Genetic Testing: Its Challenges to Employment and Insurance

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Thank you for inviting me to speak to you this morning. As members of the Vocational Rehabilitation Association of Canada, you have set high standards for your work. In fulfilling your mandate, you collaborate on an ongoing basis with other professionals in your association to establish best practices for all of you working in the field of disability and employment. You strive continually to develop your personal and professional practices, while acting as experts and as advocates for your clients on a broad range of disability issues. This is no small task.

During the next two days, you will listen to experts and colleague practitioners speak about the diverse challenges of your work. Their experiences and advice will be shared so that you can better improve the chances of your clients returning to the workplace and picking up the severed threads of their daily lives and ambitions.

This morning, as your keynote speaker, I will try to capture the theme of your conference and sail you off in a new direction. As you know, I am a lawyer whose specialty is law, science, and public policy. I am fascinated by the many possibilities that genetics and reproductive technologies offer us; I have written a book on these and related issues.1

The growing field of human genetics, and the predictive tools that come with it, will have a profound impact on labor relations and workplace rules. In turn, this will affect your work and the lives of those whom you assist.

In speaking with your executives recently, they asked that I explore some of the future cutting-edge issues that science and technology will force you to face in your practices. They also asked that I speak about how these affect some of the ethical standards that your association and members follow. To meet their request, I have divided my remarks into two parts. I begin with the question of genetics and genetic testing, the challenges these will raise for you and your clients, and what your association might do to shape public policy debate and future legislation.

We are living in one of the most exciting periods in medical-scientific history. No matter where you stand on any one issue, from stem-cell research to cloning, we all have a stake in science’s success. Each of us in this room has known illness directly, or through a family member or friend. When all is said and done, who among us would choose illness and ignorance over health and knowledge? If we were forced to make such a decision, who here today would deny the options that modern science and medicine give us?

Science and medicine offer us real and important policy and legislative challenges as well, with their cutting-edge research and technologies. Thanks to science, we can now create, manipulate, and alter human life in the laboratory. Infertile, even sterile, people can have a family. We can use genetic manipulation techniques to create new seeds, animals, and — one day — people. We can use cloning technologies, the modern-day living version of photocopying machines, to clone cells and to make new skin for burn victims or new cartilage for accident victims. We can use one person’s organs so another can live, and we can keep people alive on machines, in a state of living death.

In my book “Tough Choices: Living and Dying in the 21st Century,” I have raised these issues, and others, as I analyzed the legal and public policy issues science and technology force us to face at each stage of life’s cycles. Key among these are the issues surrounding genetics and genetic testing, with the potential for predictive medicine and therapeutic interventions, which have enormous impacts on human rights.

What do we mean when we speak of “genetics,” of “genetic information,” and “genetic testing”?2 Genetics is the study of heredity and the way in which the characteristics we inherit can vary from one individual or group to another. This can be as simple as the variation in the color of our hair to the presence of cancer or other disease-causing genes.

At the molecular level, our genes tell a part of the story about each of us. This same genetic story is found and repeated in every cell of our body. This means that from a single drop of blood, skin, or saliva, we (and anyone with the right diagnostic tools) can learn what destiny is written in our genes about our future genetic health and well-being.

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The study of genetics and its impact on our daily lives is about more than just disease and its medical treatment. It also raises at least three fundamental human rights issues of direct interest and importance to you and your profession. These include discrimination, privacy, and confidentiality. Implicit in these issues is the “right” to know medical information discovered about others that affects us. So let us address each of these in turn.

**Discrimination**

I begin with discrimination. In most countries we have human rights laws that both ensure positive protection of our human rights and ban discrimination on several grounds. These include race, religious belief, ancestry or place of origin, color, physical or mental disability, age, socio-economic status, marital status and, in some places, sexual orientation. With few exceptions, including France, Austria, and now the United States in certain situations, laws prohibiting discrimination do not address discrimination on the basis of genetic predisposition.

Science moves ahead regardless. Take the Human Genome Project (HGP) as one example. Scientists have already completed the first phase of the identification of the human genome, the common treasure that we all share. From the knowledge acquired with the completion of the HGP, we are now developing genetic testing kits and methods to predict individual predisposition to disease. We hopefully can treat such diseases even before the symptoms manifest. Failing that, we hope to develop new drugs and therapies so we can alleviate (and maybe even end) some of the worst of the physical pain and suffering that afflicts those with genetic anomalies and disease.

