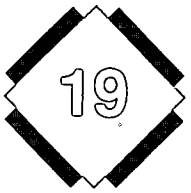

Infertility Treatments: Assisted Insemination

Assisted insemination is the oldest known remedy for women who do not have a male partner who is fertile. Although in its commonest form it is a relatively simple procedure, the social and ethical implications of AI* are potentially as significant as those of other more technically complex assisted conception methods. AI can be used in quite different situations — the sperm can come from the woman's husband or partner, or it can come from a donor; the woman can be married, single, or a lesbian; the procedure can be performed by a doctor in a medical setting or by the woman herself or with the assistance of her partner.

The Commission's investigation of AI found that the practice is worthy of much more scrutiny, assessment, and policy attention than our society has afforded it in the past. We found that researchers and commentators have often neglected AI in favour of more technologically complex infertility treatments, perhaps perceiving AI as a simple practice that is adequately monitored and controlled. The Commission's examination of AI and the issues it raises showed that this is not the case.

We discovered that the lack of enforceable regulation and inadequate monitoring of the practice of AI have the potential to endanger the health of AI recipients, their partners, and their children; that inadequate record keeping is making it impossible to meet the current and future needs of AI children and their families for information; and that families formed through assisted insemination exist in a legal vacuum in most provinces, with the potential for conflict and distress if disputes over a child's parentage, custody, or inheritance arise. Our examination of the current

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* In this text, "AI" is used to indicate all forms of assisted insemination (insemination using donor sperm, assisted insemination using the partner's sperm, intrauterine insemination using donor or partner sperm, and self-insemination using donor sperm). The specific terms are used when only one form of AI is referred to.

situation with respect to assisted insemination thus led us to conclude that the issues and concerns it raises for Canadians individually and as a society make it imperative to include the practice within the comprehensive licensing, monitoring, and record-keeping framework we propose for reproductive technologies, under the oversight of the National Reproductive Technologies Commission.

We begin this chapter with an examination of the social context in which AI is practised, then assess its past development and current practice. Next we examine issues that arise from the three stages in the process — sperm donation and banking; the clinical practice of insemination itself; and concerns about families formed through assisted insemination. (For details on the Commission's research in this area, see research volume, *Treatment of Infertility: Assisted Reproductive Technologies*.) We go on to lay out a comprehensive framework for the safe and effective delivery and monitoring of assisted insemination in Canada in a way that protects the current and future health and well-being of AI recipients and their families.

The Views of Canadians

AI involves personal decisions for the participants, but it also has broader implications for society. To reach a better understanding of the social context for AI in Canada, the Commission conducted two national surveys, each involving a representative sample of Canadians. In total, the views, attitudes, and opinions of more than 3 500 Canadians were gauged in personal interviews, telephone surveys, focus groups, or written questionnaires. The social context for donor insemination was also illustrated by the views and opinions conveyed in public hearings, private sessions, and written submissions, which gave the Commission the opportunity to hear from DI recipients, their partners, and their families, as well as from donors, AI practitioners, and others involved in the delivery of AI in Canada. We also heard a wide range of views from groups representing the interests of women, medical professionals, lesbians, churches and religious groups, legal professionals, and others interested in this field.

> It is very important that gamete banks be established in accordance with federal regulations ... to overcome problems related to the quality of donor gametes, the selection of donors, and accessibility generally.
>
> *J. Dillon, Canadian Bar Association, Public Hearings Transcripts, Vancouver, British Columbia, November 27, 1990.*

Many of the issues identified through these activities are echoed throughout this chapter: concern about the use of donor sperm and its implications for offspring and families; differing opinions about whether single women and lesbians who want to have children should have access to AI; and questions of how to maintain safety while ensuring broad access. AI has been performed for much longer than newer techniques such as IVF. It is only as it has moved from being a socially hidden to a more socially acceptable practice, however, that these issues have surfaced in public discussion. The public debate was also further focussed by Commission findings that some physicians and fertility programs are not adhering to existing professional guidelines intended to prevent the transmission of HIV, the virus thought to cause AIDS, through donor sperm. These findings were made public in April 1993 before our final report was released. The Commission also wrote at that time to provincial colleges of physicians and surgeons, whose mandate is to protect the public interest, to urge them to act in the interim before our report and its recommendations became public, so that women's health would not be put at risk by use of unsafe sperm.

> With the increasing incidence of AIDS in our society ... we have to recognize that [AI] ... can pose a risk to the health of the prospective mother and her baby.
>
> *K. Arnup, private citizen, Public Hearings Transcripts, Toronto, Ontario, November 20, 1990.*

Our surveys showed that Canadians generally support the use of AI to help a couple having difficulty conceiving, although opinions varied when the use of donor sperm was mentioned. Almost all survey respondents found AI using the male partner's sperm acceptable, but when asked about using donated sperm to help a couple who have difficulty having children, 58 percent of Canadians approved of DI use, and 22 percent were opposed. When asked if they would be likely to use sperm from a sperm bank if they were in this situation themselves, 47 percent said they would.

As mentioned in the introduction to this section, we also made deliberate efforts to solicit the views of Aboriginal people and Canadians who are members of racial or ethnic minorities in roundtable discussions and focus groups. From these we gained insights into the cultural values that affect how people see DI — we learned, for example, that many Aboriginal cultures emphasize passing on one's spirit to the next generation through one's children. We also heard from people in these communities who spoke about the importance of continuing their "family line" (see research volume, *Social Values and Attitudes Surrounding New Reproductive Technologies*).

As part of our national survey, the Commission also asked men whether they would consider donating sperm. We found that 26 percent would be very or somewhat likely to donate sperm to a sperm bank, while

73 percent would not be likely to donate. Twenty-five percent said they would consider donation if their identity was kept confidential.

Despite the issues and concerns it raises, we found general support among Canadians for AI as a reproductive option. Many women and couples impressed upon the Commission that DI had given them the chance to experience parenthood and have children, and they urged the Commission to ensure that DI remained a reproductive option. Some spoke about DI as a way to avoid passing on genetic disease and to make parenthood possible for couples who would otherwise feel they could not have children. Single women and lesbians told the Commission about how DI helped them form families. Many witnesses also pointed out that DI is non-invasive, inexpensive, and relatively low-tech when compared to other methods of assisted conception.

> Sperm donation and alternative insemination are non-invasive, low-risk procedures ... The technology is easy to use, cheap, and versatile, making decentralized and non-specialist use easily available.
>
> *S. McDonald, Ontario Advisory Council on Women's Issues, Public Hearings Transcripts, Toronto, Ontario, October 29, 1990.*

The Commission also heard concerns about how DI is practised and about its implications. The increasing incidence of HIV and other sexually transmitted diseases prompted concerns about the safety of the sperm being used, leading to calls for regulation and monitoring of DI while maintaining the accessibility of the procedure. Numerous groups had suggestions for regulating sperm banks and establishing mechanisms to ensure safe and ethical use of the procedure by AI practitioners. It was clear that most did not endorse a system based on commercial sperm banks but were looking to the government to control DI and sperm banking in Canada.

Canadians were concerned about record keeping and the needs of DI recipients and their children with respect to genetic, medical, and other information about donors. Issues such as the anonymity of donors and the lack or unavailability of records were raised, and the need for complete confidentiality of donor information was questioned. It was clear that many of those involved in DI, whether as donors, recipients, DI children, or practitioners, felt that the process of DI should become more open. Many saw a need to protect donor anonymity and familial privacy but were also cognizant of the expressed

> Abuses may be centred around the ... commercialization of sperm banks ...
>
> *R. Murray, Prairie Prolife of Portage la Prairie, Public Hearings Transcripts, Winnipeg, Manitoba, October 24, 1990.*

needs of DI families, especially of some children for information about their genetic origins. There were clear indications that Canadians see a need for record-keeping mechanisms adequate to accommodate the lifelong implications of DI. Many Canadians urged the Commission to look to the adoption experience for lessons about how to deal with the needs of children born as a result of DI.

Canadians were also concerned about the broad ethical, social, and legal issues raised by the use of donor sperm and the formation of families through DI. For example, the issue of access to DI was an important one for Canadians. Some saw insemination as a health service, with access to it falling within the scope of *Canadian Charter of Rights and Freedoms* and human rights legislation. Others saw it as analogous to adoption, so that the principle of the best interests of the child should determine access.

> [AI] using the sperm of an outside donor is considered by a majority of our members to be immoral and would conflict with their view of the sanctity of marriage and procreation.
>
> *H. Hilsden, Pentecostal Assemblies of Canada, Public Hearings Transcripts, Toronto, Ontario, November 20, 1990.*
>
> AI is acceptable between husband and wife; insemination where the sperm is brought from outside is not acceptable.
>
> *Brief to the Commission from the Muslim Women's Auxiliary, July 29, 1990.*
>
> The vitality and stability of society require that children come into the world within a family and that the family be firmly based on marriage.
>
> *Brief to the Commission from the Canadian Conference of Catholic Bishops, January 28, 1991.*

Perhaps the most controversial aspect of the practice evident in testimony before the Commission was the use of DI by single women and lesbians. This mirrors attitudes found in the Commission's national surveys. Many respondents were of the view that because DI gives women without a male partner the chance to have children, it devalues the role of males in relation to their children and deprives children of a father. Some respondents said that assisted conception should be limited to heterosexual couples because they felt the resulting child would be disadvantaged in other types of family settings.

At the same time, some Canadians pointed to constitutional and legal prohibitions on discrimination on the basis of single status or sexual orientation. Some witnesses stated that physicians control access to fertility clinics and that, given their attitudes, it is easier for married, heterosexual couples to obtain treatment. Commissioners heard specifically from single women and lesbians who described how they had

been denied access and thus discriminated against in the traditional medical setting.

The issue of medicalization of AI was raised, particularly when more invasive techniques of insemination with partner sperm were used. Some intervenors warned that doing this gives rise to other, more serious problems. We heard the view that it is inappropriate to treat women as the patients in AI programs, with the risks that entails, when in fact AI is a treatment for their male partner's infertility. On this point, we also heard that AI involving treatment of the partner's sperm and placement of it higher in the woman's reproductive tract may be the only way for such couples to have a child together; this is important to both partners and is the reason why women decide to undergo the more invasive treatment. Indeed, women who had had AI told the Commission that their main motivation was their own desire for children; pressure from a spouse or partner was a distant second, they said, and support or pressure from family and friends was of very little importance (see research volume, *Treatment of Infertility: Current Practices and Psychosocial Implications*).

> We are concerned that persons conceived of donor sperm ... may be cut off from any knowledge of [their] genetic parents by policies of confidentiality. We feel this may be harmful to them as it has been for many adoptees.
>
> *H. Kramer, Canadian Adoption Reunion Register, Public Hearings Transcripts, Toronto, Ontario, November 20, 1990.*

As alluded to earlier, the medicalization of AI has also created a situation in which medical practitioners are the gatekeepers of DI in particular, enforcing what they perceive to be community standards about family formation by establishing access criteria to it. There were also concerns that despite being viewed as within the medical sphere, some aspects of DI are in fact under-controlled and not monitored, so that the procedure is not as safe as it should be.

Finally, many Canadians pointed out that the law ignores the interests, roles, and responsibilities of DI participants, making such families vulnerable. Many linked this legal void to the secrecy surrounding DI, arguing that if the interests of donors, recipients, and children were better protected, the process could become more open (see the section on Secrecy in DI Families).

> Most Canadians see DI as an option that should be available, provided it is offered in a safe manner.

Emerging from this range of views and concerns was a distinct sense that most Canadians see DI as an option that should be available, provided it is offered in a safe manner. These views and the issues identified helped

form the basis for the Commission's research into assisted insemination.

Our decisions on these questions were not easily made. There were a few occasions, for instance, when our moral reasoning led us to conclusions that were not strongly supported by the responses to some specific questions in our surveys of Canadians. This kind of situation usually arose when a value that Canadians strongly endorsed and said was important to them, such as equality, was not upheld in answer to a question on a specific situation, such as whether single women should have access to donor insemination or whether people who are disabled should have access to IVF.

> Increasingly the use of all of the new reproductive technology is being limited to married or at least co-habiting heterosexual couples. Single women, whether they are heterosexual or lesbian, find themselves denied access to fertility treatment and to artificial insemination. And I am here today to suggest that it is critical that these technologies not be limited to a select population. I believe that access to AI should not be influenced by race, class, physical disability, marital status or sexual orientation.
>
> *K. Arnup, private citizen, Public Hearings Transcripts, Toronto, Ontario, November 20, 1990.*
>
> I urge you not to consider [AI] for lesbians and unmarried women ... Our Canadian society does not need more confused, emotionally deprived children.
>
> *Brief to the Commission from E. Kelly, December 17, 1990.*

We gave great thought to this dilemma. We were guided by and took into consideration what Canadians said about both their fundamental values and their attitudes toward specific issues, but they were not the only determinant of decision making in this complex area. Where there was a divergence on specific policy questions, we decided that our moral reasoning should have greater weight if it was in line with fundamental values endorsed by Canadians, because we had spent much time weighing the evidence and thinking through the implications of different policies on such specific questions.

History and Development of Assisted Insemination

Although AI has been known to human beings since early civilization, the first recorded insemination in women took place in Britain in 1793. American scientific literature indicates six women were inseminated with donor sperm in 1866, while the earliest recorded DI in Canada was in 1950 (although it was probably practised, unrecorded, before that time).

Techniques of Assisted Insemination

Assisted Insemination (AI): Includes all forms of insemination without intercourse using donor or partner's sperm.

Assisted Insemination Homologous (AIH): Term for AI when sperm from the woman's husband or partner is used. Also known as *Assisted Insemination by Husband.* AIH is used most frequently for oligospermia or when the woman has an immune response to the husband's sperm, since it allows the sperm to be treated to make it more likely to fertilize an egg. The sperm of the woman's partner is placed in the vagina, near the cervix, or in the uterus.

