimize disease onset and mitigate symptoms, or to otherwise promote health. Genetic research also has the potential, however, to stigmatize individuals, communities or groups, who may experience discrimination or other harms because of their genetic status, or may be treated unfairly or inequitably.

A. Application of Core Principles to Genetic Research

Genetic information has implications beyond the individual because it may reveal information about biological relatives and others with whom the individual shares genetic ancestry. The participation of an individual in genetic research may therefore have ramifications for these other persons, communities or groups. In some cases, researchers specifically seek to conduct genetic research with members of families, communities or groups that requires particular attention to the social and cultural contexts in which participants live. Research with families, communities or groups may raise special considerations regarding recruitment of participants, consent processes, privacy and confidentiality.

Article 13.1 Guidance regarding a proportionate approach to research ethics review, consent, privacy, confidentiality, research with human biological materials and other ethical guidance described in earlier chapters of this Policy apply equally to human genetic research.

Application

In developing and reviewing proposals involving genetic research, researchers and REBs should refer to earlier chapters in this Policy, including consent in Chapter 3, privacy and confidentiality in Chapter 5, and human biological materials and materials related to human reproduction in Chapter 12. Other chapters relevant to the specific research proposal should also be consulted, such as Chapter 9 concerning research involving First Nations, Inuit and Métis peoples or Chapter 11 on clinical trials. This chapter does not reiterate guidance set out in earlier chapters. Rather, it focuses on issues that arise specifically in the context of human genetic research and provides guidance for managing information revealed through genetic research, provision of genetic counselling, participation of families, communities and groups in genetic research, banking of human biological materials, and research involving gene transfer.

B. Plans for Managing Information Revealed through Genetic Research

Article 13.2 Researchers conducting genetic research shall:

a. in their research proposals, develop a plan for managing information that may be revealed through their genetic research;

b. submit their plan to the REB; and

c. advise prospective participants of the plan for managing information revealed through the research.

Application

The types of information that may be revealed through genetic research – and the implications of this information for participants and their biological relatives – require that researchers and REBs ensure that an appropriate plan is in place for managing information. In some cases, genetic research may reveal known gene-disease associations or other information, including incidental findings, that may be clinically relevant for individuals (or their biological relatives) in treating or alleviating health conditions or risks. In other cases, research may reveal information that is inconclusive in its scientific, clinical or other implications. Genetic research may also reveal information about family relationships, including adoption and non-paternity.

This range of information varies in its possible implications for individuals. In some cases, follow-up clinical testing and counselling may be recommended. Information may also have implications for biological relatives and may raise disclosure considerations, as discussed in Article 13.3(b). Genetic information may also affect eligibility for employment or insurance if, for example, an individual who acquires genetic information is required to disclose disease predisposition risks to employers or insurers.

The plan for managing information shall take into account factors such as clinical relevance as well as risks and potential benefits for participants and others who may be affected. Plans may include sharing individual findings with participants, or notification of general, non-identifiable research results through newsletters, websites or other means. In regard to release or publication of research findings, the provisions of Chapter 5 apply.

Article 13.3 Where researchers plan to share findings with individuals, researchers shall provide participants with an opportunity to:

a. make informed choices about whether they wish to receive information about themselves; and

b. express preferences about whether information will be shared with biological relatives, or others with whom the participants have a family, community or group relationship.

Application

The core principles on which this Policy is based emphasize autonomous choices regarding research participation. Researchers shall explain to participants the types of findings that may be revealed (as discussed in the Application of Article 13.2), and the potential implications of these findings, to permit participants to make informed choices about whether to receive information. Since the right to privacy includes a right not to know, researchers shall give participants options for receiving or refusing different types of information.

Where individual findings will be shared with participants, researchers must develop appropriate procedures for communicating findings in accordance with the participant's preferences or instructions. These procedures shall be clearly described in the researcher's plan. This may include direct communication of findings to the participant, or communication to a specified health care provider or other party authorized to receive the information. As discussed below, sharing research findings with individuals may give rise to a need for genetic counselling.

Participants in genetic research shall have an opportunity to express their preferences about the sharing of information with relatives or others. These preferences may be subject to overriding considerations that may warrant disclosure of information to relatives in exceptional circumstances (e.g., if genetic research reveals information about a serious or life-threatening condition that can be prevented or treated through intervention). Articles 5.1 and 5.2 provide guidance on researchers' ethical duty of confidentiality, and situations where researchers may have a requirement to disclose information to third parties.