This is the HGP’s noble goal — one which I both applaud and wholeheartedly support. But as professionals, each with our own specific training and experiences, we all know that this noble goal will not be the only outcome of our mapping of the human and other genomes.

This information will not be released into a social, legal, or economic void. The HGP was not a stand-alone effort. Science cannot pretend that it somehow operates outside of society, with its cultural and other biases and human frailties. Used with other technological developments and practices, such as pre-natal or pre-implantation genetic diagnosis, the knowledge we acquire from the human genome is immensely important. It will lead us to finally learn what each gene does in our bodies.

This will also force us to make a myriad of choices that will have an impact on our collective interests and will affect our individual rights. We will know ourselves and others at the molecular level — a partial description, at best, of what each of us is or can become as human beings. Yet it will be at this molecular level that tough decisions will be made, especially for embryos from in-vitro fertilization (IVF) that undergo genetic testing at the pre-implantation stage.

We have always been able to access some of a person’s medical story, however, having access to a person’s genetic information is a sea of change from what we had known before. This hitherto hidden personal and family information will be used for many purposes. For society, genetic testing will help solve crimes and identify the remains of people who have died tragic or violent deaths. On a personal level, it will bring about all kinds of new issues. In contested paternity or maternity cases, for instance, it will confirm or deny a man or woman’s biological relationship to a child.

Its most frequent and highly contested use will be in the employment and health care sectors, where the knowledge that we carry a defective gene that might or will result in a chronic or fatal disease later on in life, will have real and long-term consequences on our choices, our options, and our opportunities. Thus, this information has the potential of fundamentally affecting our lives.

Almost a decade ago now, in 1999, the Supreme Court of Canada gave a context to the definition of discrimination in *Law v. Canada.* The court found that a core value of our human rights principles was realizing that human dignity, when absent, led to discrimination. In its judgment, Canada’s highest court found:

> [T]he purpose of s. 15(1) [of the Canadian Charter of Rights & Freedoms] is to prevent the violation of essential human dignity and freedom through the imposition of disadvantage, stereotyping, or political or social prejudice, and to promote a society in which all persons enjoy equal recognition at law as human beings or as members of Canadian society, equally capable and equally deserving of concern, respect and consideration. Legislation which effects differential treatment between individuals or groups will violate this fundamental purpose where those who are subject to differential treatment fall within one or more enumerated or analogous grounds, and where the differential treatment reflects the stereotypical application of presumed group or personal characteristics, or otherwise has the effect of perpetuating or promoting the view that the individual is less capable, or less worthy of recognition or value as a human being or as a member of Canadian society.
As practitioners, you often deal with such stereotyping on the basis of disability of all kinds. You see its impact on your clients and their sense of self-esteem. Discrimination of any kind is a scourge, not to be tolerated in any way in Canada. That is why I hope that future courts will find precedence in the *Law* decision and in other related cases. This will protect individuals from discrimination by governments on the basis of genetic predisposition where they carry a gene that may or may not one day manifest itself as a disease or serious physical or mental condition. If future courts do so, then the large and increasing group of people who have been popularly labeled as the “healthy sick” will find protection under our Canadian Charter of Rights and Freedoms (the Charter) against this type of genetic discrimination.

So we see that the Charter may protect us, but what about our human rights laws? Do they protect us from discrimination on the basis of genetic predisposition? Under the Canadian Human Rights Act, companies like banks, which are governed by federal law, cannot discriminate on the basis of disability. Unfortunately, despite calls to do so, the Charter has not been amended to include a predisposition to disability due to a defective gene.

At the provincial level, there are no direct or explicit statutory prohibitions of discrimination on the basis of genetic predisposition to a disease or condition that has not manifested. The human rights laws in some provinces, such as Ontario and Nova Scotia, extend protection from discrimination on the basis of perceived disability. Some authors argue that provincial courts generally may find as the Supreme Court of Canada did in *Law*.

Under our human rights laws, discrimination in employment on the basis of disability or handicap is prohibited. The exception to this anti-discrimination law is where a person applying for a job, due to a disability or handicap, cannot perform the job in question. Only then can an employer refuse to hire someone. Establishing that a specific qualification or training is a “bona fide occupational requirement” is a question of fact and is usually closely scrutinized by human rights tribunals when a person alleges discrimination in not hiring or in firing on the basis of disability. Case law has looked at these issues. An employer must meet particular criteria when claiming that something is indeed a “bona fide occupational requirement.” We will have to see what happens in future cases where the discrimination alleged is based on a person’s genetic predisposition to a disease or serious condition.