Intrauterine Insemination (IUI): Term for AIH when the sperm is placed in the uterus; it is the most common form of insemination in a site other than the vagina. Others include *peritoneal insemination (PI),* in the peritoneal cavity, and *synchronized hysteroscopic insemination of the fallopian tubes (SHIFT),* in the fallopian tubes. IUI is used for oligospermia thought to be caused by poor sperm mobility, or unexplained factors, or when there is a cervical mucus problem. The sperm of the woman's partner is placed in the uterus or fallopian tubes with a catheter inserted through the cervix. IUI is thought to increase the chance of conception by allowing the sperm and egg a better chance of contact.

Donor Insemination (DI): Term for AI when the sperm comes from a man other than the woman's husband or partner. Also known as *artificial insemination* and *assisted insemination by donor (AID).* DI is the only known way to circumvent azoospermia that is not caused by a male tubal blockage or ejaculatory defect. It is also used by couples in which the male is oligospermic and AIH is ineffective, or to prevent the transmission of a genetic disease carried by the male partner. DI is also used by women who wish to have a child but do not have a male partner. Sperm from a donor is placed in the vagina near the cervix.

Self-Insemination (SI): Term for DI when it is performed without medical assistance by the woman, her partner, or other non-medical support. Also known as *alternative insemination.* SI is used by women who cannot or choose not to take part in clinical AI programs. SI takes place outside a medical setting with no medical intervention. Donor sperm is placed in the vagina by the woman or her partner.

Today AI is used in several situations: when a woman's partner is infertile or subfertile; when both partners are subfertile; and when a woman without a male partner wishes to have a child. The procedure itself is simple: a fertile man's semen is placed in the woman's body using a syringe or other instrument, with fertilization, pregnancy, and birth following naturally if the procedure succeeds. AI can also be used to increase the chances of fertilization where male factor infertility (for example, low sperm count) has been diagnosed. Although it may not be possible to achieve pregnancy through sexual intercourse in these cases,

the chances of fertilization may be greater if the sperm is concentrated and enhanced, if it is placed in the woman's body at sites other than the vagina (such as the uterus or the fallopian tubes), if the woman is prescribed fertility drugs, or if a combination of these techniques is used. The term assisted insemination homologous (AIH) includes all these methods where the sperm is that of the woman's partner.

AIH is not an option if a woman does not have a male partner, if her partner is at risk of passing on a genetic disease, or if his infertility cannot be treated through sperm enhancement techniques. Women and couples in these situations may choose to bypass these problems by using donor sperm.

In addition to women whose partners are infertile, single women or lesbian couples who want to have children have also looked to DI. They have found that marital status or sexual orientation is sometimes a barrier to services. As a result, single women and lesbians in some cities have set up alternative DI systems. The women obtain sperm from friends or other donors and do the insemination themselves; known as self-insemination (SI), this practice carries its own risks and societal concerns.

An important development in the history of AI was the discovery that sperm can survive freezing. Fresh sperm can live only a few hours outside the body, and then only if kept at a moderate temperature,[1] but semen frozen in liquid nitrogen (cryopreservation) can be kept indefinitely. The first successful insemination using thawed human sperm occurred in the 1940s.

Cryopreservation opened the door to sperm banking; sperm samples are frozen at a central location, then shipped to practitioners and thawed for use when required. Two types of sperm banks emerged — those affiliated with medical schools and hospital fertility clinics (which usually collected and stored sperm solely for their own use), and private banks operating at a profit by selling sperm to AI practitioners. The first large sperm banks appeared in the United States in the 1970s. Because donors to these banks are recruited from a wide geographic area, couples may be able to use sperm from a donor whose physical features are similar to those of the husband or partner, or from a donor with the same racial or ethnic characteristics. Some sperm banks also offer recipients a choice of donors with above-average intelligence, certain levels of schooling, or professional status, reviving the debate about selective breeding.

While the U.S. experience with DI was defined by private enterprise in the 1970s, the same decade saw the emergence of government-sponsored programs in some other countries, for example a sophisticated government-regulated system in France. The Centre d'étude et de conservation des oeufs et du sperme humains (CECOS), a self-regulating group of clinics, was established in 1973 to license sperm clinics according to rigorous standards of practice, recently incorporated into national legislation. Costs of AI when performed by licensed clinics have been covered by France's state-funded social security since 1978.

The current practice of AI in Canada has emerged as a combination of publicly supported and private, for-profit services. Donor sperm is collected by hospitals, by doctors in private practice, and by commercial sperm banks. Inseminations are performed in hospital-based fertility programs, by private practitioners, and in private fertility clinics, as well as through the alternative networks mentioned earlier. The insemination procedure is covered by provincial health insurance in half of Canadian provinces, although costs for donor sperm and cryopreservation may be charged directly to the recipient. Many hospital-based DI programs collect and store donor sperm in-house, but the majority of private fertility programs buy donor sperm from commercial sources. There are four major commercial sperm banks in Canada — Repromed (Toronto), Gamete Services (Toronto), the University of Calgary, and L'Institut de Médecine de la Reproduction de Montréal Inc. — and several U.S. banks will ship sperm to Canada. A Commission survey of Canadian fertility clinics found that Repromed is the most frequently used commercial source of sperm.

The current practice of AI in Canada has emerged as a combination of publicly supported and private, for-profit services.

In the past 15 years, professional medical associations in Canada and the United States have become concerned about the safety of AI practice. In 1980, the American Fertility Society published the first guidelines for insemination. The first Canadian guidelines, *Storage and Utilization of Human Sperm*, were published in 1981 by Health and Welfare Canada. Today, many professional associations outline specific safety guidelines for every step of the process, and both the American and Canadian fertility societies (representing practitioners involved in fertility treatments) updated their guidelines for DI practice in 1993. However, these guidelines remain voluntary; as the evidence will show, they are not uniformly adhered to, and some practitioners are not even aware of them.

AI in Canada: Current Practice

Of the 24 assisted insemination programs across Canada, 19 are offered at teaching hospitals, while five are located in other hospitals and private clinics. The Commission found that about 3 400 women used these services in 1991, more than any other infertility treatment procedure offered in Canada. AI is also offered by family practitioners and obstetricians; data on the number of women treated in these settings are not available, in some

AI is a solution in practice for many more couples who are infertile than IVF is and affects far more children and families.

cases because no records are kept, and because no mechanism exists to identify individual AI practitioners and collect information from them.

Although the Commission conducted a survey of all these clinics and of a small sample of AI practitioners in the community, it was not possible to obtain a good estimate of the number of children born as a result of AI in this country. Our 1991 survey found, for example, that 778 DI pregnancies were recorded by Canadian AI services, but this is an underestimate because many clinics do not record pregnancies or births — some do not even keep an exact count of the number of women treated, instead counting only the number of treatment cycles. While medicare billings give some information on how often AI is used in the provinces where it is an insured service, that system generally does not differentiate between DI and AIH and does not link AI to pregnancy care and birth. If both inseminations at clinics and those occurring in informal networks using self-insemination are included, estimates are that between 1 500 and 6 000 DI children are born each year — that is, between 0.4 and 1.5 percent of all children born in Canada. This is many more children than are born through *in vitro* fertilization (about 400 in 1991) — in fact between 4 and 15 times more. Thus, AI is a solution in practice for many more couples who are infertile than IVF is and affects far more children and families.

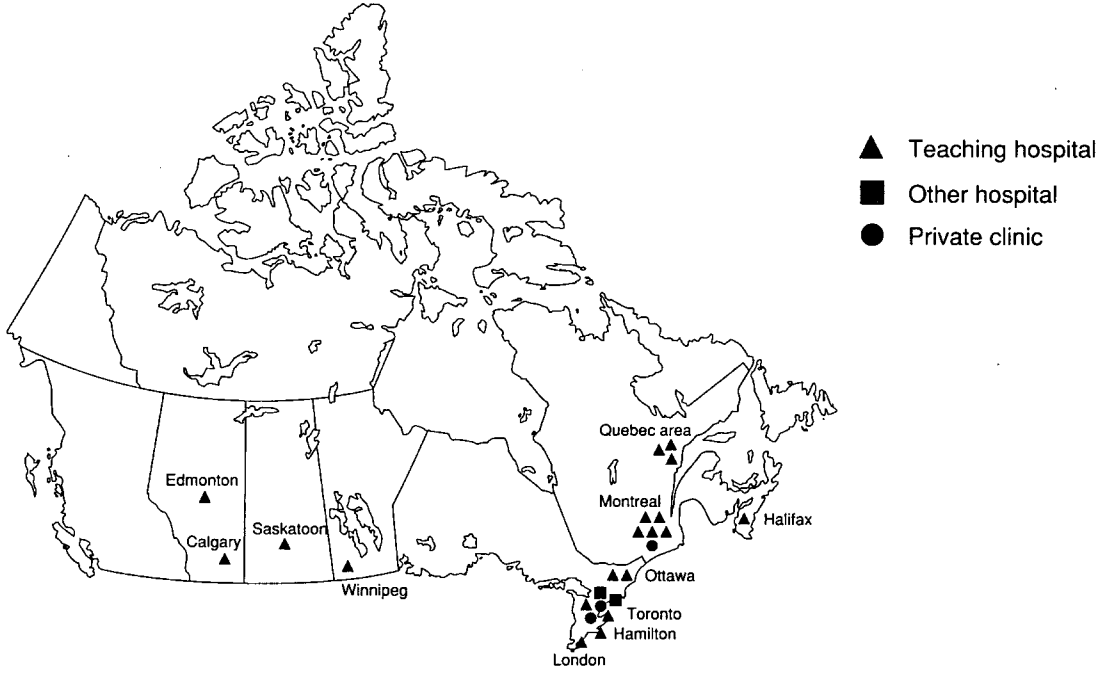
Azoospermia: Absence of living sperm in the semen.

Oligospermia: Scarcity of sperm in the semen.

The details of insemination practices vary, but sperm banks, clinics, and solo practitioners (doctors who offer DI in their own offices) must go through the same three basic stages. The process begins with the collection of donor sperm. Canadian sperm banks usually recruit donors through university newspapers or physicians' personal contacts. The currently recommended standard screening process for donors begins with a personal medical history, family history, and social history, including collection and recording of both identifying and non-identifying information. Non-identifying physical information includes such aspects as height, weight, age, build, eye and hair colour, complexion, and ethnic background. Potential donors are given a physical examination, blood samples are taken, and candidates are asked to provide a semen sample.[2] Only about 15 percent of potential donors are accepted; the most common reason for non-acceptance is that their sperm does not survive freezing and thawing well, but some donors are rejected because they are at risk of passing on. an infectious or genetic disease.

Blood and semen samples are sent to a laboratory for analysis, including sperm count, analysis of sperm shape and motility, and testing for sexually transmitted infectious diseases. The rest of the semen is cryopreserved in "straws" (small glass tubes each holding about one-tenth

Figure 19.1. Location of AI Programs in Canada, 1991



Source: Adapted from Stephens, T., and J. McLean. "Survey of Canadian Fertility Programs." In Research Volumes of the Royal Commission on New Reproductive Technologies, 1993.

> There should be no restrictions on access to [AI] apart from medical reasons, that is, no criteria or requirement that married women have permission of spouses and no exclusion of women for sociological reasons.
>
> *C. Micklewright, British Columbia Federation of Labour, Public Hearings Transcripts, Vancouver, British Columbia, November 27, 1990.*

of the sperm from an average ejaculation) and held in reserve. If the initial test results do not identify a problem, the frozen samples are kept aside until the donor can be tested again a few months later. If antibodies to HIV[3] are not found in the donor's blood at this time (they can take six months or longer to develop), the frozen semen is then considered acceptable for insemination. Professional guidelines recommend that donors continue to undergo blood and semen tests every three months for as long as they continue donating, with the semen being kept aside until results are available. Sperm considered acceptable for insemination is labelled and kept frozen until a practitioner requests a sample; currently, only physicians can obtain donor sperm from Canadian sperm banks.

The donor sperm used in fertility clinics is obtained either from in-house sperm banks or from commercial banks. Two AI programs (2 of 33) told the Commission they allow relatives or friends of the patient to act as donor. If the donor sperm is provided by the clinic, recipients can exercise some choice based on non-identifying information — usually, the donor's physical characteristics are matched as closely as possible with those of the woman's partner. Patients pay a fee for each straw of donor sperm, and there are additional charges if the type of sperm is in short supply (such as sperm from an ethnic minority donor) or is shipped from the United States.

At most clinics (12 of 18) the recipient is asked to sign forms giving her consent for the practitioner to perform AI. At half (9 of 18), her spouse must also give consent. In cases of DI, the woman's spouse is usually (14 of 18) asked to provide written acknowledgement of the insemination. Without this consent it would be possible for him to contest his paternity after the child is born. As we discuss later, this is among the legal issues raised by DI.

Women undergoing AI may have an infertility work-up to verify their fertility, and they may also be prescribed fertility drugs to ensure that they ovulate and to make the time of ovulation easy to pinpoint. The woman is then asked to chart her ovulation cycles. When a woman determines that she is ovulating, she alerts the clinic or her practitioner. If her partner's sperm is being used, a sample is collected and may be treated or enhanced to increase the chances of fertilization. If donor sperm is being used, a sample is thawed and prepared for use; it is allowed to liquify (this takes about 10 minutes) and must then be used within the next two hours. The semen is usually placed in the woman's vaginal canal with a sterile syringe

or in a small cup that covers the cervix and is left in place for about four hours. The woman may lie with her pelvis elevated for 30 to 40 minutes. The procedure is usually done the day the woman ovulates and repeated one or two times in the few days that follow. This process is referred to as one "treatment cycle." If pregnancy is achieved, the clinic or practitioner usually has no more involvement with the woman or couple.

