

Guidance on the Genetic Information Nondiscrimination Act: Implications for Investigators and Institutional Review Boards

This guidance represents OHRP's current thinking on this topic and should be viewed as recommendations unless specific regulatory requirements are cited. The use of the word *must* in OHRP guidance means that something is required under HHS regulations at 45 CFR part 46. The use of the word *should* in OHRP guidance means that something is recommended or suggested, but not required. An institution may use an alternative approach if the approach satisfies the requirements of the HHS regulations at 45 CFR part 46. OHRP is available to discuss alternative approaches at 240-453-6900 or 866-447-4777.

Date: March 24, 2009

Scope: This document applies to non-exempt human subjects research conducted or supported by HHS. It provides background information regarding the Genetic Information Nondiscrimination Act of 2008 (GINA) and discusses some of the implications of GINA for investigators who conduct, and institutional review boards (IRBs) that review, non-exempt human subjects research involving genetic testing or the collection of genetic information (hereinafter referred to as “genetic research”), particularly with respect to the criteria for IRB approval of research and the requirements for obtaining informed consent.

The information presented in the background section of this document is intended for general information purposes only. While the background section does not cover all of the specifics of GINA, it does provide an explanation of the statute to assist those involved in the conduct or oversight of research to understand the law and its prohibitions related to discrimination based on genetic information in (a) coverage provided either by health insurers or by employment-based group health plans (hereinafter referred to as “health coverage”), and (b) employment. This information should not be considered legal advice. In addition, some of the provisions of GINA discussed involve issues for which the rules have not been finalized, and this information is subject to revision based on publication of regulations.

Target Audience: Investigators who conduct, and IRBs that review, genetic research involving human subjects that is conducted or supported by HHS.

Background on GINA:

GINA is a Federal law that prohibits discrimination in health coverage and employment based on genetic information. GINA, together with already existing nondiscrimination provisions of the Health Insurance Portability and Accountability Act, generally prohibits health insurers or

health plan administrators from requesting or requiring genetic information of an individual or an individual's family members, or using such information for decisions regarding coverage, rates, or preexisting conditions. GINA also prohibits employers from using genetic information for hiring, firing, or promotion decisions, and for any decisions regarding terms of employment. The parts of the law relating to health coverage (Title I) generally will take effect between May 22, 2009, and May 21, 2010, and those relating to employment (Title II) will take effect on November 21, 2009¹. GINA requires regulations pertaining to both titles to be completed by May 2009. Once GINA takes effect, it generally will prohibit discrimination based on genetic information in connection with health coverage and employment, no matter when the information was collected.

GINA provides a baseline level of protection against genetic discrimination for all Americans. Many states already have laws that protect against genetic discrimination in health insurance and employment situations. However, the degree of protection they provide varies widely, and while most provisions are less protective than GINA, some are more protective. All entities that are subject to GINA must, at a minimum, comply with all applicable GINA requirements, and may also need to comply with more protective State laws.

GINA defines *genetic information* as information about:

- An individual's genetic tests (including genetic tests done as part of a research study);
- Genetic tests of an individual's family members (defined as dependents and up to and including 4th degree relatives);
- Genetic tests of any fetus of an individual or family member who is a pregnant woman, and genetic tests of any embryo legally held by an individual or family member utilizing assisted reproductive technology;
- The manifestation of a disease or disorder in an individual's family members (family history); or
- Any request for, or receipt of, genetic services or participation in clinical research that includes genetic services (genetic testing, counseling, or education) by an individual or an individual's family members.

Genetic information does not include information about the sex or age of any individual.

GINA defines a *genetic test* as an analysis of human DNA, RNA, chromosomes, proteins, or metabolites that detect genotypes, mutations, or chromosomal changes. Routine tests that do not detect genotypes, mutations, or chromosomal changes, such as complete blood counts, cholesterol tests, and liver enzyme tests, are not considered genetic tests under GINA. Also, under GINA, genetic tests do not include analyses of proteins or metabolites that are directly related to a manifested disease, disorder, or pathological condition that could reasonably be detected by a health care professional with appropriate training and expertise in the field of medicine involved.

¹ The effective date of the insurance provisions is not the same in all cases because for group health plans, Title I will take effect at the start of the group health plan's first year beginning after May 21, 2009. Because some health plans do not designate their "plan years" to correspond to a calendar year, there will be variation among plans as to when Title I takes effect for the plans. However, for individual health insurers, GINA will take effect May 22, 2009.