**Privacy and Confidentiality**

The second area of concern is how we ensure (if not guarantee) our individual privacy and the confidentiality of personal health information in an era of genetic testing. It is difficult now to be private and to keep things in confidence; we pay a price for this. In a case 13 years ago, Madame Justice L’Heureux-Dube, then a member of the Supreme Court of Canada, wrote that where personal health information is made public, there are profound personal ramifications. She described it as “…an invasion of the dignity and self-worth of the individual, who enjoys the right to privacy as an essential aspect of his or her liberty in a free and democratic society.”

Yet most of us cling to the belief that it will be our decision alone whether or not to know and to share our personal health information — including genetic information. In reality, it is not that simple. Canadian case law has shown us that there is no right to privacy under the Charter, although privacy interests may exist under sections seven and eight as developed in some of the “search and seizure” cases under the criminal law. This protection only covers government action and not the private sector. A person must show that he or she had a “reasonable expectation of privacy.” That is very difficult to prove in cases of employment where the health information, including the presence of a genetic predisposition to disease, is deemed necessary as a “bona fide occupational requirement.”

Our privacy laws in Canada, which cover the public sector, do not explicitly include genetic information as personal information. The Federal Personal Information Protection and Electronic Documents Act (PIPEDA) covers the private sector for data collection and storage of personal information, and accepts that health information is personal information that is covered under PIPEDA. Even though PIPEDA...
do not use the words “genetic information” in the section 2(1) definition of personal health information, the definition in PIPEDA is so comprehensive that such information, I believe, could be considered included.

While it is a debate for another day, I note here that there is real cause for concern about the ability and the willingness of the private sector to take the protection of personal data seriously. In her annual report last year, Jennifer Stoddart, Canada’s Privacy Commissioner, found that inadequate security protection of our personal data is common, and urged the government to make it mandatory for companies in the private sector to report any material data breach to her office.14

In an age in which privacy is so easily violated, and when laws do not protect us from discrimination on the basis of genetic predisposition, I believe we need stronger, not weaker, privacy laws governing personal, health, and genetic information to protect ourselves from discrimination and to protect our personal and family privacy. I have argued for some time that because genetic information is so sensitive, we should have it stored securely and separately from our regular health records. Access should be granted only with our permission and only to designated persons, such as our own doctor or on a need-to-know basis only.

Why is it important to guarantee privacy of health care records generally and records on genetic health in particular? Because health information (and genetic information even more so) carries with it the power to label us forever. In labeling us, it carries the power to marginalize us, to sideline us, to make us strangers in our own communities, even our own families. People who think this is an exaggeration need not limit themselves to genetic disease. Think what happened, indeed still happens, to people with HIV/AIDS. There are lessons for us to see, and options for us to choose to protect our privacy and that of our families.

Genetic Information and Access

The third area involves the question of whether there is a right to know a family member’s genetic information. At its most basic level, genetics is about heredity. It tells not just our own story, but the story and most important secrets of our parents and grandparents, brothers and sisters, and about our children as well. The fact that medical conditions run in families means that the information we learn about the human genome will open a Pandora’s Box over which, as yet, we have not even begun to craft legal safeguards. What kind of power does that give those with the technology and skills to identify our genetic make-up through genetic testing?

Right now, such testing is limited by cost and by our current state of knowledge about the role of individual genes. However, the practice of genetic testing can occur at any stage of life — from conception, in the womb, at birth, in childhood, and in adulthood. These modern diagnostic genetic technologies, now at our disposal, offer tools of potential and actual discrimination as powerful as any we have ever known. How will we handle this new situation? What rules should apply? As importantly, who will decide who has access to this information and for what purposes?

We do not know yet what each gene does, but researchers have had great successes. Hundreds of genes that are linked to a particular disease or condition, physical, mental and social, have been identified. Now, selectively at first, but more widely as our genetic testing capacities grow, we can learn what fate has written for us in our genes. Why is this important? How will it affect what you will have to handle in the future? We should be concerned because genetic testing allows us to identify, after as well as before birth, those among us who are predisposed to genetic diseases and conditions. Think what that will mean to many of your clients who cannot work or are in need of insurances or education or retraining options to return to work. Already the governments and companies that have laid claim to these genes through patents are planning genetic testing kits and further research. What happens then?

