D1 DNA Identification of Mass Disasters' Victims and Ethical Issues

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After attending this presentation, attendees will better understand the ethical aspects concerning the activity of identification of victims of mass disasters using DNA technology.

This presentation will impact the forensic science community by not only stressing the importance of DNA identification of victims of mass disasters, but also using caution with ethical issues with the potentially sensitive nature of DNA identification.

A mass disaster is an unexpected event that causes serious injury and death to a number of people. It may be a natural disaster (e.g., earthquake, volcano, avalanche, hurricane, and tsunami), an accidental disaster (transportation accidents and building fires), or an intentional terrorism act (e.g., terrorist activity, war, or political crisis).

Victim identification is difficult but necessary. Proper identification is necessary to notify the legal next of kin, resolve estate issues and criminal/civil litigation, and issue death certificates.

DNA profiling is increasingly becoming an important tool in the individual identification in the aftermath of mass disaster. While forensic geneticists are often not included as first responders, DNA sample collection and a strategy for DNA-based victim identification needs to be part of the community's preparedness plan. In fact, the preparedness plan of the laboratory needs to include policies for family notification, long-term sample disposition, and data archiving.

Many of the decisions which involve prioritization are made daily and often without much thought to the ethical and allocation considerations underlying them. Experienced investigators making these types of decisions are usually deciding about priority for, rather than access to, services or interventions.

One of the objectives of the forensic investigation of human remains is to identify the remains and, if possible, return them to the family of the dead person. This objective helps family members by ascertaining the fate of their relative and allowing the remains to be handled in a culturally appropriate manner, thus enabling the families of the missing to mourn their loss.

Ethical issues are associated with the use of DNA identification, because information contained in a person's DNA is sensitive and it is a unique identifier and may contain information about a person's family and intimate associations. It is widely held that the death of a person does not extinguish the interests of that individual. Indeed, family members, and others who have physical possession or access to an individual's body, tissue, or cells, have to respect certain obligations and rights following the death of the individual.

Although the ultimate goal is to obtain a match between two persons or between a biological material and a person, the specific context of each of these applications of human identity testing has its specific problems, ranging from technical approach, through statistical interpretation, to ethical issues.

There has been very little systematic effort to identify and analyze the major ethical and policy challenges associated with this new use of genetic technology. This study seeks to define some of these ethical aspects focusing on particular situations.

International law does not have any specific provisions for protecting genetic data in mass disaster. International humanitarian law and international human rights law recognize the need to provide special protection for persons affected by armed conflict. However, these bodies of law contain only general principles relating to confidentiality, privacy, non-discrimination, and human dignity that can be applied to the protection of genetic data.

It seems important to evaluate how to deal with resource allocations, incidental findings, ethical acceptance of secondary uses of the biological materials collected, and the use/misuse associated with the creation of large genetic databases. Last but not least, the issue of privacy, which has to be rigorously protected to ensure the respect of human individual rights must be addressed.

DNA Identification, Mass Disaster, Ethics

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