Chapter 5 also requires researchers to provide details to the REB regarding their proposed measures for safeguarding information throughout its life cycle, including dissemination, and to guard against risks of re-identification. Funders of human genomics research may have policies requiring researchers to make genome sequence data publicly accessible. Where such policies apply, researchers must advise the REB and participants of data-sharing requirements, and measures for protection of personal information (see Articles 5.2 and 5.3 for further guidance). Publication of aggregated data from genome-wide association studies has raised concerns about individual re-identification.[1] This underscores the need for researchers and REBs to ensure that measures for safeguarding information are responsive to risks that arise from continuing advances in genetic research and data linkage.

C. Genetic Counselling

Article 13.4 Where researchers plan to share results of genetic research with participants, the research proposal should make genetic counselling available at that time, where appropriate.

Application

Where the plan for managing information revealed in genetic research involves sharing individual findings with participants, genetic counselling may be required to explain the meaning and implications of the information. For example, genetic counselling can help explain the clinical significance of the information, whether health care interventions or lifestyle changes are recommended, and any implications of the information for biological relatives. Researchers should explain differences between genetic testing in a research context and testing in a clinical context. Clinical genetic testing may be needed to clarify or confirm findings obtained in research. Where researchers share information with biological relatives or other family, community or group members, genetic counselling should be made available to them as well as the participants. The counselling service provider must have the appropriate experience or training to provide genetic counselling but need not necessarily hold a diploma, degree or professional designation in genetic counselling.

D. Genetic Research Involving Families

Article 13.5 Researchers who seek to recruit members of a family to participate in genetic research shall:

a. ensure recruitment processes respect privacy and other personal interests of family members; and

b. seek consent from individual family members.

Application

Recruitment of members of a family may take place in various ways: through (a) the researcher, (b) an individual participant, or (c) a third party on behalf of an individual participant. A family group, such as parents and a child, or several adult siblings, may all receive an invitation at the same time from the researcher to participate in genetic research. Alternatively, researchers may seek permission from an individual participant to contact family members to invite participation. It may be preferable for the participant to make initial contact with the family member, in order to respect privacy interests or known sensitivities. The participant may prefer to identify a third party to inform family members about the opportunity to participate in genetic research. However, an approach by someone in a position of authority over family members may raise concerns about undue influence or manipulation. Refer to Chapter 3 for further guidance in regard to the voluntariness of consent.

Family members may have conflicting views about participation in research, and some may have specific sensitivities or objections. Researchers should recognize the potential for conflict within families and be respectful of any known sensitivities. Where researchers seek participation from children or other members of a family who may lack decision-making capacity to consent, the applicable provisions in Chapter 3 shall be followed.

E. Genetic Research Involving Communities and Groups

Article 13.6 Where researchers intend to recruit participants for genetic research based on their membership in specific communities or groups, it may be appropriate for researchers to discuss the research with community or group members, and/or their leaders, in addition to seeking consent from individual participants. In these cases, researchers shall provide details to the REB about their proposed methods for engaging in discussion.

Application

Some genetic research seeks to explore genetic variations within specific communities or groups. Such research may raise ethical concerns regarding stigmatization, unfair or inequitable treatment, and social disruption in communities or groups – especially if individual members disagree about participation in research. Discussion with formal or informal leaders or other members of the community or group may be appropriate. This determination will depend on factors such as: the objectives of the proposed research (in particular, the extent to which membership in, or characteristics of, the community or group are a key aspect of the research); the risks and potential benefits of the research to the community or group; the nature of the community or group from which participants will be recruited; and the community's or group's organizational structure.

Individuals within a community or group may have conflicting views about participation in research, including disagreements between leaders and members. Such conflicts may involve attempts by some to influence or coerce choices of others about whether to participate in research. Researchers should recognize the potential for conflict within communities or groups, and ensure that consent and discussion processes facilitate free and informed decisions by individual members. Refer to Chapter 3 for further guidance in regard to voluntariness of consent.

Researchers who propose to conduct genetic research involving Indigenous participants or communities, or to use human biological materials that are identifiable as originating from Indigenous peoples, should refer to Chapter 9 for further guidance.

F. Genetic Material Banks

Article 13.7

a. Researchers who propose research involving the collection and banking of genetic material shall indicate in their research proposals, and in the information they provide to prospective participants, how they plan to address the associated ethical issues, including confidentiality, privacy, storage, use of the data and results, possibility of commercialization of research findings, and withdrawal by participants, as well as future contact of participants, families, communities and groups.

b. Researchers who propose research involving the secondary use of previously collected and banked genetic material shall, likewise, indicate in their research proposals how they plan to address associated ethical issues.