Should we encourage genetic testing? Who should we ask to be tested and for what conditions? What conditions are serious enough to warrant attention? Color blindness? Deafness? Alzheimer’s? Who decides what genetic conditions will be tested for, and on what basis will be one of the most hotly debated questions of the coming decade?

These are tough enough questions for your clients who want to return to work and have perhaps already been labeled one way or another throughout their working lives. What if your client only carries a late onset condition that manifests itself, if at all, when he is older, likely after he is retired? Should he be able (or be required) to use genetic testing now, when he is younger, to find out what his fate might be when he reaches middle age? Should he be able to make that decision for his children? How do our rules governing consent apply here? How can children be protected from future discrimination on the basis of their genetic heritage by decisions taken now by their parents?

The answers to these questions are important — they are society’s, not just science’s, to make. The social and economic ramifications of this information on
your clients are huge. You know, from your own counseling and work experiences and those of your clients, that knowing this information will label people (for good or for bad) by their family, their friends, and even by strangers in their own communities. Not all of their attitudes will be supportive and generous. It is easy to be open and inclusive when we are all healthy. But think about how society responds to conditions like HIV-infection, or cancers, or serious physical or mental disability. Are we as welcoming and generous then?

One very important question in all this is: “Who should have access to your genetic information and for what purposes?” We would probably agree that our doctor should, but what about life or private health insurance companies? Should they require a genetic test as part of the medical examination needed to qualify for these various insurances? What about banks? Should they be able to require genetic testing as a pre-condition to lending you money or providing you with a mortgage? What about teachers working with students in our schools? Should they be granted a privileged status when it comes to knowing the genetic make-up of their students? This has been heightened by suggestions that anti-social and destructive sociopathic behavior can have a genetic basis. Some are demanding access to testing as a way of protecting teachers and students alike when they are at school.

In all this, can our privacy laws meet the challenge? The answer is certainly not as they are now. I have argued, and will continue to do so, that Ottawa and the provinces have an obligation to amend their human rights laws to include “genetic predisposition” and “genetic condition” among the enumerated categories of discrimination. I find the U.S. model, passed in May of this year, to be of considerable merit. We will want to consider it as part of our own legislative responses.

The U.S. Genetic Information Nondiscrimination Act (GINA) prohibits genetic discrimination by employers, insurers, and unions. Under the new law, employers will not be able to hire, fire, promote, or compensate an employee on the basis of genetic tests. Health care insurers will not be able to determine their coverage, premium rates, or increases using genetic testing information that indicates a susceptibility to a genetic disease or condition. Unfortunately, though, long-term care and life insurance are not covered under this health care provision.

Several states in the United States have some legislative measures to protect genetic information in the employment and health insurance fields. This new law will set a national standard and show federal leadership on a problem that affects a growing number of Americans, many of whom have refused to have genetic testing done for fear that they or a member of their family, would suffer discrimination if they did. That fear has led to the rise of Internet genetic testing services, unregulated and offered without counseling.

All of you who are counselors would know what that means. Imagine being told that you carry the gene for a disease like Cystic Fibrosis, Duchenne Muscular Dystrophy, breast cancer or ovarian cancer, and being unable to seek counseling for fear that you would lose your job or your health, life, or other insurances. Unfortunately, for some reason, the GINA law does not cover the regulation of the genetic testing industry, which is a growing multi-million dollar industry. Canada must be sure to address this issue when we amend our own laws. The provinces must agree to cover the cost of actual genetic testing as part of our provincial health insurance plans.

Finally, genetic information, no matter how it is gathered (by genetic tests or personal family medical histories) is special information that labels people who are well now and may become ill later in life. The purpose of acquiring and using this information has to be to benefit the person involved in an effort to ensure treatment for them. In a country like ours, there is no room for discrimination and exclusion based on genetic information.

We have seen how law and the courts address these issues, but what about your own profession? How would the concerns I have expressed this morning about genetic information and its special nature be treated in the context of your own code of ethics? I would like to conclude by looking at this question.

The word ethics has many meanings depending on the context. In the context of your work, it can mean "morally correct" or "honorable" behavior. It can refer to a “set of moral principles” fueled by religion or a noble secular code. Regardless of the exact definition you accept, the ethical rules of conduct are at the heart of your association’s ethics code and professional mandate. Indeed, your own code of ethics states: “Codes of professional ethics identify those moral principles and standards of behaviour [sic] that professions, institutions, and organizations believe will assist them in distinguishing between right and wrong, and ultimately in making good moral judgments.”