Effectiveness of AI

In some treatment programs, about 60 to 70 percent of women inseminated with donor sperm become pregnant within six treatment cycles — this is about the same as the natural pregnancy rate (see Figure 9.1). Other clinics say that 30 to 40 percent of inseminations result in pregnancy within six cycles. Obviously, the success rate at any given clinic will depend on the ages of the women treated and on what proportion of them are subfertile (in addition to their partners being oligospermic). Nevertheless, the likelihood of having a live birth after donor insemination is much greater than for IVF. By contrast, the pregnancy rate after AIH depends on the male partner's diagnosis and the method used to treat the sperm or inseminate the woman; some studies have shown that AIH is of little benefit in achieving pregnancy.[4] Currently, it is not standard practice to follow up once pregnancy is achieved or to record the number of children born after DI. Our survey showed that many clinics left it up to the sperm bank to keep records about donors and recipients and that each sperm bank has different standards of record keeping. The Commission found that the number of inseminations allowed from one donor varies widely, and the number of inseminations may not be recorded or tracked. No central records are kept about the number of inseminations or children born per donor, pregnancy outcomes, or the health of children born after AI.

The likelihood of having a live birth after donor insemination is much greater than for IVF.

The Commission assessed each form of assisted insemination (AIH, IUI, and DI) for both risks and effectiveness.

Effectiveness of AIH

AIH is the most medically complex form of AI, although it raises fewer social and ethical concerns, as only the couple's gametes are involved. If a semen analysis identifies a problem with the male partner's sperm,[5] the sperm can be treated by various methods aimed at enhancing its ability to fertilize the egg. The treatments include

- sperm washing, the most common procedure, which is used to separate viable sperm from other elements of the semen, such as prostaglandins, antibodies, and micro-organisms, and concentrate viable sperm into a smaller volume;
- sperm swim-up, also known as sperm rise, which is used to concentrate the most highly motile sperm; and
- drug treatments, such as the addition of caffeine or other stimulants to the semen sample, in the hope of improving sperm motility. Antibiotics may also be used to eliminate bacterial infection.

Treated sperm are usually placed directly in the uterus rather than in the vagina or near the cervix because the volume is very small and, it is reasoned, closer access to the fallopian tubes may help to compensate for this. However, it is not clear whether these treatments in fact increase the likelihood of having a child, and there is no evidence from suitably controlled observations that it is effective. AIH has a clear role in cases where the male partner has a spinal cord injury and intercourse cannot occur, but, apart from this, there is not sufficient evidence to conclude that sperm treatments are effective either in increasing sperm motility and function or in increasing the probability of conception.

In addition to treatments aimed at enhancing the viability of the sperm, insemination can be performed in such a way as to increase the chances of fertilization by mixing the partner's sperm with donor sperm, allowing the possibility that any child born could be genetically linked to the male partner. This is no longer considered good practice as it creates ambiguity about the child's parentage. Other adjuncts to AIH may include the treatment of the woman, either with fertility drugs or with different methods of insemination, because in some couples both partners may be subfertile.

Risks and Effectiveness of Intrauterine Insemination and Related Techniques

Insemination in the uterine cavity may be used in some cases of poor sperm motility or low sperm count, for a cervical mucus problem,[6] or where the sperm may be prevented from ascending to the fallopian tube. As outlined above, the sperm is usually treated first. The Commission found that 20 percent of couples with unexplained infertility undergo IUI as their first treatment in fertility clinics (see research volume, *Treatment of Infertility: Current Practices and Psychosocial Implications*). IUI may be done using natural (unstimulated) cycles or may be used in conjunction with fertility drugs, the rationale being that if more than one egg is released from the ovaries, this may increase the chance of pregnancy. IUI carries a small risk of complications such as cramping, allergic reaction, fever, shock, or infection.

Research comparing the effectiveness of IUI for couples with unexplained fertility with that of sexual intercourse timed to coincide with ovulation has failed to demonstrate any benefit to using IUI, although weaknesses in study design limit the reliability of these results (see research volume, *New Reproductive Technologies and the Health Care System: The Case for Evidence-Based Medicine*). When intrauterine insemination is conducted in conjunction with drug therapy using hMG (see Chapter 18), there is some evidence that it is more likely to be effective, but, again, methodology problems with the studies render the evidence inconclusive. This is an important area for further study; at present there is simply not enough evidence to categorize intrauterine insemination as effective or ineffective, either with or without fertility drugs.

At present there is simply not enough evidence to categorize intrauterine insemination as effective or ineffective, either with or without fertility drugs.

Cervical Mucus Incompatibility

The cervix, at the entrance to the uterus, secretes mucus throughout the menstrual cycle according to hormone levels in the woman's body. During most of the cycle, the mucus creates an acidic barrier preventing bacteria, sperm, or other foreign substances from entering the uterus. Sperm that encounter the mucus die within a few hours. In response to increased estrogen produced around the time of ovulation, however, the mucus changes to "mid-cycle mucus," becoming much thinner and more hospitable to sperm. For up to three days, this type of mucus is produced and facilitates sperm movement into the uterus and toward the egg. After ovulation, the mucus goes back to its acidic state.

In some cases, inadequate mid-cycle mucus can impair fertility, especially in cases where the sperm is of low motility, and sperm die before entering the uterus. IUI is meant to circumvent this problem by bypassing the cervix and depositing the sperm directly inside the uterus.

Evidence is also lacking about the effectiveness and risks of two related techniques — peritoneal insemination (PI), in which semen is injected into the peritoneal cavity, and synchronized hysteroscopic insemination of the fallopian tubes (SHIFT), in which semen is injected into a fallopian tube. These are therefore unproven treatments.

Risks and Effectiveness of Donor Insemination

Statistics show that DI with frozen sperm, quarantined until the donor has been tested for infectious diseases, is the safest and most effective method of circumventing the lack of a male partner who is fertile. This is not surprising, as both the woman and the donor are presumably fertile,

and no drug therapy, surgery, or other invasive procedures are required. In the past, frozen sperm was less viable than fresh sperm, but cryopreservation and insemination procedures have improved, and some recent studies show little difference in success rates between frozen and fresh sperm.

DI properly performed after appropriate testing of the donor poses no physical risks, but there may be psychological effects on the recipient, her partner, or both. DI pregnancies can be accompanied by feelings of ambivalence, fear, or nightmares for some women. Some women report being depressed after a DI birth, while their partners report feelings of guilt, impotence, and resentment (see research volume, *Treatment of Infertility: Assisted Reproductive Technologies*). Many of the psychological effects of DI can be minimized or avoided with proper counselling and informed consent before a woman or couple agrees to undergo the procedure; these and other related issues are discussed later in this chapter.

Issues in Sperm Donation, Collection, and Storage

The DI process begins with the donor. Studies show that men donate sperm for different reasons: altruism, for example, or a wish to "test" their fertility. Donors have been neglected in the study of DI, however, perhaps because they are wary of jeopardizing their anonymity and because current record-keeping practices make most of them impossible to contact. The donor's interests and responsibilities should not be ignored, however. Issues such as anonymity and informed consent, as well as the standards and practices of facilities that collect and use sperm, have implications for the donor's health and psychological well-being, as well as that of the recipient and her child.

Donor Anonymity

> I think it is clearly a necessity for the [children] to know the genetic heritage they are carrying and not run into a roadblock when they go searching for that genetic heritage.
>
> *J. Harrington, Thomas More Centre for the Family, Public Hearings Transcripts, Toronto, Ontario, November 19, 1990.*

One of the most controversial issues in DI is whether the donor should remain anonymous; the issue is also related to secrecy about the procedure (see section on Secrecy in DI Families). For decades, practitioners believed that anonymity made DI easier for everyone involved and have protected the identity of both the donor and the recipient. In interviews, many donors have said that they value the guarantee of anonymity because they want to ensure that they are not forced to assume the legal responsibilities of parenthood; they trust

clinicians and sperm banks not to reveal their identity, and they have no interest in meeting recipients or their children. It has been argued that eliminating donor anonymity would make it more difficult to find men willing to donate sperm; in a national survey done for the Commission, men identified confidentiality as the number one condition for donating sperm. Most women and couples contemplating DI also prefer an anonymous donor, usually to avoid unwanted involvement by the donor in the life of the family and the child. Although two (2 of 33) AI programs surveyed by the Commission allow patients to designate a donor, few patients request this.

Donor anonymity may, however, work against the interests of DI children, for example if they want to know about their origins. Some DI children and parents told the Commission that without information about the donor, the children could feel cut off from their genetic origins, might be unaware of potential health problems, or might marry a blood relative unknowingly (see section on Lessons from the Adoption Context).

The Commission considered three options for making donor information available to DI families:

1. full disclosure of all information — donations would be made on the understanding that recipients and their children would have full access at some time to both identifying and non-identifying information about the donor;
2. a dual system — donors could choose to have their identity known or to remain anonymous, and recipients could choose whether they wanted an anonymous donor or a named donor; and
3. a system giving DI recipients and children full social, medical, and genetic information about the donor, but concealing his identity unless there was a pressing medical need to reveal further information.

These options are discussed below.

Full Disclosure

Access to the donor's name and identity would put DI children in the same situation as most other children with respect to knowing who their parents are. Proponents of this approach told the Commission that the social and psychological need to know about their origins is no different for DI children (or indeed for adoptees) than it is for other children. This is not a straightforward issue, however. Full disclosure of identifying information about donors also raises ethical and practical issues that may work against the best interests of the DI child. Disclosing the identity of the donor invades the privacy and security of the newly formed DI family, it may go against their wishes, and it may threaten parent/child bonds. The recipient has contributed genetically to the child, has carried the child to term, and has shared the experience of pregnancy and birth with her partner, and her partner is usually the child's social and legal father — it

is in their child's best interests that a strong, mutually supportive, and nurturing family unit be established without the unwanted intrusion of a known donor.

> It will be important for children who are conceived through alternative insemination to know later what their genetic history is, particularly ... health risks, but also probably ethnic and racial background ... [perhaps with] a code attached to it which states the genetic [and] medical [background].
>
> *B. Beagan, Halifax Lesbian Committee on New Reproductive Technologies, Public Hearings Transcripts, Halifax, Nova Scotia, October 17, 1990.*

A sperm donor cannot in any way be compared to a parent or family member — he has not entered into any personal relationship with the recipient, and he has undertaken none of the duties or responsibilities of fatherhood. The social parents, no matter what the child's origins, must be able to define how the family will live and interact — they may find any role for the donor in their lives intrusive and disruptive. Knowing the identity of the donor may be seen by them to belittle their shared experience, as well as actual parenthood. If revelation of the donor's identity is unwanted but is mandatory, it may well be at the expense of the well-being of the child and the social parents and their ability to form family bonds as they see fit. Indeed, it may contribute to or encourage secrecy about the method of conception.

> This issue is related to donor anonymity, and I would also like to bring another element to the attention of the Commission — an element that may be peculiar to Quebec, but I think that the same principle holds true for all other Canadian provinces: the equality of all children regardless of the circumstances of their birth. [Translation]
>
> *E. Deleury, Faculté de droit, Université Laval, Public Hearings Transcripts, Quebec City, Quebec, September 26, 1990.*

DI children are not the only ones who may not know the name of their father — for example, adoptees have access to birth records only if their birth mother agrees — and children in other families may not know either. It has been estimated that the birth certificates of between 6 and 10 percent of children born in Canada do not contain an entry for the father. Even in cases where paternity is presumed, children born as a result of extra-marital affairs or relationships that broke up before the current union are often raised thinking they are biologically linked to both their parents — society does not demand disclosure in these instances. In fact, in North America, the likelihood of non-paternity in the children of couples in the general population is in the range of 1 to 5 percent and may be as high as 10 percent.[7] A man's name

on a child's birth certificate is one indication of his willingness to be identified as the father, but it is not a guarantee that he is in fact genetically linked to the child.

Paradoxically, a system of full disclosure might well encourage secrecy about the DI process. Parents who want no contact with the donor could arrange insemination privately and simply conceal the circumstances of conception from the child, so that he or she would never have reason to request information about a donor. Moreover, evidence before the Commission shows that secrecy in families can be very harmful (see section on Lessons from the Adoption Context). If parents were secure in the knowledge that a donor would not be identified and intrude on their lives, they might be more likely to feel free to raise their children in an open and honest environment, revealing the circumstances of a child's conception but not the particular individual involved.

As with adoptees, disclosure of a donor's identity could be postponed until the child reached the age of majority. As we discuss further in the next section, however, this presumes that a donor can anticipate how he will feel 18 or more years later.

Finally, full disclosure is likely to affect the supply of donor sperm. When Sweden changed its law in 1985 to require that identifying information be made available to the child upon request to the social services authority, the number of clinics was reduced by half (from 10 to 5), and Swedish couples began travelling to other countries for DI.

Dual System

Another system proposed to the Commission would allow men, at the time of donation, to choose one of two options: (a) not to have identifying information released, or (b) to be willing to be identified by name when the child reached the age of majority. DI recipients and their partners could choose either an anonymous donor or one willing to be identified, based on their values and perceptions of the role of the donor. The system has analogies to current adoption law in some jurisdictions, where adoption records are revealed to the child if the birth mother wishes to be contacted.

As explained previously, however, the Commission believes DI families *are* different from those formed through adoption. When a couple raises an adopted child, neither is biologically related to that child; when a couple raises a DI child, only one of them is the biological parent. In adoption, the child already exists and is placed for adoption because the mother is unable to raise the child; in DI situations, the child is conceived

> DI families *are* different from those formed through adoption ... Adoption deals with finding a family for an existing child, while DI deals with the deliberate formation of a family by having a child.

deliberately with the intent of nurturing and raising it. Adoption deals with finding a family for an existing child, while DI deals with the deliberate formation of a family by having a child.

