Using Informed Consent to Protect Tribal Citizens in Genetics Research

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Researchers should develop a process called *informed consent* for every individual and community invited to participate in a research project. "Informed consent" means that potential participants have received enough information (they are "informed") to make a thoughtful and voluntary decision about whether or not to join a study (give "consent"). Informed consent is a process involving discussions between the research team and potential participants. The *informed consent form* is an important part of this process. Traditionally, informed consent forms are signed by individuals who agree to participate in a research study. A written research agreement between a tribe and a researcher can serve as a form of informed consent for the community as a whole. Tribal consent for research participation is important because tribes are sovereign governments with the authority to regulate research conducted with their citizens. In addition, potential benefits and risks of a research study can affect tribes as groups, not just individual research participants. The same elements which are included in an informed consent form can be included in a research agreement or contract. Model tribal research contracts are discussed in another section of this resource guide. Researchers working with tribes should seek written informed consent both from individual participants (through an informed consent form) and the tribe as a whole (through a research agreement).

There are many elements that must be included in an informed consent form under federal regulations. There are also many models of informed consent form language available. For genetics research, there are some specific issues that need to be addressed in informed consent, particularly how the genetic data will be used, and whether that data will be used for additional studies or shared with researchers outside the original team.

According to federal regulations (45 CFR 46) and the National Human Genome Research Institute (NHGRI) (an institute within the National Institutes of Health (NIH)), the key elements of informed consent are:

- Purpose of the research project
- Description of the research procedures
- Financial compensation, costs, and commercialization
- Potential benefits of participating in the project
- Potential risks of participating in the project
- Confidentiality
- Returning results to research participants
- Withdrawal
- Alternatives to participating in the project
- Voluntary participation
- Contact information

For each of these elements, the NHGRI has provided explanations and model informed consent language on their website. Examples of informed consent forms for different types of genetics research are also available on the NHGRI website.

These documents provide helpful guidance for genetics research in general. Given the history of genetics research in American Indian/Alaska Native communities, there may be some specific considerations for tribes in informed consent forms, as noted by Dr. Linda Burhansstipanov and colleagues (2005). They have developed model policy language for tribes related to genetics research studies. This language is a helpful resource for tribes in writing informed consent forms, tribal research codes, and contracts with researchers.

Some tribes are concerned about the use of genetic information for purposes outside the original study design. This issue was at stake in the lawsuit the Havasupai Tribe filed against Arizona State University, as described in another section of this resource guide. One way to deal with this concern is to have language in the informed consent form which specifically addresses the use of samples for other studies (known as "secondary use" of samples). If a tribal government does not wish to have samples used for any purpose outside the original study, the informed consent form can include language to this effect. Dr. Linda Burhansstipanov and colleagues wrote the following model language for restricting the use of genetic samples: "No specimens collected for this study will be shared or accessible to any researcher other than those listed on the consent form. If the investigator should relocate or retire, the specimens will not be transferred without explicit permission from the tribal health board and/or tribal/IHS IRB…Formal tribal approval is mandatory should specimens be shared with federal entities" (Burhansstipanov et al. 2005, p. 55). This kind of language could be adapted for use in a tribe's research agreement template, research code, or policy.

In the event that a researcher does wish to use specimens for a secondary study, Burhansstipanov and colleagues recommend that tribes require another process of informed consent for the original research participants. In other words, participants in the original research study would need to be asked for permission before their samples were used in another study. They would also need to sign a new informed consent form for the secondary study. Burhansstipanov and colleagues wrote the following model policy language about re-consent for secondary use: "If at any time these specimens are requested for other research, active informed re-consenting…is mandatory from the individual. If the specimens have had phenotypic information removed, then tribal health board and/or tribal/IHS IRB permission is required" (Burhansstipanov et al. 2005, p. 55). Again, this type of language might be useful to use as a template in tribal research agreements, codes, or policies.

Re-consent may not be possible if an individual has died since contributing a specimen for a study. This issue can be addressed through including a place on an informed consent form to name a family member or other individual authorized to provide future consents in the event of the research participant's death. Alternatively, options could be provided for the research participant to select. Sample language might read:

> In the event that I die and my specimen could be used for future research studies, I choose to (select from the options below):
>
> __Contribute my specimen and genetic data for use in any and all research studies.
>
> __Not have my specimen and genetic data used for any other studies.
>
> __Designate an individual who can make future decisions about my specimens on my behalf.
>
> Name of individual:_____

Contact information:_____

Another approach might be to include a specific question on the original informed consent form about whether or not secondary use of specimens is acceptable. This question could also include a specific option saying that the research participant has to be contacted again before his or her specimen can be used in a future study(Mello and Wolf 2010).In reflecting on the implications of the Havasupai Case, Michelle Mello and Leslie Wolf propose some model language (adapted from the National Cancer Institute's informed consent template for cancer treatment trials):