This will be our starting point. Ethical principles are not passive norms. They are dynamic and important tools upon which we guide our actions and decision-making. Indeed, I would argue that the the fundamental spirit of respect and caring, which is the philosophical basis of the Canadian Code of Ethics for the Vocational Rehabilitation Association of Canada, imposes specific obligations on all of you.
Take the first ethical principle of your professional association, namely respect for the dignity and autonomy of persons. Right now, you, as members of the Vocational Rehabilitation Association of Canada, agree to place this ethical principle of respect for the dignity and autonomy of persons at the top of the pyramid of ethical considerations in your decision-making and problem-solving with clients. You agree that this is such an important ethical obligation that you state clearly that it can only be set aside, “in circumstances in which there is a clear and imminent danger to the physical safety of any person.” 16

What does this mean in the current context of genetic testing, which risks affecting the long-term health and the current privacy rights, human rights, and everyday life of both your client and his or her family? How each of you answers that question or defines this respect for the dignity and autonomy of a person will have real repercussions on how you meet the second ethical principle of the VRA, which requires members to care responsibly “for the best interest of persons.” What are their “best interests” when it comes to genetic testing in the employment and insurance context? Is it the fact that they will actually know whether or not they are genetically predisposed to a certain disease?

On the positive side, then, if they do learn their genetic information, then they can exercise their autonomous choices to accept or undergo medical therapies to cure or control the manifestation of the disease carried in their genes. In such a case, genetic testing would seem to be an ideal, perhaps even the best, solution for your client. Are there other equally compelling factors that you must consider when looking at whether or not a genetic test is in the “best interests” of your client? What about their privacy and need or desire for confidentiality about their genetic story? Genetic information is special information that can exclude your clients from future jobs, health and life insurance, educational, or financial opportunities.

Determining what the interests at stake are for your own client in terms of genetic testing is essential to help you meet your profession’s first ethical commitment, which is to maintain “respect for the dignity and autonomy of persons.” Even today, in all of your work, there are third parties to consider, including family members of a client who have their own worries and needs. Your code of ethics suggests that in situations involving third parties, “there is not one right or wrong answer, but rather the issue is how to manage the ongoing relationships in respectful and caring ways.” 17

That is a logical common sense approach. Family, after all, can give much-needed support to a client under your management. How does this help you counsel a client in situations where access to genetic information can affect the livelihood and career of innocent third parties in a real and detrimental way?

In your work, you know the importance of family support and encouragement. What happens when genetic information, its collection, identification, and use negatively affects the personal relationships your clients enjoy with other members of their families?

In genetic testing, this dilemma arises when one family member agrees to be tested while others in the family do not, either because they do not want to know or because they do not want to be specifically identified as being sick or predisposed to a genetic condition. Once this information is known, the reality is that there is nowhere to hide for family members who have not been tested. In these situations, there are not too many options. They can pretend they are unaffected, which is small comfort when the odds are they are indeed carriers as well. They can undergo genetic testing themselves, against their preference not to, in order to prove that they are not carriers of a particular gene.

What about children? Who decides for them? The question of who consents for children in these cases may seem unrelated to your work as vocational rehabilitation professionals. Is it? When you work in the future with clients who have agreed to genetic testing, you are automatically working with an entire family. These are some of the questions that genetic testing raises for you personally and for the Vocational Rehabilitation Association. All of these questions will challenge, in practice, the ethical principles that mark your decision-making and work.

How would I recommend that you address these issues? I spent a year in the United Kingdom recently studying and undertaking research in my field. In offering some suggestions for your group to consider, I refer you to a report by the British Human Genetics and Advisory Committee (HGAC). 18 Among its recommendations, the report proposed that the government and the public prepare for the day in which genetic testing in employment is possible and current. Even though such testing is not common among employers now, there is no doubt that the practice will develop as the science surrounding genetic testing and knowledge improves.

While not dismissing the possible use of genetic testing in the workplace, the HGAC insisted in its report that it be used restrictively and in very specific circumstances. What might these circumstances be? Genetic testing would be allowed if an employer were able to show that this would protect employees and workers. Such bona fide situations could include testing to detect any condition that may put the employee or others at risk in the workplace or to assess, whether a specific variation in an employee’s or worker’s genetic make-up affects his/her susceptibility to disease while working in a particular type of employment or environment. This, at the same time, has been shown to represent no hazard to most employees.