Application

Collection of human biological materials, including genetic materials, and their retention in biobanks provides an increasingly important research resource. Guidance for research involving human biological materials (Chapter 12) applies to banking of genetic material. Chapter 12, Section D, provides guidance for the creation of biobanks of genetic material, and Section C addresses access to, and use of, previously collected genetic material. Researchers who intend to bank genetic material shall inform participants of the potential for secondary use. See Chapter 5 for guidance regarding secondary use.

G. Gene Transfer

Guidance set out in Chapter 11 applies to clinical trial research involving gene transfer, and Article 12.9 is applicable to gene transfer in utero. In the context of gene transfer research, researchers and REBs shall pay careful attention to the need to assess safety, minimize risk (Chapter 1, Section C), and minimize therapeutic misconception (Article 11.5). Researchers have obligations to share with participants new information that may be relevant to ongoing consent, and to follow up with former participants to inform them of issues that may affect their welfare.

Gene alteration involves the transfer of genes into cells to induce an altered capacity of the cell. Viruses are commonly used vectors (carriers) to introduce the gene into the host genome. Gene alteration is irreversible — the cell and its descendants are forever altered and introduced changes cannot be removed. The possible use of germ line alteration implies changes that could be transmitted to future generations.

Gene transfer research that involves alteration of human germ line cells is governed in Canada by the *Assisted Human Reproduction Act*[2] and its regulations. Researchers should be aware of how this law applies to their work, such as the Act's prohibition on knowingly altering the genome of a cell of a human being, or in vitro embryo, such that the alteration is capable of being transmitted to descendants.

The special circumstances of gene transfer must be explained to prospective participants (or authorized third parties) during the consent process. This includes providing information about uncertain and potentially latent risks of gene transfer, and any processes for long-term follow-up of participants. Guidance regarding inclusion in research (Chapter 4) should be followed where gene transfer research involves children, or others who lack the capacity to decide for themselves.

Endnotes

1. In 2008, the U.S. National Institutes of Health amended its policy on publication of and access to data from genome-wide association studies. See National Institutes of Health, *Modifications to Genome-Wide Association Studies (GWAS) Data Access*, August 28, 2008.

2. *Assisted Human Reproduction Act* (2004, c. 2).

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GLOSSARY

A

Aboriginal peoples – See "Indigenous peoples."

Academic freedom – The collective freedom of faculty and students to conduct research and to disseminate ideas or facts without religious, political, or institutional restrictions. It includes: freedom of inquiry; freedom to challenge conventional thought; freedom to express one's opinion about the institution, its administration, or the system in which one works; and freedom from institutional censorship.

Ad hoc advisor – A person with relevant and competent knowledge and expertise consulted by a research ethics board for a specific research ethics review, and for the duration of that review. The ad hoc advisor is not a member of the research ethics board.

Agencies, the – Canada's three federal research agencies: the Canadian Institutes of Health Research (CIHR); the Natural Sciences and Engineering Research Council of Canada (NSERC); and the Social Sciences and Humanities Research Council (SSHRC).

Agreement, the – The agreement between the Agencies and institutions eligible to receive and manage research funding from the Agencies. A commitment to adhere to the TCPS is a part of the Agreement.

Appeal – A process that allows a researcher to request a review of a research ethics board (REB) decision when, after reconsideration, the REB has refused ethics approval of the research.

Appeal mechanism – A procedure established by an institution to promptly handle a researcher's appeal of a research ethics board (REB) decision. An ad hoc or permanent appeal committee, which reflects a range of expertise and knowledge similar to that of the REB, is established or appointed by the same authority that established the REB.

Authorized third party – Any person with the necessary legal authority to make decisions on behalf of a prospective participant who lacks the capacity to decide whether to participate, or to continue to participate, in a particular research project. In other policies/guidance, they are also known as "authorized third party decision makers."

Autonomy – The capacity to understand information and to be able to act on it voluntarily; the ability of individuals to use their own judgment to make decisions about their own actions, such as whether to participate in research.

B

Biobank – A collection of human biological materials. It may also include associated information about individuals from whom biological materials were collected.

C

Clinical equipoise – The existence of a genuine uncertainty on the part of the relevant expert community about which interventions are most effective for a given condition.

Clinical trial – Any investigation involving participants that evaluates the effects of one or more health-related interventions on health outcomes.