GINA includes a “research exception” to the general prohibition against health insurers or group health plans requesting that an individual undergo a genetic test. This exception allows health insurers and group health plans engaged in research to request (but not require) that an individual undergo a genetic test. This exception permits the request to be made but imposes the following requirements:

- The request must be made pursuant to research that complies with HHS regulations at 45 CFR part 46, or equivalent Federal regulations, and any applicable state or local laws for the protection of human subjects in research;
- There must be clear indication that participation is voluntary and that non-compliance has no effect on enrollment or premiums or contribution amounts;
- No genetic information collected or acquired as part of the research may be used for underwriting purposes;
- The health insurer or group health plan must notify the Federal government in writing that it is conducting activities pursuant to this research exception and provide a description of the activities conducted; and
- The health insurer or group health plan must comply with any future conditions that the Federal government may require for activities conducted under this research exception.

GINA’s provisions prohibiting discrimination in health coverage based on genetic information do not extend to life insurance, disability insurance, or long-term care insurance. For example, GINA does not make it illegal for a life insurance company to discriminate based on genetic information. In addition, GINA’s provisions prohibiting discrimination by employers based on genetic information generally do not apply to employers with fewer than 15 employees. For health coverage provided by a health insurer to individuals, GINA does not prohibit the health insurer from determining eligibility or premium rates for an individual based on the manifestation of a disease or disorder in that individual. For employment-based health coverage provided by group health plans, GINA permits the overall premium rate for an employer to be increased because of the manifestation of a disease or disorder of an individual enrolled in the plan, but the manifested disease or disorder of one individual cannot be used as genetic information about other group members to further increase the premium. GINA also does not prohibit health insurers or health plan administrators from obtaining and using genetic test results in making payment determinations.

For additional details regarding the provisions of GINA see <http://www.genome.gov/Pages/PolicyEthics/GeneticDiscrimination/GINAInfoDoc.pdf>.

Guidance:

Given that GINA has implications regarding the actual or perceived risks of genetic research and an individual’s willingness to participate in such research, investigators and IRBs should be aware of the protections provided by GINA as well as the limitations in the law’s scope and effect. IRBs should consider the provisions of GINA when assessing whether genetic research satisfies the criteria required for IRB approval of research, particularly whether the risks are minimized and reasonable in relation to anticipated benefits and whether there are adequate

provisions in place to protect the privacy of subjects and maintain the confidentiality of their data. GINA is also relevant to informed consent. When investigators develop, and IRBs review, consent processes and documents for genetic research, they should consider whether and how the protections provided by GINA should be reflected in the consent document's description of risks and provisions for assuring the confidentiality of the data.

A. GINA and the Criteria for IRB Approval of Research

When reviewing proposed or ongoing genetic research, IRBs should consider the protections provided by GINA when determining whether the research satisfies the following criteria required for IRB approval of research:

- Risks to subjects are minimized: (i) by using procedures which are consistent with sound research design and which do not unnecessarily expose subjects to risk; and (ii) whenever appropriate, by using procedures which are already being performed on the subjects for diagnostic or treatment purposes (45 CFR 46.111(a)(1));
- Risks to subjects are reasonable in relation to anticipated benefits, if any, to subjects, and the importance of the knowledge that may reasonably be expected to result (45 CFR 46.111(a)(2)); and
- When appropriate, there are adequate provisions to protect the privacy of subjects and maintain the confidentiality of data (45 CFR 46.111(a)(7)).

Among the risks typically associated with genetic research, investigators, IRBs, and research subject advocates, among others, have identified the potential adverse impact on insurability or employability if genetic information about the subject obtained as part of the research was disclosed to, or sought by, insurers or employers. When the provisions of GINA take effect, the risk of such harms will be decreased with respect to health coverage and most employment. Since a decrease in risk should favorably affect the risk-benefit assessment for genetic research, the protections provided by GINA have direct relevance for IRBs that are assessing whether genetic research satisfies the criteria under 45 CFR 46.111(a)(1), (2), and (7).

Even though the provisions of GINA related to health coverage generally will take effect between May 22, 2009, and May 21, 2010, and those related to employment will take effect on November 21, 2009, investigators and IRBs should be aware that the protections provided by GINA are pertinent to genetic research that is conducted prior to these effective dates because these protections eventually will extend to genetic information obtained as part of any research study regardless of when the research was conducted. Therefore, IRBs conducting initial or continuing review of genetic research prior to GINA's stipulated effective dates should take into account the protections to be provided by GINA when assessing whether such research satisfies the criteria required for IRB approval of research referenced above.

When making the above determinations required under 45 CFR 46.111(a), IRBs also need to be cognizant that (1) GINA's provisions prohibiting discrimination in health coverage based on genetic information do not extend to life insurance, disability insurance, or long-term care insurance; and (2) GINA's provisions prohibiting discrimination by employers based on genetic information generally do not apply to employers with fewer than 15 employees.