I agree with the HGAC’s recommendation that genetic testing should not be used to provide information about a condition or a predisposition to a condition, which might lead to more absences for sickness. Other options will need to be found to ensure that employers are not overly burdened
financially as a result, and that the job is done regardless of the need for extended absences by an employee or worker. It would not result in fairness if preserving one person’s rights in this case adversely affected the health and rights of colleagues who were required to take up the slack.

Finally, someone has to monitor all of this. I vote for an existing public agency with one caveat — the oversight body must be broadly representative of government, labor, and business. It would also be helpful to have access to health professionals and scientists working in the field of genetics and genetic testing, to offer guidance and to ensure that decisions are reasoned and based on sound medical and scientific evidence.

This week, you will have an opportunity to address your code of ethics in an attempt to make it more current to meet modern challenges that science and technology force us all to face. I hope that you will consider this aspect — that of genetic testing in the context of employment and insurance so that you will be ready to play the advocacy role essential to establishing fair and just rules for workers in this area.

As you discuss future policy action the Vocational Rehabilitation Association of Canada will undertake in the months ahead, I urge you to consider lobbying both the federal and all the provincial governments to amend their human rights laws to expressly prohibit discrimination in the workplace and insurance on the basis of a genetic predisposition to an illness or disease that has not manifested itself — and perhaps never will.

Science and society must work in tandem to achieve real progress. This is why I have spoken out over the years to encourage greater involvement by the public in the discussion of the issues science raises for society. In this case, for instance, you and I must learn enough about what science is doing to be able to understand and review its developments and discoveries. Science does not operate in a social vacuum. Nowhere is that more so than in the area of human genetics. The legal, social, cultural, and ethical challenges will remain and become more complicated as science does what it does best — pushes back the frontiers of ignorance and superstition and discovers solutions to the toughest medical and scientific questions of our time. You and I may not be equipped to find the cure to deadly cancers or build whole organs from our individual cells, but we have other skills, experience and intelligence that we must add to the public debate and the crafting of public policy. We must use these to build public confidence and understanding of the nature of the challenges ahead of us as we balance science’s potential and society’s individual and collective rights.


2 The following definitions are useful for the issues discussed in this speech. Genetic testing — testing to detect the presence or absence of, or alteration in, a particular gene sequence, chromosome or a gene product, in relation to a genetic disorder. Diagnostic genetic testing — use of genetic testing in a person with disease symptoms to aid in their diagnosis, treatment and management. Presymptomatic genetic testing — testing of healthy or asymptomatic individuals to provide information about that individual’s future risk of certain specific inherited diseases. Such a test may indicate that the individual has a higher likelihood of developing a disorder. Presymptomatic genetic testing is most frequently offered to those thought to be at high risk of autosomal dominant disorders such as Huntington’s disease. Carrier testing — testing of unaffected individuals to determine whether they are carriers of a gene for a recessively inherited disorder (e.g., cystic fibrosis) and are thus at risk of having an affected child. Susceptibility testing — testing which provides information about a genetic component in a multifactorial disorder. Multifactorial disorders are disorders whose genetic components are not the sole cause, but which work with other, often environmental factors, in determining a disease outcome. Multifactorial disorders include many cardiovascular diseases, most Alzheimer’s disease of old age and most forms of diabetes. Genetic screening — a term used to denote the application of genetic tests to populations of people, who individually are not at particularly high risk. In contrast, genetic testing of individuals is undertaken when there is some specific prior reason to suspect that the person being tested may be at higher than average risk of carrying the gene change being tested for. See Human Genetics Advisory Commission Papers: The Implications of Genetic Testing for Employment, available at http://www.advisorybodies.doh.gov.uk/hgac/papers.htm. (defining a variety of genetic tests and terms cited in this speech).

on genetic discrimination in employment and insurance, a list of reports on genetics and discrimination and on recommendations by the NHGRI on discrimination in employment and insurance).
5. 1 S.C.R. 4977 (Can.) (1999).
6. Id. at 51.
11. The Charter does not include privacy, but Canadian Courts have recognized that in certain cases in the public realm that there can exist a reasonable expectation of privacy. For cases that have dealt with the Canadian Personal Information Protection & Elec. Document Act, see the Canadian Legal Information Institute, available at http://www.canlii.org (last visited Oct. 27, 2008).
16. Id. at 7.
17. Id.

Additional References

6. FACULTY OF OCCUPATIONAL MEDICINE, GUIDANCE ON ETHICS FOR OCCUPATIONAL PHYSICIANS, (5th ed. 1999).