Coercion – An extreme form of undue influence, involving a threat of harm or punishment for failure to participate in research. See "Undue influence."

Collaborative research – Research that involves the cooperation of researchers, institutions, organizations and/or communities, each bringing distinct expertise to a project, and that is characterized by respectful relationships. See "Community-Based research" and "Participatory research."

Community – A group of people with a shared identity or interest that has the capacity to act or express itself as a collective. A community may be territorial, organizational, or a community of interest.

Community-Based research – Research conducted at a community site that focuses not only on individuals, but on the community itself. Community-based research may be initiated by the community independently or in collaboration with a researcher. See "Collaborative research" and "Participatory research."

Community engagement – A process that establishes an interaction between a researcher (or a research team) and a community with regard to a research project. It signifies the intent of forming a collaborative relationship between researchers and communities, although the degree of collaboration may vary depending on the community context and the nature of the research.

Concern for Welfare – A core principle of this Policy that requires researchers and research ethics boards to aim to protect the welfare of participants, and, in some circumstances, to promote that welfare in view of any foreseeable risks associated with the research. See "Risk" and "Welfare."

Confidentiality – An ethical and/or legal responsibility of individuals or organizations to safeguard information entrusted to them from unauthorized access, use, disclosure, modification, loss or theft.

Conflict of interest – The incompatibility of two or more duties, responsibilities, or interests (personal or professional) of an individual or institution as they relate to the ethical conduct of research, such that one cannot be fulfilled without compromising another.

Consent – An indication of agreement by an individual to become a participant in a research project. Throughout this Policy, the term "consent" means "free (or voluntary), informed and ongoing consent."

Continuing research ethics review (also referred to as "continuing ethics review") – Any review of ongoing research conducted by a research ethics board (REB) occurring after the date of initial REB approval and continuing throughout the life of the project to ensure that all stages of a research project are ethically acceptable in accordance with the principles in the Policy.

Core principles – The three core principles of the Policy that together express the overarching value of respect for human dignity: Respect for Persons; Concern for Welfare; and Justice. See "Respect for Persons," "Concern for Welfare" and "Justice."

Creative practice – A process through which an artist makes or interprets a work, or works, of art. It may also include a study of the process of how a work of art is generated.

Critical inquiry – The analysis of social structures or activities, public policies, or other social phenomena for research purposes.

Cultural heritage – A dynamic concept that includes, but is not limited to, First Nations, Inuit and Métis peoples' relations with particular territories, material objects, traditional knowledge and skills, and intangibles that are transmitted from one generation to the next, such as sacred narratives, customs, representations or practices.

Cyber-Material – Documents, images, audio or video recordings, records, performances or online archival materials available in digital form on the Internet.

D

Data linkage – The merging or analysis of two or more separate data sets (e.g., health information and education information about the same individuals) for research purposes. See also "Data set."

Data and Safety Monitoring Board (DSMB) – A multidisciplinary, expert advisory group established by a research sponsor, that is responsible for safeguarding the interests of participants by reviewing emerging data, assessing the safety and efficacy of clinical trial procedures, and monitoring the overall conduct of a trial.

Data set – A collection of information to be used for research purposes, including human biological materials.

Data steward – Data stewards are responsible for data definition (i.e., defining the characteristics of the elements in a database) and access authorization, particularly data access and disclosure to third parties.

Debriefing – The full disclosure of the research purpose and other pertinent information to participants who have been involved in research employing partial disclosure or deception. Debriefing is typically done after participation has ended, but may be done at any time during the study.

Decision-Making capacity – The ability of prospective or actual participants to understand relevant information presented (e.g., purpose of the research, foreseeable risks, and potential benefits), and to appreciate the potential consequences of any decision they make based upon this information.

Delegated research ethics board (REB) review – The level of REB review assigned to minimal risk research projects. Delegated reviewers are selected from among the REB membership, with the exception of the ethics review of minimal risk student course-based research activities, which can be reviewed by delegates from the student's department, faculty, or an equivalent level. Delegated reviewers who are non-members or non-voting members of the REB must have experience, expertise and knowledge comparable to what is expected of an REB member.

Differentiation – The process by which cells acquire new characteristics and form more specialized cell types.

Disciplined inquiry – An inquiry that is conducted with the expectation that the method, results, and conclusions will be able to withstand the scrutiny of the relevant research community.