> With your permission, we would like to store your blood sample for use in future research. You do not have to agree to this in order to be in the study, and your decision will not affect the care you receive from the study doctors. Please pick one of the choices below:
>
> ___My blood may be kept and used in research to learn about, prevent, or treat diabetes.
>
> ___My blood may be kept and used in research to learn about, prevent, or treat diabetes and other health problems (e.g., heart disease and mental illness).
>
> ___My blood may not be used in future research unless researchers contact me to tell me about the study and ask my permission
>
> ___My blood may not be used in future research. I do not want researchers to contact me about future studies.

Individuals may have different preferences, and so providing options on informed consent forms allows each participant to express his or her own desires about specimen use. Options can be offered in the informed consent form for any issue on which individual research participants' perspectives might differ. Given the diversity of perspectives within tribal communities, having questions with options on informed consent forms can be very helpful.

In addition, tribes and their citizens may wish to consider their views on cell lines when developing language for informed consent forms, research agreements, and tribal policies. A cell line begins with a specimen collected from an individual. Scientists then trigger cells from the specimen to keep reproducing themselves for long periods of time in the laboratory, forming a cell line. These cell lines can provide a potentially indefinite supply of DNA that can last for many years. Tribes may decide to address this issue through specific language in informed consent forms and research agreements related to whether or not cell lines may be created in a research study.

Death presents some spiritual and cultural issues for the use of specimens in the original research study. Specimen use after death is a complicated issue. Some tribal members may not wish to have any part of their body or blood used in research studies after they have died. However, other tribal members may view the use of their specimen in research after their death as an important way that their legacy continues. To accommodate the potential diversity of views on this topic, language could be included in the informed consent form that provides options for what an individual would like done with their specimen in the event of their death. For example, there could be options for an individual to check or initial, such as:

> If I die, I wish to have my specimen (choose one of the options below):
>
> __Used in this study
>
> __Withdrawn from the study if possible
>
> __Returned to my family or tribe

A researcher would first need to be informed of a research participants' death so that the participants' wishes can be honored. If researchers are unaware a participant has died, then they may continue using the specimen. There are also cases in which it may not be possible for a specimen to be withdrawn after a certain point in a study. Genetic information from multiple specimens is usually combined into a larger data set. If this process has already happened, then it may not be possible to separate an individual's data from the compiled set. If the study design is such that individual data cannot always be separated, then the informed consent form should state this.

The disposal of specimens may also raise cultural or spiritual issues for tribal members. Some tribal members may wish to have their specimens returned to them or their tribe for ceremonial disposal (Burhansstipanov et al. 2005). In the Havasupai Case, for example, the Tribe ultimately called for the return of their blood samples (Harmon 2010). Tribal members who view body parts and blood as containing their spirit or essence may be more likely to want specimens returned and disposed of ceremonially. Informed consent forms could include options for specimen disposal, including (1) disposal by the researcher and (2) return of the specimen to the individual or tribe. For example, the informed consent form could state:

> When my specimen is no longer needed for this study, I would like the specimen:
>
> ___Disposed of by the research team
>
> ___Returned to my tribe
>
> ___Stored for use in future research

Tribal leaders could decide whether all these options should be included or not, depending on their preference for the study overall. For example, if tribal leaders do not wish to have any specimens stored for future use, then the third option could be omitted. Burhansstipanov and colleagues propose model policy language about specimen disposal:

> The investigators agree to discard unused specimens according to the local tribal community's restrictions. This may include returning the specimens to tribal leaders for ceremonies or other culturally specific practices. The community may elect to have the scientists dispose of the specimens by ordinary means.

This kind of language could be included in a contract between the tribe and researcher.

In conclusion, informed consent forms can be a valuable tool in tribal regulation of genetics research studies. The issues in genetics research are complex, especially related to the handling of specimens. American Indian/Alaska Native communities may have spiritual or cultural contexts that impact the way they view genetics research. There is considerable diversity between tribes, as well as within the membership of individual tribes, in their spiritual and cultural beliefs. For this reason, we do not propose overall specimen handling language for informed consent forms, but rather present options for checklists. These kinds of options may help to accommodate the diversity of views within a tribe, allowing each individual research participant to express their preferences. While informed consent forms are an important tool, they do not substitute for open and detailed conversations between researchers and tribal communities. Informed consent is a process, not a form, and discussions between researchers and tribal communities can provide the opportunity to negotiate creative solutions to issues such as the handling of biological specimens. In a separate section, we provide a guide for tribes to have internal discussions about defining a collective perspective on genetics research and implementing tribal decisions in the design of a research project.

References

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