B. GINA and the Requirements for Informed Consent

When investigators develop, and IRBs review, consent processes and documents for genetic research, they should consider the protections provided by GINA, particularly with respect to the following elements of informed consent that must be provided to subjects (unless an IRB has approved an alteration or waiver of these requirements in accordance with the requirements of HHS regulations at 45 CFR 46.116(c) or (d)):

- A description of any reasonably foreseeable risks or discomforts to the subjects (45 CFR 46.116(a)(2)); and
- A statement describing the extent, if any, to which confidentiality of records identifying the subject will be maintained (45 CFR 46.116(a)(5)).

Investigators and IRBs must ensure that descriptions of the reasonably foreseeable risks of genetic research and any statements describing the extent to which confidentiality of records identifying the subject will be maintained do not overstate the protections provided by GINA (45 CFR 46.116(a)). Key points for investigators and IRBs to consider when describing these protections include the following:

- The provisions of GINA related to health coverage generally will take effect between May 22, 2009, and May 21, 2010, and those related to employment will take effect on November 21, 2009.
- The discrimination protections provided by GINA address health coverage and employment only.
- GINA's provisions prohibiting discrimination in health coverage based on genetic information do not extend to life insurance, disability insurance, or long-term care insurance. Therefore, to the extent that the risks of genetic research include potential adverse impact on a subject's ability to obtain life insurance, disability insurance, or long-term care insurance if genetic information about the subject obtained as part of the research was disclosed to or sought by such insurers, GINA has no effect on these risks.
- GINA generally does not apply to employers with fewer than 15 employees. Therefore, subjects who are or will be employed by such employers receive none of the GINA protections that prohibit discrimination in employment on the basis of genetic information.

Even though, as explained above, the provisions of GINA related to health coverage do not take effect until some time within a year of May 21, 2009, and those related to employment do not take effect until November 21, 2009, investigators and IRBs need to be aware that GINA has implications for how risks are described for genetic research conducted prior to these effective dates.

Regardless of when genetic information was obtained or collected, GINA restricts the use of such information as soon as GINA becomes effective for a particular plan or insurance policy. For example, even if an individual participated in a research study involving genetic testing in

January 2009, a health insurer or health plan administrator, once GINA's protections related to health coverage take effect, will be prohibited from (1) requesting information about the results of the genetic tests performed in that research study or about the individual's participation in that research study (unless the health insurer or health plan administrator has satisfied the requirements of the research exception discussed in the background section above), and (2) using such information for decisions regarding coverage, rates, or preexisting conditions for that individual if such information is disclosed in some way to the insurer or health plan administrator.

Likewise, effective November 21, 2009, GINA generally will prohibit employers with 15 or more employees from using genetic information for hiring, firing, or promotion decisions, and for any decisions regarding terms of employment, *regardless of when the information was obtained or collected*. For example, even if an individual participated in a research study involving genetic counseling in January 2009, an employer with 15 or more employees, as of November 21, 2009, will be prohibited from using genetic information resulting from that individual's participation in that research for hiring, firing, or promotion decisions or for any decisions regarding terms of employment for that individual.

OHRP recommends that for genetic research undergoing initial or continuing review investigators and IRBs consider whether consent processes and documents should include language regarding the protections provided by GINA, and if so, ensure that such language accurately describes the impact of GINA on the risks and confidentiality protections for such research. The following is one example of sample language regarding the protections provided under GINA that investigators and IRBs could consider including in informed consent documents for such research, if it is determined that including such language is appropriate:

A new Federal law, called the Genetic Information Nondiscrimination Act (GINA), generally makes it illegal for health insurance companies, group health plans, and most employers to discriminate against you based on your genetic information. This law generally will protect you in the following ways:

- *Health insurance companies and group health plans may not request your genetic information that we get from this research².*
- *Health insurance companies and group health plans may not use your genetic information when making decisions regarding your eligibility or premiums.*
- *Employers with 15 or more employees may not use your genetic information that we get from this research when making a decision to hire, promote, or fire you or when setting the terms of your employment.*

All health insurance companies and group health plans must follow this law by May 21, 2010. All employers with 15 or more employees must follow this law as of November 21, 2009.

² Note that if an insurance company or health plan administrator is engaged in the research in accordance with the requirements of the research exception, this bullet should be modified accordingly.

*Be aware that this new Federal law does **not** protect you against genetic discrimination by companies that sell life insurance, disability insurance, or long-term care insurance.³*

IRBs should feel free to revise the sample language above as appropriate based on the nature of the research and the types of human subjects involved.

If you have specific questions about how to apply this guidance, please contact OHRP by phone at (866) 447-4777 (toll-free within the U.S.) or (240) 453-6900, or by e-mail at ohrp@hhs.gov.

³ For genetic research that involves determining whether subjects have an already manifest genetic disease or disorder, investigators and IRBs may wish to consider including additional language in the informed consent document indicating that GINA does not prohibit discrimination on the basis of an already manifest genetic disease or disorder.