Moreover, a dual system would create two classes of DI children — those who may have named information on their genetic father, and those who may not. This seems intrinsically unfair since if it is beneficial for one group, it must be for the other as well. Whatever system is chosen should treat all DI children equally.

Finally, a dual system in which the donor's identity is revealed when the child reaches the age of majority assumes that, at the time of donation, a donor can anticipate how he will feel at least 18 years later. By that time most donors will have entered into marriages or relationships, perhaps with children, with the result that their families would be affected by such a revelation. Now, with the advent of cryopreservation, a child born from donor sperm could be born years after a donation, pushing the date of disclosure even further into the future. It is unrealistic to believe that a donor's feelings and beliefs about his role are unchanging — as discussed later in this chapter, some donors told the Commission that they regretted their donation. As a result, a donor might wish to withdraw his consent to be contacted by his biological child, perhaps years after he or she is born. Unless revocation were disallowed, DI parents could choose a donor based on his willingness to be identified, only to have that option revoked by the donor at a later date, making their choice meaningless.

Non-Identifying Information Disclosure

The reasoning just outlined led Commissioners to endorse the concept of non-identifying information disclosure; identifying information would be collected and maintained, however, and could be made available in extraordinary circumstances of medical need under strictly controlled conditions. The Commission believes that this is the best way to balance the needs of children and families. It is a system that acknowledges the need of individuals for social, genetic, and medical information about their biological parent, but it also acknowledges the need for DI families to flourish and form a strong unit if the best interests of the child are to be served. It is an option that does not impose specific roles on participants and that respects marital and familial privacy. Moreover, this system accords greater importance to family relationships and actual parenting than to the source of genetic material.

> The Commission proposes a system whereby information (standard non-identifying genetic, social, and medical information) about a donor would be available at any time to DI parents and children. Such information would be stored by the National Reproductive Technologies Commission for 100 years after the birth of the last child from the donor's sperm.

The Commission therefore proposes a system whereby information (standard non-identifying genetic, social, and medical information) about a donor would be available at any time to DI parents and children. Such information would be stored by the National Reproductive Technologies Commission for 100 years after the birth of the last child from the donor's sperm. Identifying information on donors (name, date of birth, city of residence) would also be stored for the same length of time, under conditions of strict security. Only in very rare cases would this information be revealed if the physical or psychological health needs of the child warranted. In these cases, and only if a situation were deemed to be a medical necessity by a court of law, identifying information should be available to parents or children. This should be very rare, as, even in the case of an inheritable medical disorder, for example, it would not usually be necessary to release named information.

Informed Consent to Sperm Donation

Researchers conducting interviews for the Commission were told that sperm donation is not necessarily a simple isolated act; some donors said they had not considered the full implications of DI until years after donating. Some said they strongly regretted donating; some felt frustrated by the lack of access to basic information about the children born as a result of their donation. Many reported that they had regarded donation very casually until they were married or had children of their own, when they began considering the implications of having a genetically linked child growing up elsewhere. Some donors also reported that their wives or partners were upset by their past donations — and said they worried that their children could marry a half-sibling unknowingly. One donor told the Commission that his wife's concerns about his donation were a major factor in the break-up of their marriage.

Sperm donation is not necessarily a simple isolated act; some donors said they had not considered the full implications of DI until years after donating.

Gamete donation is a decision that should not be taken lightly. Donors should have access to professional counselling and should be aware of the implications of their actions. They should also be aware of the policies that govern sperm donation, including the requirement for full disclosure of genetic or health information. Donors should be advised that although their identity will not normally be disclosed to recipients, their identity could be released in the event that a court deemed it necessary. Donors should also be made fully aware that decisions about how donations are used in inseminations, and whether they are used at all, will be made by the collection/storage facility and recipients and their doctors — the donor should realize that he will not be able to control who receives

his gametes or influence the storage or practice policies of facilities or physicians.

Men considering sperm donation need access to standardized written information about the implications of sperm donation and should be required to sign a statement that they have read the information and understand the short- and long-term implications of donation. Given that donated sperm can be used not only in assisted insemination, but in other ways as well, the donor should be informed about and give consent for the possible uses of his donation if he consents to be a donor. The other two purposes for which donor sperm could be used are fertilization of eggs *in vitro*, to create zygotes for donation to infertile couples, and fertilization of eggs to create zygotes for research purposes under controlled conditions. Counselling should be available if requested, and men considering sperm donation should also be informed and counselled about the tests they will be required to undergo if they donate. This is particularly important with regard to testing for HIV — potential donors should know that their blood will be tested for HIV antibodies, as they may not wish to have this testing. Similarly, they should be aware that although the identity of a sperm donor is protected today, the same may not be true in decades to come; this, too, may influence the decision to donate.

Men considering sperm donation need access to standardized written information about the implications of sperm donation and should be required to sign a statement that they have read the information and understand the short- and long-term implications of donation.

Commercialization

Commissioners are strongly opposed to commercializing human reproduction, as are Canadians generally. We heard clearly from Canadians that they are uncomfortable with any situation involving the development of reproductive technologies or services on the basis of their profit potential, particularly where only those with the means to pay can have access to them. In our view, no profit should be made from the selling of any reproductive material, including eggs, sperm, or zygotes/embryos, because of its ultimately dehumanizing effects. Two aspects are relevant here — payment for donors and sperm banking and distribution.

No profit should be made from the selling of any reproductive material, including eggs, sperm, or zygotes/embryos, because of its ultimately dehumanizing effects.

Payment for Donation

Because donors must spend considerable time giving a medical history, having a physical examination and coming back for repeated blood tests, and giving sperm samples, the Commission feels it is reasonable to compensate donors for their time and inconvenience. Such compensation should not be high enough, however, to provide a financial incentive to donate. What level of remuneration, if any, is appropriate for sperm "donation"? Most sperm donors in Canada receive money intended to reimburse their out-of-pocket expenses — currently around $75 per donation. This is unlikely to act as a financial inducement, given the inconvenience involved, but we believe this level should not increase except perhaps to maintain its value relative to inflation.

Storage and Distribution

Another aspect of DI that lends itself to commercialization is the storing and distribution of sperm. The principle of non-commercialization means that commercial sperm banks are unacceptable in Canada, as are the purchase and use of sperm from commercial banks in other countries. In the United States, assisted insemination is a $164-million-per-year industry,[8] and data gathered by the Commission show that the potential exists for substantial profit in this country too — each sperm donation (for which the donor receives $75) produces 8 to 10 straws or containers of sperm, which are sold to practitioners for about $125 each. Since many women and couples undergoing DI have to pay in advance for a six-month supply of donor sperm — and are not reimbursed if a pregnancy occurs in an early cycle (see research volume, *Treatment of Infertility: Current Practices and Psychosocial Implications*) — sperm banks can potentially earn far more than it costs them to test, freeze, and transport sperm and maintain adequate records, despite the significant cost of stringent testing and detailed record keeping. Making a profit from sperm banking is unacceptable from the perspective of our guiding principles.

Safety Issues

Because most sexually transmitted diseases can be transmitted in semen, it is essential to ensure that donors do not infect recipients. Precautions to prevent this occurring are now critical because HIV, the virus associated with AIDS, is transmitted in semen. For good practice, professional organizations have identified several tests that should be performed before donated sperm is used for insemination. The American Fertility Society, for example, recommends that sperm be cryopreserved and quarantined for six months to allow testing for HIV, cytomegalovirus, hepatitis B, herpes simplex, chlamydia, gonorrhoea, syphilis, ureaplasma, mycoplasma, streptococcal species, and trichomonas. The Canadian Fertility and Andrology Society guidelines recommend even more stringent

testing for other sexually transmitted diseases, such as genital warts, and some genetic diseases. However, these tests are only "recommended" by professional guidelines; they are not compulsory, and there is no way of assessing whether guidelines are being adhered to by the physicians who perform DI, especially outside clinics.

Every Canadian sperm bank contacted by the Commission said they followed the professional guidelines for testing and record keeping. However, fewer than half the programs surveyed in a research project for the Commission in fact performed the full complement of recommended tests. At least two fertility clinics said that sperm donors were tested for tuberculosis, when in fact the bank from which the clinics purchased sperm did not perform such a test. Just 12 of the 33 programs tested for genital warts, while 17 tested for herpes or trichomoniasis (Table 19.1). Commissioners were very disturbed to find from this 1991 survey of clinics and practitioners that, in some parts of Canada, donor sperm was being used without proper testing for HIV and some other STDs. One program did not test donors for HIV at the time of donation, and two sperm banks said they did not test donors for HIV at an appropriate interval after donation (this infection can take up to six months or more to be detectable by blood tests). In addition, at that time a small survey of 11 private practitioners showed that 3 of them used donor sperm that had not been frozen, a process necessary to allow the time to ensure that the sperm donor is not infected with HIV. The physicians in question said they were convinced the sperm was safe because they "trusted the donors."

Failure to observe existing professional guidelines constitutes dangerous and unethical practice, which puts the health and well-being of women, their partners, and their children at risk. Implementing the Commission's recommendations would mean safe frozen sperm could be sent to smaller communities through the distribution system we propose. Our recommendations not only would make safe sperm available but also would ensure proper records are kept, thus protecting the best interests of the child.

It is not known how many physicians in Canada are performing DI in their offices or whether there are many others who are also not adhering to guidelines. Some family practitioners and others have argued that the use of fresh sperm is justified, for example, in smaller communities where facilities to test and freeze sperm are not available and women cannot afford the expense of travelling to a larger centre. Commissioners disagree and believe strongly that failure to observe existing professional guidelines constitutes dangerous and unethical practice, which puts the health and well-being of women, their partners, and their children at risk. Implementing the Commission's recommendations would mean safe frozen sperm could be sent to smaller communities through the distribution

system we propose. Our recommendations not only would make safe sperm available but also would ensure proper records are kept, thus protecting the best interests of the child.

Table 19.1. Screening of Potential Sperm Donors in 1991

	All settings (28)*	Teaching hospitals (16)**	Other hospitals and private clinics (12)***
Gonorrhoea	27	15	12
Hepatitis A & B	27	15	12
HIV 1&2	27	15	12
Syphilis	27	15	12
Chlamydia	25	14	11
Genetic history	25	14	11
Sexual activity	25	13	12
Sexual orientation	24	13	11
Cytomegalovirus	19	10	9
Herpes	17	8	9
Trichomoniasis	17	10	7
Ejaculate culture and sensitivity	16	8	8
Chromosomal analysis	13	8	5
Human papillomavirus	12	6	6
Tuberculosis	8	3	5

* There are 33 settings, but one did not respond; for 4, it was not applicable.

** There are 18 teaching hospitals, but, for 2 hospitals, it was not applicable.

*** There are 15 other hospitals and private clinics, but one did not respond; for 2, it was not applicable.

Source: Stephens, T., and J. McLean. "Survey of Canadian Fertility Programs." In Research Volumes of the Royal Commission on New Reproductive Technologies, 1993.

Other Uses for Sperm Banking Facilities

Sperm banks can have uses other than the collection and storing of sperm for donation. They can also store sperm for men whose fertility is in

jeopardy — for example, men undergoing testicular surgery or radiation therapy for cancer. Samples of their healthy sperm can be frozen for future use according to agreed conditions (for example, that it will be destroyed at their death; released only into their control).

Issues in the Practice of Insemination*

In this section we discuss the medicalization of AI, access to DI, alternatives to the medical setting, patient needs and characteristics, and treatment protocols such as informed consent and counselling.

Medicalization

Couples in which the infertility can be treated simply by self-insemination using partner's sperm are very rare; these would be cases where intercourse cannot take place but normal sperm is produced. AI using the husband's or partner's sperm is almost always performed in a fertility clinic to allow that sperm to be treated with the goal of enhancing the likelihood of conception; this may on occasion involve more invasive placements of the sperm higher in the woman's reproductive tract. However, people who choose to have donor insemination in a medical setting do so not mainly for medical reasons but because this is where the service is most readily available at present and they are most comfortable with the process. Treating the insemination as a medical procedure reduces some of the sexual connotations and maintains anonymity of the donor and secrecy about the process. In addition, many women feel safer when a procedure is performed under a doctor's supervision. It is important, however, to re-examine the consequences and implications of medicalization. Factors such as the invasive nature of diagnosis and treatment, costs of medicalization, and the availability of alternatives must be considered.

AI patients, as well as many groups presenting their views during the Commission's public hearings, expressed concerns about the invasive and impersonal nature of the AI process. Many questioned the necessity of invasive investigative or diagnostic procedures on women when AI is a remedy for male infertility.[9] The Commission's survey of clinics showed that more than half the AI programs (which included both AIH and DI) routinely required that women undergo hysterosalpingograms[10] before treatment, and a third required endometrial biopsy.[11] One clinic required a laparoscopy — a surgical procedure done under general anaesthetic to rule out tubal blockage or scarring — before going ahead with AI.

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* Other countries have grappled with these issues, and it is instructive to look at their experiences. These are outlined briefly in Appendix 1 to this chapter.

Physicians consider this approach to be medically indicated, because even if sperm tests show some problems, the female partner may also have less than optimal fertility. It is important that invasive diagnostic or insemination procedures be kept to a minimum; at the same time this must be balanced with a recognition of a couple's desire to identify and treat their problem in a timely fashion and to try to conceive a child using their own gametes. Many of the couples in AI programs have unexplained infertility and have been trying to become pregnant for at least a year, so unless male-factor infertility can be clearly identified immediately, it may be appropriate to investigate the female partner more extensively.