E

Efficacy/Effectiveness – One of the goals of interventional research is to find out if an intervention works. Two measures that describe how well an intervention works are efficacy and effectiveness. A study focused on **efficacy** tests the ability of an intervention to produce its specific beneficial effect under ideal circumstances. This includes the measurement of focused outcomes after application of the intervention by experts to study participants who meet strict inclusion and exclusion criteria and who fully receive the intervention as it was designed. A study focused on **effectiveness** tests the ability of an intervention to provide overall benefit under real-world circumstances. This includes application of the intervention by those who will ultimately apply it and recruitment of all the types of people who will ultimately receive it. The study may also try to ensure that participants receive the intervention the same way they would if it were adopted. It should be noted that efficacy and effectiveness lie at opposite ends of a continuum. The outcome measures of many studies may fall anywhere along the continuum, using a mix of efficacy and effectiveness criteria.

Embryo – A human organism during the first 56 days of its development following fertilization or creation, excluding any time during which its development has been suspended. It also includes any cell derived from such an organism that is used for the purpose of creating a human being.

Embryonic germ (EG) cells – Pluripotent stem cells derived from the cells in the fetal gonad that would normally develop into mature gametes.

Embryonic stem (ES) cell – A cell derived from the inner cell mass of developing blastocysts. An embryonic stem cell is self-renewing (can replicate itself) and pluripotent.

Embryonic stem cell line – An embryonic stem cell line is derived from one embryo that has been propagated indefinitely in culture.

Emergency preparedness plans – Plans that detail an institution's policies and procedures for addressing research ethics review during public health outbreaks, natural disasters, and other publicly declared emergencies. See "Publicly declared emergency."

Emergent design – A research method in which data collection and analyses can evolve over the course of a research project in response to what is learned in earlier parts of the study.

Epidemiological observational research – An epidemiological study that does not involve any intervention by the researcher. Such a study may be one in which nature is allowed to take its course, with changes in one characteristic being studied in relation to changes in other characteristics.

Epidemiology – The study of the distribution and determinants of health-related states or events in specified populations, and the application of this study to the control of health problems.

F

Fetal tissue – Membranes, placenta, umbilical cord, amniotic fluid, and other tissue that contains genetic information about the fetus.

Fetus – A human organism during the period of its development beginning on the 57th day following fertilization or creation, excluding any time during which its development has been suspended, and ending at birth.

Full research ethics board (REB) review – The level of REB review assigned to above minimal risk research projects. Conducted by the full membership of the research ethics board, it is the default requirement for the ethics review of research involving humans.

G

Gamete – The sex cell (sperm or egg). The functional, mature, male gamete is called a "sperm," while the female gamete is called the "ovum" or "egg."

Gender – Gender refers to the socially constructed roles, behaviours, expressions and identities of girls, women, boys, men, and gender-diverse people. It influences how people perceive themselves and each other, how they act and interact, and the distribution of power and resources in society. Gender is usually conceptualized as a binary (girl/woman and boy/man), yet there is considerable diversity in how individuals and groups understand, experience and express it.

Gene alteration – The transfer of genes into cells to induce an altered capacity of the cell.

Genetic counselling – The explanation of the meaning and implication of information revealed in genetic research to a participant by someone with the experience or training to provide the appropriate context and support.

H

Harm – Anything that has a negative effect on participants' welfare, broadly construed. The nature of the harm may be social, behavioural, psychological, physical or economic. See "Welfare."

Health-Related intervention – The planned imposition of an intervention intended to affect participants' health.

Health-Related outcome – Any outcome that concerns the health status of an individual, group or population.

Human biological materials – Tissues, organs, blood, plasma, skin, serum, DNA, RNA, proteins, cells, hair, nail clippings, urine, saliva, and other body fluids. The term also includes materials related to human reproduction, including embryos, fetuses, fetal tissues and human reproductive materials.

> **Anonymized human biological materials** – The materials are irrevocably stripped of direct identifiers, a code is not kept to allow future re-linkage, and risk of re-identification of individuals from remaining indirect identifiers is low or very low.

Anonymous human biological materials – The materials never had identifiers attached to them, and risk of identification of individuals is low or very low.

Coded human biological materials – Direct identifiers are removed from the materials and replaced with a code. Depending on access to the code, it may be possible to re-identify specific individuals (e.g., a principal investigator retains a key that links the coded material with a specific individual if re-linkage is necessary).

Identified human biological materials – The materials are labelled with a direct identifier (e.g., name, personal health number). Materials and any associated information are directly traceable back to a specific individual.

Human embryonic stem cell (hESC) – An embryonic stem cell derived from a human embryo.