Hysterosalpingogram: An X-ray of the uterus and fallopian tubes, which has been the standard screening test for tubal patency since the 1960s. Dye is injected into the uterus through a catheter inserted into the cervix. The X-ray measures how the dye flows through the fallopian tubes (tubal blockage, scarring, or endometrial growths or fibroids can be identified). For some the procedure can be painful, inducing strong uterine cramping, while others report little pain.

Endometrial biopsy: This test is the final confirmation of ovulation and confirmation that the endometrium is being properly primed by hormones. A speculum is inserted in the vagina, the cervix is dilated, and a sample of the lining of the front wall of the uterus is scraped with a metal curette and read under a microscope for characteristic changes. The procedure is unpleasant, can be painful, and causes some bleeding.

However, it is good medical practice to perform the least invasive, risky, or costly diagnostic techniques first, and only if indicated. In AIH programs, male infertility should be diagnosed or ruled out before more invasive diagnostic investigations of the woman are considered. There should also be some prior evidence that there is a female factor blocking fertility — invasive diagnostic procedures should not be performed routinely. Unless a treatable male or female factor is identified, adjuncts to AI that pose risks for women, such as fertility drug therapy or insemination at sites other than the vagina, should not be initiated until after three unsuccessful cycles of AIH with sperm manipulation and vaginal insemination, and then only in the context of clinical trials for insemination at sites other than the vagina. Experts in this area recommend that at least three cycles be attempted before moving to more invasive methods, because the data indicate that virtually all AIH conceptions occur within the first six cycles and the majority of conceptions are achieved within three to six months. If time is short, three unsuccessful cycles would be an indication that AIH is probably not the best option.

In DI programs, unless there is evidence to the contrary, it should be assumed that women are fertile, and they should not undergo invasive diagnostic tests unless repeated inseminations are unsuccessful, indicating the likelihood of infertility in the recipient. The same progression should

be followed: vaginal insemination, vaginal insemination with fertility drugs, and insemination at sites other than the vagina (such as the unproven and invasive techniques of intrauterine insemination and peritoneal insemination). However, insemination at other sites should be used only after unsuccessful vaginal insemination and should be offered only in the context of a clinical trial. Physicians and couples should make decisions about treatment without unnecessary delays, but a couple's feelings of urgency should not supersede the ethics of good medical practice.

Medicalization of a procedure naturally leads to higher costs. Patients in clinical AIH programs reported an average cost of about $900 per cycle of treatment, while DI patients reported costs of about $500 per cycle. If travel and accommodation are necessary, clinical AI programs can become too expensive to be an option for many women and couples — clinics are concentrated in urban centres in central Canada (a third of them in southern Ontario), and treatment can span months. The financial and psychological costs of time off work and of regular travel are unaffordable for many women or couples who are infertile.

> [A] problematic ... recommendation is a designation of alternative insemination as the practice of medicine ... This would make self-insemination subject to legal prosecution.
>
> *M. Patrell, Halifax Lesbian Committee on New Reproductive Technologies, Public Hearings Transcripts, Halifax, Nova Scotia, October 17, 1990.*

Some have avoided high travel costs by seeking out a local private practitioner to perform AI, although the cost of sperm (and the insemination, if not covered by public or private health insurance) is still charged to the patient. We also found that one clinic had out-of-town couples come to the clinic once, where they were shown how to self-inseminate — sperm for subsequent cycles was then sent to them for self-insemination, so that the costs of repeated travel could be avoided.

Although a private practitioner's office may offer a less expensive alternative or a more relaxed setting than fertility clinics, Commission research showed that individual doctors operating outside the confines of a clinic are more likely to report poor clinical practice, such as using fresh sperm or sperm from untested donors, performing procedures that do not conform with professional guidelines, or keeping inadequate records (see research volume, *Treatment of Infertility: Assisted Reproductive Technologies*). The

> It is evident that a mechanism is required to ensure that AI is offered only by practitioners following standard guidelines for good practice, and that all DI is done using safe sperm and appropriate donor testing.

Commission believes that solo practitioners may be a valuable alternative, but they must meet the same safety and practice standards as fertility clinics. It is evident that a mechanism is required to ensure that AI is offered only by practitioners following standard guidelines for good practice, and that all DI is done using safe sperm and appropriate donor testing. Similarly, if a source of safe sperm were available, women could inseminate themselves alone or with a partner's help (see section on Alternatives to the Medical Setting).

Access to Treatment*

To find out who was having AI in Canada, the Commission surveyed 150 AIH patients and 150 DI patients at 21 of the 33 fertility clinics across the country (see research volume, *Treatment of Infertility: Current Practices and Psychosocial Implications*). The two groups of patients were demographically very similar — predominantly between 30 and 40 years old, English-speaking, and educated to at least the community college level. More than 60 percent of female partners and more than 80 percent of male partners were employed full time. Close to 80 percent of AI patients' households had an annual income of at least $40 000 (compared to close to 60 percent in the general population[12]). Everyone who responded to the Commission's survey was married or cohabiting in a stable relationship with a male partner.

Although our sample of AI patients was not exhaustive, it seemed to bear out the perception that single women and lesbians, as well as unemployed and low- to middle-income couples, are not represented among patients at fertility clinics. In a separate study, researchers asked 33 clinics about their policy and practices. Twenty would exclude single women, and 19 of the 33 AI programs surveyed told the Commission that lesbians would be refused treatment at their clinic. Other factors were also taken into consideration with regard to access: 16 clinics said "below-average intelligence" would be grounds for refusing treatment; 10 clinics said "doubtful parenting ability," including financial factors, would be a factor; and 6 specified low income as grounds for refusal.

Clinic staff said admission policies are usually set by clinic directors and treatment teams, and only about 5 percent of applicants were rejected. They also said that they rarely received applications from single women and lesbians, and other data show that DI programs within the traditional medical milieu receive few inquiries from these women. It is probable that single women and lesbians are not applying to fertility clinics because they know they will be rejected. Many such women told the Commission they did not attempt to gain access on the advice of other patients, or because of what they had heard from their family doctors and gynaecologists. One

* See Annex for dissenting opinion.

single woman said her doctor had asked for reference letters concerning her ability to parent before he would refer her to a fertility clinic. Although clinicians may believe that these women are using alternatives to the medical setting out of choice, interviews with 19 women who helped other women perform DI outside a medical setting showed that half believed that women would use a medical route for DI if it were available — the dominant reasons being well-screened sperm and easier access to donors.

> The sole criterion determining who has access to the NRTs should be medical in nature. The criterion of whether a woman would make a good mother or not is very subjective, and neither the medical staff nor the government nor anyone else besides the woman in question should make such judgments, except in extreme situations.
>
> *Brief to the Commission from New Brunswick Advisory Council on the Status of Women, October 1990.*

The Commission believes that the criteria used to determine access to publicly funded medical services must be fair and applied equally to all. We believe this as one of our fundamental guiding principles, and we believe this because it reflects basic principles of human rights law. Non-discrimination in the provision of public services is a clear requirement under the Canadian Charter and federal and provincial human rights legislation, which prohibit discrimination on the basis of such historically disadvantaging factors as sex, marital status, sexual orientation, and social or economic status.

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We do believe that it is within the purview of practitioners to make decisions about medical indications for services. That is their responsibility, and it is what they are trained to do. In the case of DI, however, there are no medical indications for this service, in that, other than in rare cases, it is performed on healthy women who are fertile. Whether heterosexual or homosexual, married or single, all women undergoing DI are in the same situation — they are unable to have a child, either because their partner is infertile or because they do not have a male partner. The Commission believes it is wrong to forbid some people access to medical services on the basis of social factors while others are

permitted to use them; using criteria such as a woman's marital status or sexual orientation to determine access to DI, based on historical prejudices and stereotypes, amounts to discrimination as defined under human rights law and contravenes the Commission's guiding principle of equality. There is no intent to force any practitioner or clinic to provide new reproductive technologies if they do not wish to do so — our recommendations are to ensure that services provided and funded by provinces' health budgets are not offered in a discriminatory way contravening the Canadian Charter. Clearly, religious institutions exist and should not be forced to contravene their religious beliefs, but publicly supported health care should be delivered in a universal and non-discriminatory way.

The Commission recognizes that some Canadians are uneasy about family forms that might be facilitated by such access to AI. Our survey of national values and attitudes, for instance, found that the Canadians surveyed are most supportive of AI when it is used by a married, heterosexual couple, and least supportive when it is used by a lesbian couple. Almost half the people surveyed oppose or strongly oppose its use by single women.

Although most Canadians surveyed did not support lesbians having access to DI, to provide a service in a discriminatory way by denying access, without evidence that a resultant child would be harmed, is contrary to the Charter and also contravenes our ethic of care. The available evidence does not show different outcomes in children born to or raised by lesbians when compared to outcomes in children born to heterosexual women and couples.[13] Thus, the "best interests of the child" cannot be used as a reason to deny access simply because a woman is a lesbian. The ethic of care dictates that people should be treated equally unless there is evidence that others will be harmed.

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As we made clear in Part One of this report, the Commission believes that society's approach to new reproductive technologies should be governed by the social values of Canadians. We are also aware, however, of the difference between social values and individual opinions. We believe that the social values held by Canadians are reflected in the *Canadian Charter of Rights and Freedoms*, and the prohibitions on discrimination it contains must be our guide in this matter.

There might be grounds to over-ride this provision, of course, if it could be determined that discriminatory criteria for access to DI were in the best interests of the children who would be born; this would have to be

specified in law and be shown to be demonstrably justified in a free and democratic society, as required by section 1 of the Charter. Commission research found no reliable evidence, however, that the environment in families formed by single women or lesbian couples is any better or worse for the children involved than that in families formed by heterosexual couples. It found that other factors such as time invested, nurturing, and emotional commitment to the child are more important than sexual orientation per se. There is therefore no demonstrated basis for restricting the experience of parenting to heterosexual or married couples for the best interests of the child.

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Studies show that although a majority of Canadians (54 percent) think others should be able to use DI, fewer, even in a married relationship, would use it themselves. Moreover, it is likely that only a very small minority of women would consider using donor insemination if single or in circumstances where raising a child would be difficult. Women deliberately trying to conceive a child by DI are likely to have thought through the decision carefully; it is not taken in the heat of the moment. As a caring society, we have an obligation to protect from harm all those who would use DI to form their family. Forming a family is of deep importance to the vast majority of Canadians, regardless of their sexual orientation, marital status, or financial situation. If practised with adherence to standards, DI is an effective, safe, and non-invasive way of enabling this.

Excluding single women or lesbians from DI programs not only contravenes their equality rights, it also puts their health at risk, by forcing them to resort to unsafe practices while heterosexual women in traditional marital relationships have access to safe and effective procedures. In both situations there is a strong desire for a child, but no male partner who is fertile; there is in fact no greater medical need in a woman whose partner has no sperm than in a woman who has no partner. If a service is to be available, women should be treated equally, unless there is good evidence that the best interests of the child will suffer. Current practice is inequitable and reflects discriminatory attitudes. The same standards of access to DI should apply to all women choosing this route to pregnancy and parenthood, to ensure that all can do so safely.

If a service is to be available, women should be treated equally, unless there is good evidence that the best interests of the child will suffer.

Alternatives to the Medical Setting

Some women who have been rejected by medical DI programs, or fear they would be rejected, choose self-insemination as an alternative. Although SI can be used by any woman who wishes to have control over the process, it is used most often by single women and lesbians. Some heterosexual couples may also choose to use SI because they wish to have a known donor. Establishing how frequently SI is used is difficult, because by definition it takes place in a private setting. Since the early 1970s, alternative insemination networks in Britain, the United States, and Canada have grown in both numbers and sophistication. One U.S. estimate suggests that 1 000 to 3 000 children are conceived by lesbians using SI each year, and it is generally agreed that the practice is increasing. However, given the total number of children born each year, this is still a very uncommon way for children to be conceived.

The Commission learned about self-insemination in Canada through studies based on the experiences of women who have used SI and others who have been involved in its provision. It appears to be practised primarily in larger urban areas, particularly Toronto. Participants say they chose SI to have control over the process, to avoid intercourse, to avoid unnecessary medications, or to avoid having to justify one's wish to be a parent to clinic personnel. The majority of women who chose SI used anonymous donors for fear of legal complications and from a desire to raise the child without the involvement of the donor.[14]

An exploratory study of women involved with SI showed that some communities have sophisticated networks that find donors, provide women with suitable donor sperm, and teach women how to pinpoint ovulation and perform the insemination. Although some said they were able to get safe frozen sperm from "friendly MDs," this was the exception, not the rule. Two small studies of SI networks showed that all used fresh sperm and that little information was available about donors. Donor sperm is so scarce outside a medical setting that most networks were able to accommodate only the request that donors be of the same race as recipients.

> Small volunteer networks cannot afford the equipment to cryopreserve sperm ... Only if the sperm can be frozen for later use are test results on the donor's blood at six months after donation relevant to the decision to use the frozen sperm for insemination.

Finding donors and ensuring the safety of the sperm are the most difficult aspects of SI. In the past, gay men frequently acted as donors for lesbians, but this option has become riskier because of the prevalence of HIV in the gay community. Screening of donors is also problematic; although donors participating in SI networks were often asked about their medical history, HIV testing and screening for STDs or genetic disorders

were less common — in interviews with 19 women involved in SI networks, only 9 reported that donors were tested for HIV, and only 7 used frozen sperm. These small volunteer networks cannot afford the equipment to cryopreserve sperm. This makes testing for infectious diseases, particularly HIV, irrelevant — because only if the sperm can be frozen for later use are test results on the donor's blood at six months after donation relevant to the decision to use the frozen sperm for insemination. The Commission heard of only one group of women in a small Ontario city with their own equipment for freezing sperm.

Few of the networks keep records; access is limited to word-of-mouth. Most of the networks contacted by Commission researchers said they would give any woman access to their services, although one woman told researchers that because donor sperm was so scarce and heterosexual women could gain access to the traditional medical system more easily, the network she was involved in reserved donor sperm for the use of lesbians.

If society supports the use of donor insemination to have children, it should be provided in a fair and equitable manner.

The Commission believes that if society supports the use of donor insemination to have children, it should be provided in a fair and equitable manner. There is no medical necessity limiting the practice of DI to the medical setting; there is no clear reason to deny single women and lesbians access to safe donor sperm (they essentially have the same diagnosis as married women — lack of a male partner who is fertile and a strong wish to have a child); and there is no reliable evidence that children raised by single women or lesbians are disadvantaged because of their parents' sexual orientation or marital status. Thus, principles of equality dictate that these women should not be prevented from forming a family. Self-insemination is going to go on; making it unavailable in the medical system will not stop it. It is therefore important that safe sperm be available so that women do not have to risk their health and lives. Because many women and indeed many couples would prefer the control, comfort, and affordability of SI, the Commission feels it is important to allow and facilitate the safe practice of SI in Canada.

Commissioners believe that society has a responsibility to ensure that women choosing this alternative are not forced to jeopardize their health by using unsafe donor sperm. In addition, they and their children

Both heterosexual couples and women without a male partner can avoid the costly and medicalized aspects of clinical DI programs by choosing SI, and that choice should be made available to them without compromising the standards for sperm safety or comprehensive record keeping that are offered to recipients in clinical DI programs.

should not be forced to give up the benefits of proper record keeping on donors and recipients simply because they have chosen a less medicalized procedure. Both heterosexual couples and women without a male partner can avoid the costly and medicalized aspects of clinical DI programs by choosing SI, and that choice should be made available to them without compromising the standards for sperm safety or comprehensive record keeping that are offered to recipients in clinical DI programs.

Information, Counselling, and Consent

Participants in AI programs told the Commission they valued a sense of personal control about their treatment. Close to 90 percent of AI recipients surveyed by the Commission read literature about the procedure, discussed the procedure with doctors and others who had had the procedure, or informed themselves in other ways before deciding to go ahead with AI; 68 percent had counselling before making their decision. Two things are necessary for people to make their own decisions about treatment: full information and appropriate counselling. If these are provided in a way that meets the needs of prospective AI recipients, it can be said with confidence that they are exercising informed choice.

The provision of information enables couples to learn the facts about their diagnosis, their chances of success (both general success rates for the procedure and the success rates at the particular clinic), and the details of their treatment. It can also assist them in making an informed choice about their treatment path — information about non-medical alternatives, treatment costs and benefits, and possible outcomes is an essential basis for informed discussion and decision making. Various professional guidelines have outlined what AI patients should be told about the procedure, but there is evidence that recipients are either not receiving or not absorbing the recommended information.

Professional standards outline the importance of providing information in the following areas: the nature of the fertility problem, alternatives to treatment, chances of success, the physical and emotional demands, and the long- and short-term effects of treatment. Although more than three-quarters of AI recipients identified these as the most important types of information, less than a third were satisfied with the information their clinic provided in these areas — in fact, AI recipients were the least satisfied of all the patient groups in our survey of 1 395 people treated at Canadian fertility clinics.

> These findings show clearly the need to develop standard, accurate, comprehensible information materials about AI that meet high standards of content and accessibility. Provision of these materials should be mandatory for all AIH and DI programs, and any woman or couple considering DI should receive these.

Furthermore, an analysis of the information materials on AI provided by clinics found them to be too technical and complex for a general audience.[15] Reading levels required ranged from grade 10 to four years of post-secondary education. Those whose mother tongue is neither English nor French had to provide their own translation — none of the clinics had information in any other language. These findings show clearly the need to develop standard, accurate, comprehensible information materials about AI that meet high standards of content and accessibility. Provision of these materials should be mandatory for all AIH and DI programs, and any woman or couple considering DI should receive these.

Commission survey results also showed that women seeking AI were dissatisfied with the counselling they received. Only 13 percent of AIH patients and 23 percent of DI patients said their needs were met (compared to 35 percent of IVF patients), and only 10 percent of AIH patients and 18 percent of DI patients were satisfied with the counselling their male partners received (compared with 31 percent of IVF patients). Given the strong psychosocial implications of DI, people need the opportunity to discuss and weigh their options with a qualified counsellor. Existing studies in this area have found that couples contemplating DI must first work through their infertility (which can include strong feelings of loss, depression, guilt, anger, and ambivalence for both members of the couple, particularly the male). Then they must deal with the implications of DI, its impact on the couple's marriage, the future family, and the complex social dynamics involved.

> It is essential to see the couples as a couple, then each separately, then as a couple again at least once more. They have to be willing to focus on the effect of the imbalance in the relationship — "I'm all right, you're not all right" — and be willing to discuss their feelings about a child that is hers but not his. What of the tendency she may have to look for his rejection? What of his possible jealousy? What of the donor? ... He must have time to grieve over his lost fertility ... She must have time to focus on the grief of not bearing her partner's child and feelings about carrying a "stranger's child." As a couple, would they want the child to know about their donor status? If not, what are their fears? If so, what are their ideas about when and how to tell? ... Is there anything they wish to explore, before going on to DI — AIH, IVF ... etc.? Have they discussed these options?
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> *B. Mostyn, "Counselling the Infertile Patient," in Infertility: Guidelines for Practice, Fertility Committee of the Royal College of Obstetricians and Gynaecologists. London: RCOG Press, 1992.*

As was the case with the information materials, the Commission found that the provision of counselling did not live up to the professional standards set in this area. Although guidelines recommend counselling of the woman by a

clinical psychologist, this is often not provided.[16] Only 5 of 33 programs said that all women received counselling on their own; 18 said couples were counselled together. In the Commission survey of patients, 50 percent of those in DI programs and 48 percent in AIH programs said they received no counselling at all, and those that did were more likely to speak to a physician or nurse than to a professional counsellor.

The Commission believes that patients would benefit significantly from counselling before, during, and after treatment, and from discussing their situation and the options before them. Not everyone wants counselling — half the women who underwent DI did not want follow-up counselling after treatment, perhaps to help maintain secrecy about their involvement and appear as close to a "normal" family as possible. The Commission believes nevertheless that the availability of counselling is an essential component of responsible practice, especially in DI programs. On-site counselling services, or referral to appropriate services, should be a standard and mandatory part of AI programs, should be completely confidential, and should be provided by health care and helping professionals with specialized training in this area.

A final component of informed choice for patients is consent to treatment. Medical standards dictate that patients be aware that they can refuse to participate in treatment, and that consent and refusal are both revocable (see research volume, *New Reproductive Technologies: Ethical Aspects*). At present there are no standard methods of obtaining consent from women undergoing AI or from their partners; Commission research found 28 distinct consent procedures in place at various Canadian fertility clinics, and at least two years of post-secondary education were needed to understand many consent forms. Many survey participants told the Commission that they were not given copies of the consent forms they were required to sign, and few were told that they could revoke their consent at any time.

Patients need fact-based information, as well as counselling about feelings and decision making, in order to make informed choices about treatment. AI provides a good setting for the participatory ideal in informed choice: prospective patients are usually able to comprehend information and make well thought out decisions, most are young and healthy, the treatment is elective, and they have the time to digest and discuss their options, so real choice is possible. Decisions about DI in particular involve personal values, which patients are better equipped to factor into their decision than

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physicians are. Yet our findings indicate that many programs do not seem to facilitate genuine informed choice for patients (see research volume, *Treatment of Infertility: Current Practices and Psychosocial Implications*).

The Commission's findings with respect to information provision, counselling, and consent are a further indication of a discrepancy between published professional guidelines and actual clinical practices and of a gap between patient needs and the services they receive.

Familial and Societal Implications of DI*

Complex issues face families formed using DI, and from them emerge new societal dilemmas. At the individual level, the secrecy surrounding DI can give rise to conflict within the DI family, but at the societal level it has also resulted in significant gaps in relevant research, legal direction, and record keeping. The legal status of DI families, what records should be required and who should have access to them, and how best to balance the needs of DI participants remain unaddressed in law or policy. Many DI participants liken their situation to that of adoptive families, so it is important to consider whether there are lessons to be learned from the evolution of Canada's adoption policies.

Canadians attach importance to having a genetic link between themselves and their children; we found that most Canadians would seek medical help to conceive before looking into adoption because of the importance of this link.

Surveys and research done for the Commission show that Canadians attach importance to having a genetic link between themselves and their children; we found that most Canadians would seek medical help to conceive before looking into adoption because of the importance of this link. Many aspects of Western and other cultures reflect as well as reinforce the importance of the genetic link between parent and child. As a result, many practitioners suggest that DI be kept secret, even from the child, to preserve the appearance that the family does not differ from most other families. Some clinics even require couples to sign a form stating that they will never tell anyone about their DI procedure. At the same time, our society values honesty and openness in personal relationships. This results in great ambivalence for many individuals involved, as secrecy often implies something to be ashamed of.

Parents deal with these pressures in different ways. There is a marked preference among recipients at the time of insemination to keep the procedure secret (although this may become more difficult as time passes

* See Annex for dissenting opinion.

and the child is growing up), and they are encouraged in this by our laws and medical standards. Secrecy is preferred because it seems to solve so many problems: the man's infertility is hidden, an image of normalcy is maintained, children do not grow up feeling different from their peers, and any potential legal tangles are avoided. In addition, keeping it a secret sidesteps the issue of acknowledging a division between social and biological parenthood for these couples.

The cultural norm of parenthood assumes that an individual undertakes both biological and social roles. When these roles are severed, deviation from the cultural norm is reflected in additional descriptors to the parental roles. In the case of adoption, biological parents are known as birth parents and social parents are the adoptive parents. A stigma is attached to non-biological parental roles. As Kirk pointed out, "adoptive kinship is not and cannot be the equivalent of blood relationship."

DI severs the relationship between biological and social fatherhood. In this sense, DI participants are social innovators in family forms ... Successful adjustment to DI requires clarification and identification of the distinct roles, including the rights and the responsibilities, of biological and social paternity.

R. Achilles, "The Social Meanings of Donor Insemination," in Research Volumes of the Commission, 1993.

Secrecy in DI Families

On the surface it would seem that secrecy about DI is fairly easy to maintain. Once conception has occurred, the pregnancy continues like any other. In the long run, however, the Commission found that secrecy places great strains on families. Parents must always remain on guard lest they give away the secret, and differences between father and child must be minimized or ignored. The father may feel incomplete or inadequate, but he has to suppress those feelings. Some fathers said they felt fraudulent about how they fit into the family narrative.

When Commission researchers interviewed married DI mothers, many expressed relief at finally being able to talk about the facts of their child's conception. They said they avoided talking about the issue at home, out of sensitivity for their husbands' feelings. Some women said they felt they were "living a lie," pretending that their husband was the genetic father of the children. Lesbian DI mothers told the Commission they did not feel the same pressure to keep their child's origins a secret because DI is more accepted in the lesbian community. Some said they paid a price for this openness — some were already estranged from parents and siblings who could not accept their sexual orientation, and undergoing DI added to the strain.

Commission research showed that maintaining secrecy about the means of conception can be contrary to the best interests of the child (see

research volume, *The Prevalence of Infertility in Canada*). Adults born through DI reported that the decision to keep DI a secret was very damaging — they felt deceived and said they had always sensed that something was "wrong" in the family. Some told the Commission that they found out about the method of conception at a time of family crisis, such as divorce or death in the family — a time when secrets are difficult to keep. Discovering the truth in this way is doubly traumatic; the shock of discovery during an already stressful period is coupled with the realization that your parents had lied to you all your life.

Adoptive families used to be advised to keep this secret from the community and from the child; studies have since shown, however, that openness and honesty about adoption are healthier for all concerned.[17] Secrets kept within families put added pressure on marriages, and children often sense something is being hidden. Many professionals who have experience with adoption, such as social workers, psychologists, doctors, and sociologists who have seen the damage that secrets can cause, as well as some adoptees themselves, advocate openness about the fact of DI.[18]

Ultimately, the decision about whether and whom to tell should be made by the parents, as it is rooted in personal values and beliefs. However, given the long-term psychological and familial implications of secrecy, particularly for the resulting child, women and couples should make their decision based on full information and discussion about their options. Provision of information to the recipient about the issue should be a required part of the DI process.

Legal Status of DI Families

Family law has not kept pace with the advent of new reproductive technologies. Most current legislation in Canada was enacted before these new familial realities became apparent. Although DI is not new, secrecy about its practice has compounded the legal vacuum for participants. Legal rights and obligations of parents are set out in provincial family law, governing such matters as maternity, paternity, filiation, custody, access, and support. Only three jurisdictions have amended their laws to deal explicitly with donor insemination — Yukon, Newfoundland, and Quebec[19] — with a view to protecting the interests of DI children, recipients, and donors. In the rest of the country, DI participants exist in a virtual legal limbo.

It has been argued that DI recipients, their partners, and their children are adequately protected by existing family law. Commission analyses of the relevant statutes indicate that this is not true (see research volume, *Legal and Ethical Issues in New Reproductive Technologies: Pregnancy and Parenthood*). A basic tenet of family law establishes the "best interests of the child" as the governing principle in the determination of an award of custody between two legal parents. Many situations could

arise in which the best interests of DI children are not served by existing family law.

Single DI Recipients

In most Canadian jurisdictions, it is recognized that the woman who gives birth to the child is the legal mother; thus, DI recipients have virtually undisputed maternal rights. At present, if the recipient is single and there is no male partner legally presumed to be the father, a donor could establish paternity and seek parental access to the child. Conversely, recipients and children could have a legal basis to pursue the donor for support or inheritance rights. Only in the three Canadian jurisdictions with DI-specific legislation have these matters been clarified by absolving the donor of parental rights and responsibilities.