Human genetic research – The study of genetic factors responsible for human traits and the interaction of those factors with each other, and with the environment.

Human participant – See "Participant."

Human reproductive materials – A sperm, ovum, or other human cell, or a human gene, including a part of any of them.

I

Identifiable human biological materials – Human biological materials that may reasonably be expected to identify an individual, alone or in combination with other available information.

Identifiable information – Information that may be reasonably expected to identify an individual, alone or in combination with other available information. Also referred to as "personal information."

Impracticable – Incapable of being put into practice due to a degree of hardship or onerousness that jeopardizes the conduct of the research; it does not mean mere inconvenience.

Incentive – Anything offered to participants, monetary or otherwise, to encourage participation in research.

Incidental findings – Unanticipated discoveries made in the course of research that are outside the scope of the research.

Indigenous knowledge – See "Traditional knowledge."

Indigenous peoples – In Canada, the term "Indigenous peoples" refers to persons of Indian (First Nations), Inuit, or Métis descent, regardless of where they reside and whether their names appear on an official register. In Canada, a comparable term, "Aboriginal peoples" is also used in certain contexts.

Induced pluripotent stem cell (iPSC) – A type of pluripotent stem cell, similar to an embryonic stem cell, formed by the introduction of certain embryonic genes into a somatic cell.

Information (Types)

Anonymized information – The information is irrevocably stripped of direct identifiers, a code is not kept to allow future re-linkage, and risk of re-identification of individuals from remaining indirect identifiers is low or very low.

Anonymous information – The information never had identifiers associated with it (e.g., anonymous surveys), and risk of identification of individuals is low or very low.

Coded information – Direct identifiers are removed from the information and replaced with a code. Depending on access to the code, it may be possible to re-identify specific participants (e.g., the principal investigator retains a list that links the participants' code names with their actual names so data can be re-linked if necessary).

Directly identifying information – The information identifies a specific individual through direct identifiers (e.g., name, social insurance number, personal health number).

Indirectly identifying information – The information can reasonably be expected to identify an individual through a combination of indirect identifiers (e.g., date of birth, place of residence, or unique personal characteristic).

Institutional conflicts of interest – An incompatibility between two or more substantial institutional obligations that cannot be adequately fulfilled without compromising one or another of the obligations.

Institutions – The universities, hospitals, colleges, research institutes, centres and other organizations eligible to receive and manage Agency grant funds on behalf of the grant holders and the Agencies.

Intermediary – An individual with the necessary language skills to ensure effective communication between the research team and participants, should any language barriers exist.

Intervention – The planned imposition of a set of conditions.

J

Justice – A core principle of this Policy that refers to the obligation to treat people fairly and equitably. Fairness entails treating all people with equal respect and concern. Equity requires distributing the benefits and burdens of research participation in such a way that no segment of the population is unduly burdened by the harms of research or denied the benefits of the knowledge generated from it.

L

Lead principal investigator – The designated principal investigator who is responsible for the ethical conduct of the study for all sites.

M

Medical device trial – A clinical trial that tests the safety and/or efficacy of one or more instruments used in the prevention, diagnosis, mitigation, or treatment of a disease or abnormal physical condition, or in the restoration, correction or modification of body function or structure.

Medical emergency – A situation in which one or more individuals require urgent medical care.

Minimal risk research – Research in which the probability and magnitude of possible harms implied by participation in the research are no greater than those encountered by participants in those aspects of their everyday life that relate to the research.

Multi-Jurisdictional research – Research involving multiple institutions and/or multiple research ethics boards (REBs). It is not intended to apply to ethics review mechanisms for research involving multiple REBs within the jurisdiction or under the auspices of a single institution.

N

Natural Health Product (NHP) Trial – A clinical trial testing the safety and/or efficacy of one or more natural health products. The term "natural health product" is used to describe substances such as vitamins and minerals, herbal medicines, homeopathic preparations, energy drinks, probiotics, and many alternative and traditional medicines.

Naturalistic observational research – The study of human acts or behaviours in a natural environment in which people involved in their normal activities are observed with or without their knowledge by researchers who do not intervene in any way in the activity. Also known as "non-participant observational research."

Non-participant observational research – The study of human acts or behaviours in a natural environment in which people involved in their normal activities are observed with or without their knowledge by researchers who do not intervene in any way in the activity. Also known as "naturalistic observational research."

O

Ongoing research – Research that has received research ethics board (REB) approval and has not yet been completed.

Outcome – A change (or absence of change) in the variable or attribute of interest and/or related variables or attributes affected by an intervention in the context of research.