Male Partners

In a heterosexual partnership (marriage or common-law), the male partner is legally presumed to be the father of any children born of that union. That presumption of paternity could be contested in jurisdictions with no DI-specific legislation if a donor could establish a genetic link to the child.[20] If a donor successfully contested the paternity of the social father and could prove to a court that the best interests of the child would be served, he could conceivably gain custody of or access to the child.

> A first step would be legislation to give full legal standing to the [DI] child, recognizing the social father as the child's father in law and the donor as having no legal rights or responsibilities for support and maintenance.
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> *P. Creighton, private citizen, Public Hearings Transcripts, Toronto, Ontario, November 19, 1990.*

Also, male partners of DI recipients may not be legally compelled to act as a father to a DI child. In jurisdictions with no DI-specific law, the male spouse or partner of a woman undergoing DI, even if he consented at the time of insemination and intended to act as a parent to the child, could possibly disavow paternity when the child was born, leaving the child without a legal father.[21] Conversely, if the relationship broke up before the child was born, the recipient could challenge her partner's paternity and seek to deny him access to the child.

Female Partners

Lesbian couples are the most legally vulnerable after having a child by DI. Even in a stable, long-standing lesbian relationship, the law does not grant the legal status of parenthood to a female partner of a DI recipient

(see research volume, *Treatment of Infertility: Assisted Reproductive Technologies*). It is legally impossible for a child to have two parents of the same sex, so if the biological mother died, or in cases of custody, access, or child support, the non-genetically linked lesbian partner would have the status of a "legal stranger."[22] This is the case even when the partner has shared in the parenting of the child all his or her life. The best interests of the child do guide court decisions about custody in these cases, so a lesbian partner who had been in a nurturing relationship with the child would not necessarily be precluded from obtaining custody or access. However, lesbians understandably want to guard against court decisions based on discriminatory attitudes.[23]

DI Children

Given that family law in most provinces contains the gaps just described, the situation of DI children is characterized by uncertainty with respect to inheritance, custody, access, and support. It is clearly not in the best interests of DI children to allow these gaps to persist. In addition to creating unwarranted stress, confusion, and uncertainty in DI families, the lack of legal recognition of DI participants fosters unsafe DI practices and secrecy about the process. Reforms in Canadian family law are needed to define the roles and responsibilities of DI participants and to avoid further confusion in this area. The Commission therefore recommends that

82. Legislation be adopted, in those provinces where it does not already exist, to ensure that
- **(a) the donor's rights and responsibilities of parenthood are severed by the act of sperm donation;**
- **(b) the married or cohabiting male partner of a DI recipient, if he has given his written consent at the time of insemination, is considered the legal father of the child;**
- **(c) the married or cohabiting male partner of a DI mother at the time of birth should be able to initiate a disavowal of paternity only if:**
  - **(i) he did not consent in writing to the insemination or he did not enter into a parental relationship with the child knowing he was not the genetic father;**
  - **(ii) he consented to the insemination under duress, coercion, or fraud;**
  - **(iii) he had acted as a father to the child only because he believed he was the genetic father;**

(d) if the legal mother of the child has no male partner, the child has the legal status of "father unknown";

(e) if the legal mother enters into a relationship with a male partner who acts as a parent toward the DI child, such a relationship be recognized by the courts in determining the best interests of the child for purposes of custody, access, and support, or in the event of the death of the child's mother;

(f) if the female partner of a DI child's mother acts as a parent toward the child, such a relationship be recognized by the courts in determining the best interests of the child for purposes of custody, access, and support, or in the event of the death of the child's mother.

The Commission believes that such legislation would remedy the ambiguities of current family law as it relates to DI families. It would enable the formation of secure families, free of unwanted contact with or by donors, in the best interests of DI children. In addition, it would assure DI children the benefits of two legal parents or, in the case of single women and lesbians, clear legal authority for the mother to form her family according to her values. Third, such legislation would maintain the privacy of the donor and protect him from any unexpected or unwarranted claim for support or inheritance.

Lessons from the Adoption Context

At present, DI record-keeping practices are unregulated — in fact, there is no requirement for sperm banks, individual physicians, or fertility clinics to maintain any donor records at all. An analysis of the evolution of law and policies relating to adoption may help in developing a framework for DI policies. Although adoptive and DI families are different, the experience of adoptees can suggest what DI children need with regard to access to information about their social and genetic background. Many adoptees who have little or no information about their origins feel as if their life stories "began at chapter two." These adoptees may develop an incomplete sense of identity and may make the search for their biological roots a primary life focus.

All jurisdictions have some means of providing for the release of non-identifying information about birth parents to adoptive families, in recognition of its importance to the emotional well-being of adoptees. In

more open arrangements, non-identifying information on the birth mother may be provided to the adoptive parents at the time of placement; an adopted child can request further non-identifying information at any time, although the permission of the adoptive parents is required until the child reaches the age of majority. Disclosure without the birth parent's permission is not allowed unless the health, safety, or welfare of the child requires such disclosure, and such cases would be rare. Where there are no legislative provisions, courts have tended to guard the confidentiality of the birth family when asked by an adopted child to open court records related to the adoption.

> As adoptees who have been reunited with birth parents and siblings, we can personally attest to the importance of the genetic link. To us the view that such a link could ever be erased or eradicated is extreme folly.
>
> We believe that the genetic third parent of children born of DI ... procedures will be a fundamental reality in their lives and one which cannot be dismissed or debased without eventually causing harm.
>
> We feel that the very existence of a central registry for information on these births would tend to swing public opinion away from the notion that such procedures are best concealed. This Commission has the opportunity to promote an atmosphere of truthfulness and greater openness in these matters by recommending that the future information rights of these children be acknowledged now.
>
> *H. Kramer, Canadian Adoption Reunion Register, Public Hearings Transcripts, Toronto, Ontario, November 20, 1990.*

The goals of adoption record keeping are based on a concern for the best interests of the adopted child. Full adoption records, kept on file for generations, mean that genetically transmitted health problems can be identified and traced; two family members can be prevented from marrying or conceiving a child unknowingly; and adoptive families can have enough information about the child's biological background for their own psychological needs. Record-keeping practices in the field of DI should have similar goals.

Canadian practitioners, particularly solo practitioners, have kept haphazard or even no records on sperm donors, inseminations, and DI births. This effectively closes off all routes for most DI children alive today ever to learn even basic information about their paternal genetic and social heritage. Record keeping on donated gametes varies greatly across Canada. The Commission's research showed that two (2 of 33) DI programs kept no donor records, seven kept no records on the number of children born, and seven did not count the number of women inseminated (see research volume, *Treatment of Infertility: Current Practices and Psychosocial Implications*). Clinics also kept their records for varying periods — three programs kept them for less than five years, while nine kept them for an

indefinite period.[24] Children resulting from DI performed outside the health care system are even less likely to have access to any records.

Poor record keeping has also led to situations where it is impossible to determine how many children have been born from the gametes of one donor. This information is important for many reasons. As mentioned above, during private meetings with DI families, donors, and their partners, the Commission heard concerns that individuals could unknowingly marry or have children with a half-sister or -brother. Although statistically such a situation is highly unlikely, it worries many DI participants — and, indeed, it is possible if a clinic has no policies regarding the number of children born from the sperm of one donor (especially if the clinic was the only one serving a particular area).

> In considering this issue of the right to know where you come from, a parallel is often drawn with the adoption process, where, over the past decade, attempts to find relatives have become much more common.
>
> In Quebec, the issue is still a controversial one. The principle of confidentiality persists, despite the fact that there have been constant changes in it since 1960 ... Following the passage of the legislation enacting the new *Civil Code* and amending family law, under article 632 of the Quebec *Civil Code* it is now possible for children and parents to find each other, as long as consent is free and informed, and unsolicited. [Translation]
>
> *S. LeBris, private citizen, Public Hearings Transcripts, Montreal, Quebec, November 21, 1990.*

Better record keeping would afford DI participants a measure of peace of mind without releasing identifying or named information about donors or DI families. Reassurance that a prospective spouse is not genetically related, or that a limit is placed on the number of children born from the sperm of one donor, would go far to ease the concerns of DI participants. The Commission heard that most Canadians believe these limits are necessary — in submissions and public hearings, all groups discussing this option recommended that the number of children per donor be limited.

> All jurisdictions have some means of providing for the release of non-identifying information about birth parents to adoptive families, in recognition of its importance to the emotional well-being of adoptees.

Mechanisms ensuring that information is available to DI children should be a requisite component of the DI process. Only a comprehensive, uniform record-keeping system can take into account the needs of DI families, donors, and Canadian society. A regulatory system is needed to facilitate the release of non-identifying information to DI recipients and

children, as well as to ensure proper record keeping for the other reasons just outlined.

Recommendations

The Commission's examination of assisted insemination significantly changed our view of the practice. Like others, we focussed initially on the more complex assisted conception technologies — until our research showed unequivocally that AI is worthy of the same concern, attention, and public policy investment as other technologies. We believe that others must also re-evaluate AI in light of its familial and legal implications and the potential for harm to women, children, and families if it is not practised appropriately.

As we have shown, sperm donation has lifelong implications with a cascade of social, ethical, and legal consequences. The Commission concludes that current shortcomings in the practice of DI must be corrected. Women without a male partner who is fertile have been led to believe that DI is a safe and effective option for them, when in fact there is a patchwork of standards and unsafe practices in this field; as a result, DI recipients are taking chances with their health and the health of their families, often unknowingly. Insemination is being offered under widely varying clinical conditions, sometimes in a dangerous fashion; technical variations in the procedure are being performed with no evidence of their benefit; record keeping is haphazard; some practitioners are not adhering to the standards physicians have set for themselves as a profession; and access criteria differ from clinic to clinic, possibly resulting in discrimination at some. AI has also become a highly medicalized procedure, in many cases unnecessarily, making it increasingly inaccessible to many women for whom it might otherwise be a reproductive option.

> The time has come for Canada to implement a donor insemination system; an integrated, uniform approach to this practice can resolve most of the problems and deficiencies the Commission identified and can regulate and standardize sperm collection, service provision, and record-keeping practices.

Commissioners believe that donor insemination should be available to women and couples who have considered their options and decided to form a family in this way. Few women or couples are likely to choose this option without having given it a great deal of thought or without having considered what the lifelong implications of their choice will be. It will never be an easy decision or one that is taken lightly, nor is it an option that every involuntarily childless woman or couple will be prepared to choose. For these reasons, we believe that relatively few

women, with or without a male partner, are likely to choose this way of having a child; the availability of donor insemination is therefore unlikely to imply major social change, because it will not change how the vast majority of children are conceived and families are formed. Nevertheless, given the need to protect the health and well-being of those who do choose to form a family in this way, as well as the well-being of the resulting children, we believe that steps are necessary to ensure that it is done in a safe manner, with appropriate record keeping and standards, and that the legal status of the resulting families is clarified and standardized across the country.

The Commission therefore believes the time has come for Canada to implement a donor insemination system; an integrated, uniform approach to this practice can resolve most of the problems and deficiencies the Commission identified and can regulate and standardize sperm collection, service provision, and record-keeping practices. This is not a trivial exercise; some practitioners and others will be inconvenienced and restricted by increased regulation, but Commissioners believe this is the only way to eliminate the unsafe practices, poor record keeping, and arbitrary access criteria that have evolved to date.

This is not a trivial exercise; some practitioners and others will be inconvenienced and restricted by increased regulation, but Commissioners believe this is the only way to eliminate the unsafe practices, poor record keeping, and arbitrary access criteria that have evolved to date.

The Commission proposes a system that builds on existing mechanisms within the health care system, and much of the responsibility for adapting them to serve the needs we identify must necessarily lie with provincial/territorial ministries of health. The ministries also have the funding and organizational resources to ensure that AI is offered to women and couples in a manner comparable to other health services — with no direct charges for the procedure and a fee for donor sperm based on cost recovery only. The system we propose will resolve the problems we identified by ensuring that

- all DI recipients and children are protected as much as is medically feasible from sexually transmitted infectious diseases (including HIV) and genetic diseases that are transmittable by donor sperm;
- only sperm that is collected and stored according to established safety standards is used in insemination procedures;

Figure 19.2. Outline of Proposed AI System in Canada

Licensed Collection Facility or Physician → (licence granted by NRTC based on testing/record-keeping criteria)	**Licensed Storage and Distribution Facility** →	**Requester** (licensed clinic, licensed practitioner, self-insemination recipient)

- collects sample
- interviews donor
- counsels donor
- screens blood and semen (freezes sample for six months for HIV retesting)
	- freezing/storage facility
	- attaches code number to general information/test results
	- attaches code to stored sample
	- maintains name/code link in a secure, separate, and protected file
		- receives sample with
		  - code number
		  - general medical/social information
		- performs insemination or instructs for self-insemination

- Sends sample to regional bank with:
  - identifying information (name, address, etc.)
  - general medical, social, genetic information
  - test results
  - signed statement by donor that he has read and understood information brochure and consents to donate
  - standard form completed
	- sends coded sample out only after receiving name/information of recipient
	- requests information on birth outcome
	This data/sperm bank thus contains information linking donor and social parents to be forwarded for ongoing storage to the NRTC.
	↓
		←to receive sample, requester sends to licensed storage and distribution facility:
		- identifying information on the woman
		- standard form completed
		- signed statement that the sperm is for her use
		- signed statement that she has read and understood information brochure
		- signed statement that she will inform facility of the name and birth date of any child that results from the insemination
		- any request that another sample from the same donor be kept in reserve

	National Reproductive Technologies Commission - receives all data (identifying and non-identifying on donors and recipients) for children born each year for ongoing, secure record maintenance.	