P

Participant – An individual whose data, biological materials, or responses to interventions, stimuli, or questions by a researcher are relevant to answering the research question(s). Also referred to as a "human participant," and in other policies/guidance as "subject" or "research subject."

Participant observational research – The study of human acts or behaviours in a natural environment in which people involved in their normal activities are observed with or without their knowledge by researchers who participate in some way in the activity.

Participatory research – Research that includes the active involvement of those who are the subject of the research. Participatory research is usually action-oriented, where those involved in the research process collaborate to define the research project, collect and analyze the data, produce a final product and act on the results. See "Community-Based research" and "Collaborative research."

Personal information – Identifiable information about an individual. See "Identifiable information."

Pharmaceutical trial – A clinical trial designed to test the safety and/or efficacy of a pharmaceutical product.

> A **pharmaceutical product** is any chemical substance intended for use in the medical diagnosis, cure, treatment, or prevention of disease, disorders, or other illness.

Pilot study – A smaller version of the main study intended to assess the feasibility and/or inform the design of the main study.

Placebo-Controlled trial – A clinical trial in which the safety or efficacy of one or more interventions are compared with a placebo control group.

> A **placebo** is an inactive substance or intervention that resembles the comparable active substance or intervention.

Pluripotent stem cell – A cell that can become all the cell types that are found in an implanted embryo, fetus or developed organism, but not embryonic components of the trophoblast and placenta. Pluripotent stem cells include embryonic stem cells, induced pluripotent stem cells and embryonic germ cells.

Practicable/Impracticable – An action is practicable if it is possible and it is reasonable to expect the action to be done. For example, it is practicable to offer consent materials and task instructions in multiple languages when members of the desired participant population speak different languages, and there is no common language understood by all participants. An action is possible but not practicable when circumstances render a possible action unreasonably difficult to execute, or when the action will jeopardize the ability of the researcher to address the research question. For example, in a study examining the effect of two types of exit signage (alternated daily for two weeks) on crowd behaviour in a stadium, it would be impracticable to seek prior consent without affecting the behaviour under observation. It may be practicable to offer debriefing once the study is concluded, by advertising the availability of information about the study to the community that makes use of the stadium.

Principal investigator – The researcher who is responsible for the ethical conduct of the research, and for the actions of any member of the research team at a local site.

Privacy – An individual's right to be free from intrusion or interference by others.

Privacy risks – The potential harms that participants, or the groups to which they belong, may experience from the collection, use, and disclosure of personal information for research purposes.

Proportionate approach to research ethics review – The assessment of foreseeable risk to determine the level of scrutiny a research proposal will receive (i.e., delegated review for minimal risk research or full research ethics board [REB] review for research above minimal risk), as well as the consideration of

the foreseeable risks, the potential benefits and the ethical implications of the research in the context of initial and continuing review.

Prospective assignment of participants – The assignment of an intervention to participants in studies involving one or more interventions. Prospective assignment may be randomized or based on specific criteria relevant to the study conditions.

Psychotherapy trial – A clinical trial testing the safety and/or efficacy of one or more psychotherapeutic approaches to behavioural disorders or other mental illness.

Publicly available information – Any existing stored documentary material, records or publications, which may or may not include identifiable information, and that has no restrictions on its use or distribution, or that may be released under certain legal conditions.

Publicly declared emergency – An emergency situation that, due to the extraordinary risks it presents, has been proclaimed as such by an authorized public office (in accordance with legislation and/or public policy). Publicly declared emergencies are extraordinary events that arise suddenly or unexpectedly and require urgent or quick responses to minimize devastation. Examples include hurricanes and other natural disasters, large communicable disease outbreaks, catastrophic civil disorders, bio-hazardous releases, environmental disasters, and humanitarian emergencies.

Q

Qualitative research – An approach that aims to understand how people think about the world and how they act and behave in it. This approach requires researchers to understand phenomena based on discourse, actions, and documents, and how and why individuals interpret and ascribe meaning to what they say, what they do, and to other aspects of the world (including other people) they encounter.

R

Reciprocal research ethics board (REB) review – An official agreement between two or more institutions, in which they accept, with an agreed level of oversight, the research ethics reviews of each other's REBs.

Reimbursement – Payment to participants to ensure that they are not put at a direct, or indirect, financial disadvantage for the time and inconvenience of participation in research. Direct expenses refer to the costs incurred, and indirect expenses refer to losses that arise because of research participation.

Research – An undertaking intended to extend knowledge through a disciplined inquiry and/or systematic investigation.

Research agreement – A document that serves as a primary means of clarifying and confirming mutual expectations and, where appropriate, commitments between researchers and communities.

Research directive – Written instructions used to express an individual's preferences for participation in future research, in the event that the individual loses decision-making capacity. It is intended to guide the individual's authorized third party in deciding whether to give substitute consent for the individual to participate in research.

Research ethics board (REB) – A body of researchers, community members, and others with specific expertise (e.g., in ethics, in relevant research disciplines) established by an institution to review the ethical acceptability of all research involving humans conducted within the institution's jurisdiction or under its auspices.

Research ethics education and training – The provision of materials and corresponding instruction by an institution to research ethics board (REB) members or researchers with regard to the core principles and understanding of this Policy, basic ethics standards, applicable institutional policies, and legal or regulatory requirements. This term also includes an understanding of the role and mandate of REBs and responsibilities of REB members.

Research findings – The results of an investigation.

Research involving partial disclosure or deception – A type of research in which the participant may not know that they are part of a project until it is over or in which the participant is not informed of the true purpose of the research in advance. See "Debriefing."

Respect for Persons – A core principle of this Policy that recognizes the intrinsic value of human beings and the respect and consideration that they are due. It incorporates the dual moral obligations to respect autonomy and to protect those with developing, impaired, or diminished autonomy.

Risk – The possibility of the occurrence of harm. The level of foreseeable risk posed to participants by their involvement in research is assessed by considering the magnitude or seriousness of the harm and the probability that it will occur, whether to participants or to third parties.

S

Secondary use – The use in research of information or human biological materials originally collected for a purpose other than the current research purpose.

Security – Measures taken to protect information. It includes physical, administrative, and technical safeguards.

Sex – Refers to a set of biological attributes in humans and animals. It is primarily associated with physical and physiological features including chromosomes, gene expression, hormone levels and function, and reproductive/sexual anatomy. Sex is usually categorized as male or female, but there is variation in the biological attributes that comprise sex and how those attributes are expressed.

Shall – Indicates a mandatory provision.

Should – Indicates guidance for the interpretation of the core principles.

Somatic cell – Any body cell other than gametes (egg or sperm). Sometimes referred to as "adult" cells.

Somatic (adult) stem cell – A relatively rare undifferentiated cell found in many organs and differentiated tissues with a limited capacity for both self-renewal (in the laboratory) and differentiation. Such cells vary in their differentiation capacity, but it is usually limited to cell types in the organ of origin. These are stem cells with a more restricted differentiation capacity than pluripotent stem cells.

Stem cell – A cell that has the ability to divide for indefinite periods in culture and to give rise to specialized cells.

Stopping rules – Pre-determined rules that consist of one or more safety and efficacy criteria (end points) that, if met, warrant a temporary or permanent stop to all or part of the study or a participant's involvement in the study.

Surgical trial – A clinical trial that compares the safety and/or efficacy of different surgical techniques.

T

Therapeutic misconception – A misunderstanding, on the part of participants, of the purpose, benefits, and/or risks of clinical trials. Often participants do not understand that research is aimed primarily at producing knowledge and may not provide any therapeutic benefit to them.

Traditional knowledge – The knowledge held by First Nations, Inuit and Métis peoples, the Indigenous peoples of Canada. Traditional knowledge is specific to place, usually transmitted orally, and rooted in the experience of multiple generations. It is determined by an Indigenous community's land, environment, region, culture, and language. It may also be new knowledge transmitted to subsequent generations.

U

Unanticipated issues – Issues that: occur during the conduct of research; may increase the level of risk to participants or have other ethical implications that may affect participants' welfare; and were not anticipated by the researcher in the research proposal submitted for research ethics review.

Undue influence – The impact of an unequal power relationship on the voluntariness of consent. This may occur when prospective participants are recruited by individuals in a position of authority over them (e.g., doctor/patient, teacher/student, employer/employee). See "Coercion."

V

Vulnerability – A diminished ability to fully safeguard one's own interests in the context of a specific research project. This may be caused by limited decision-making capacity or limited access to social goods, such as rights, opportunities and power. Individuals or groups may experience vulnerability to different degrees and at different times, depending on their circumstances. See also "Autonomy."

W

Welfare – The quality of a person's experience of life in all its aspects. Welfare consists of the impact on individuals and/or groups of factors such as their physical, mental and spiritual health, as well as their physical, economic and social circumstances.