- no sperm that does not comply with Canadian standards is imported from international sources;
- all sperm donors understand the long-term implications of the act of donation;
- sperm donors have no rights or obligations with respect to children conceived through insemination with their sperm;
- sperm, as a human reproductive material, does not become the object of commercial transactions;
- only practitioners adhering to uniform standards of safety, effectiveness, and informed consent can offer AI services;
- self-insemination is available as a safe, effective, and low-cost alternative to DI carried out in a medical setting;
- secrecy about DI is discouraged while recognizing that families should be free to make their own choices about issues that affect them;
- complete records are collected, stored, and securely maintained on donors, recipients, and DI children, and the needs of DI families and donors are balanced with regard to access to information about each other;
- information on donors and recipients is accessible to those authorized by a court of law in the case of medical necessity; and
- DI record-keeping practices are uniform across the country.

The scheme is further described in Figure 19.2 and in the licensing requirements set out below.

Licensing Requirements for Sperm Collection, Storage and Distribution, and Use

The Commission recommends that

83. The National Reproductive Technologies Commission establish an Assisted Insemination Sub-Committee with responsibility for setting the standards and guidelines to be adopted as conditions of licence and for monitoring developments in this field.

84. The collection, storage, distribution, and use of sperm in connection with assisted insemination be subject to compulsory licensing by the National Reproductive Technologies Commission.

85. Sperm collection, sperm storage and distribution, and the provision of assisted insemination services constitute three distinct licensing categories, as described below. Upon meeting the necessary conditions of licence, a single facility may be considered eligible for all three types of licence.

and that

86. Collecting, storing and distributing, or using sperm in providing assisted insemination services without a licence issued by the National Reproductive Technologies Commission, or without complying with the National Commission's licensing requirements, as outlined below, constitute an offence subject to prosecution.

Sperm Collection Facilities

The Commission recommends that

87. The compulsory licensing requirements for sperm collection apply to any physician, centre, or other facility or individual collecting sperm to be used to inseminate a woman other than the social partner of the sperm donor.

and that

88. The Assisted Insemination Sub-Committee of the National Reproductive Technologies Commission develop, with input from relevant bodies, standards and guidelines to be adopted as conditions of licence. The recommendations of the Royal Commission on New Reproductive Technologies should serve as a basis for the guidelines. In particular, the Commission recommends that the following requirements be adopted as conditions of licence for sperm collection:

(a) Non-identifying information about the donor's medical history, age, and physical and social attributes, including race and ethnicity, should be collected at the time of donation.

(b) All potential donors should provide a signed, self-administered completed questionnaire providing information about their health and the health of their first-degree relatives (parents, siblings, and offspring), which should be reviewed by a clinical geneticist. Any indication of serious genetic anomalies or other high-risk factors should disqualify a potential donor from participating in the program.

(c) Identifying information, including the donor's full name, date and place of birth, and address, should be collected from the donor at the time of donation.

(d) All identifying donor information should be stored securely, so that it remains strictly confidential. When a sperm sample and information related to that sample are forwarded to a licensed sperm storage and distribution facility, no named information should be retained by the collection facility.

(e) Standard forms and procedures for collecting, recording, and encoding identifying and non-identifying information, and for storing identifying information in strictly confidential and highly secure conditions, should be developed by the Assisted Insemination Sub-Committee of the National Reproductive Technologies Commission.

(f) Potential donors, who should be of the legal age of consent, should be required to read and discuss information outlining the risks, responsibilities, and implications of sperm donation, including the fact that they will be tested for HIV and other infectious diseases, and should sign a consent form indicating they have done so. Standard

information and counselling materials should be developed by the Assisted Insemination Sub-Committee of the National Reproductive Technologies Commission, with a view to ensuring that they are comprehensive, easily understood, and non-directive.

(g) The necessary steps for screening donors and for testing sperm for infectious diseases that could potentially affect the health of the woman using the sperm or her child should be specified by the Assisted Insemination Sub-Committee of the National Reproductive Technologies Commission, and should be strictly followed. Non-compliance with such standards should be punishable by loss of licence.

(h) In setting standards for testing, the Assisted Insemination Sub-Committee should consider inclusion of testing for gonorrhoea, hepatitis A and B, human immunodeficiency virus (HIV) 1 and 2, syphilis, chlamydia, cytomegalovirus, herpes, trichomoniasis, ejaculate C and S, chromosomal analysis, human papillomavirus, and tuberculosis.

(i) Testing for HIV 1 and 2 should include a sperm quarantine period of at least six months before the initial sample is used and further quarantine periods and retesting of the donor at appropriate intervals during any continuing period of donation.

(j) Only sperm from donors with negative results for the diseases tested for should be considered suitable for insemination.

(k) Donors should be compensated only for their inconvenience and for the direct costs of donation. Payment for sperm should not be substantial enough to constitute an incentive to donate.

(l) Sperm suitable for insemination should be forwarded only to licensed sperm storage and distribution facilities, as described below.

(m) Sperm forwarded to licensed sperm storage and distribution facilities should be accompanied by the following information:

(i) identifying donor information;

(ii) the signed donor consent form showing that the donor has read and understood the information and counselling materials;

(iii) non-identifying donor information; and

(iv) all donor and sperm screening and medical test results, including date of donation.

(n) Once all sperm from a donor is forwarded to a licensed sperm storage and distribution facility, no identifying information in relation to that donor should be retained in the sperm collection facility.

(o) Sperm collection facilities should not operate on a for-profit basis. Charges for sperm should cover the costs of collection, testing, record keeping, and related administrative expenses, but should not include a profit.

The Commission further recommends that

89. Sperm collection facilities report to the National Reproductive Technologies Commission on their activities in a standard form, at least annually.

90. Sperm collection facilities be required to apply to the National Reproductive Technologies Commission for licence renewal every five years.

and that

91. Sperm collection licences be revocable by the National Reproductive Technologies Commission at any time for breach of the conditions of licence.

Sperm Storage and Distribution Facilities

The Commission recommends that

92. The compulsory licensing requirement for sperm storage and distribution apply to any physician, centre, or other facility providing sperm to be used to inseminate any woman other than the social partner of the sperm donor.

and that

93. A licence is also required to treat sperm for the social partner if it is treated with the aim of separating X- and Y-bearing sperm.

The Commission recommends that

94. The Assisted Insemination Sub-Committee of the National Commission develop standards and guidelines to be adopted as conditions of licence. The recommendations of the Royal Commission on New Reproductive Technologies should serve as a basis for the guidelines.

In particular, the Commission recommends that the following requirements be adopted as conditions of licence:

(a) All sperm stored or distributed by a sperm storage and distribution facility must be obtained from a licensed sperm collection facility. A licensed sperm storage and distribution facility should also be eligible for a sperm collection licence if it meets the conditions of licence outlined above.

(b) Only sperm accompanied by the following information should be accepted for freezing, storage, and distribution:
  (i) identifying donor information as specified above;
  (ii) the signed donor consent form;
  (iii) non-identifying donor information; and
  (iv) all required donor and sperm screening and medical test results.

(c) Immediately upon receipt, a donor identification code number should be attributed to the sperm sample. All test results, data sheets with non-identifying information, and sperm samples should be identified only by the donor identification code number, and the information linking the name to the code number stored separately and under secure conditions specified by the National Reproductive Technologies Commission.

(d) Sperm suitable for insemination should be cryopreserved in accordance with standards established by the National Reproductive Technologies Commission.

(e) Applications for sperm should be accepted only from an individual or facility licensed to provide assisted insemination services, as described below, or from an individual woman seeking sperm for self-insemination.

(f) Sperm should be provided to individual women for self-insemination without discrimination on the basis of factors such as sexual orientation, marital status, or economic status.

(g) Applications for sperm should be accepted only if accompanied by the following information:
  (i) identifying information, including the name, birth name (if different), date and place of birth, and address of the woman seeking to be inseminated (the recipient);
  (ii) data on the medical history of the recipient;

(iii) in the case of a woman seeking sperm for self-insemination, a signed statement that the sperm is for her own use, that she has received, read, and understood information materials outlining the risks, responsibilities, and implications of donor insemination, and that she consents knowingly to using the sperm;

(iv) a signed undertaking by the recipient, or by the licensed assisted insemination service, that the sperm storage and distribution facility will be informed within 21 days (in accordance with provincial birth registry requirements) of any live birth resulting from the insemination, and be provided with the name, sex, place and date of birth of the child, and information about any significant congenital anomalies or health problems.

(h) Sperm samples distributed to qualified applicants should be accompanied by the following information:

(i) the donor identification code number;

(ii) non-identifying donor information;

(iii) all donor and sperm screening and medical test results (identified only by the donor identification code number);

(iv) the form to be completed and returned to the sperm storage and distribution facility in the event of a live birth, recording:

- the date of birth;
- the sex of the child(ren) born;
- the full name(s) of the child(ren) born;
- any other information that the National Reproductive Technologies Commission deems necessary for adequate record keeping, such as information about any congenital anomalies or significant health problems in the newborn child;

(v) informational materials for the recipient explaining the legal status of the donor, the recipient, and her partner, if applicable, and outlining benefits to the child and family of registering the birth of the child(ren) with the National Reproductive Technologies Commission; and

(vi) in the case of sperm intended for self-insemination by the recipient, directions for thawing the sperm and for self-inseminating.

(i) Information relating to the donor, the recipient, and the child(ren) should be linked by the licensed storage facility, under secure conditions, pursuant to guidelines established by the National Reproductive Technologies Commission, so as to ensure

(i) no more than 10 live births per donor;

(ii) the donor or the child(ren) can be contacted in the event of serious medical need (e.g., discovery of a serious genetic disease in either the child or donor that would have implications for the other);

(iii) access at any time by recipients and the children to non-identifying information about the donor upon providing the identification code number of the donor; and

(iv) access by qualified researchers to non-identifying data for research purposes.

(j) Records, including identifying information about the donor, the donor's identification code number, the name of the recipient, and information about the child(ren) born as a result of insemination, should be forwarded to the National Reproductive Technologies Commission annually, for storage by the National Commission for a minimum of 100 years.

(k) All identifying donor information should be stored securely, pursuant to guidelines established by the Assisted Insemination Sub-Committee of the National Reproductive Technologies Commission, so that it remains strictly confidential. Once all sperm samples from a donor have been distributed, no identifying information relating to that donor should be retained by the sperm storage and distribution facility.

(l) Identifying donor information should be released by the National Reproductive Technologies Commission only in the event of serious medical need as determined by a court of law.

(m) Sperm samples should be stored and shipped in accordance with guidelines established by the National Reproductive Technologies Commission.

(n) Sperm storage and distribution facilities should not be permitted to operate on a for-profit basis. Charges for sperm should cover the costs of storage, testing, record keeping, distribution, and related administrative expenses, but should not include a profit.

In addition to the specific conditions of licence outlined above, the Commission recommends that

95. Sperm storage and distribution facilities follow the record keeping, data collection, and data reporting requirements established by the National Reproductive Technologies Commission.

96. Sperm storage and distribution facilities report to the National Reproductive Technologies Commission on their activities in a standard form, at least annually.

97. Sperm storage and distribution facilities be required to apply to the National Reproductive Technologies Commission for licence renewal every five years.

and that

98. Sperm storage and distribution licences be revocable by the National Reproductive Technologies Commission at any time for breach of the conditions of licence.

Assisted Insemination Services

Access to donor sperm for use in insemination, whether by a clinic or a solo practitioner for use in assisted insemination or by an individual woman for self-insemination, would be contingent upon the provision of identifying information on the recipient as outlined above.

The Commission recommends that

99. The National Reproductive Technologies Commission develop, with input from relevant bodies, standards and guidelines to be adopted as conditions of licence. The recommendations of the Royal Commission on New Reproductive Technologies should serve as a basis for the guidelines. In particular, the Commission recommends the following requirements:

(a) Only frozen sperm from a licensed sperm storage and distribution facility, obtained upon completion of a form providing the required information on the recipient, should be used. The use of imported sperm is not permissible.

(b) For female participants in assisted insemination programs, invasive exploratory or diagnostic techniques or adjuncts such as hormones should not be used unless there is a reasonable indication of a female fertility problem.

(c) A licence is required to perform insemination at any site other than the vagina even if the recipient is the social partner.

(d) Criteria for determining access to assisted insemination services should not discriminate on the basis of social factors such as sexual orientation, marital status, or economic status.

(e) Standard information, counselling, and consent forms should be developed by the Assisted Insemination Sub-Committee of the National Commission and should be completed and signed by all recipients before any treatment. Such forms should include
  (i) information on both the physical and psychological effects of assisted insemination and its lifelong implications;
  (ii) information about alternatives to assisted insemination;
  (iii) information about specialized psychosocial counselling services that are available on request to support decision making;
  (iv) a standard section, requiring signature of the recipient, indicating that she has read and understood the above information and that she undertakes to provide the requisite information if she has a pregnancy and birth as a result of the insemination; and
  (v) a standard section where the signature of the partner, if he consents, is provided.

(f) At the time of insemination, the recipient should be provided with the following additional information and materials:
  (i) the donor identification code number;
  (ii) non-identifying donor information (identified only by the donor information code number); and
  (iii) a list of the donor and sperm screening and medical test results.

(g) Within 21 days of a live birth, the requisite information about the child(ren) born as a result of the insemination should be provided by the recipient to the assisted insemination service, for forwarding to the storage and distribution facility that supplied the sperm.

(h) The form to be completed by the recipient and returned to the sperm storage and distribution facility in the event of a live birth should include:

- **(i) the date and place of birth;**
- **(ii) the sex of the child(ren) born;**
- **(iii) the full name(s) of the child(ren) born;**
- **(iv) details of any significant congenital anomalies or health problems; and**
- **(v) any other information the National Reproductive Technologies Commission deems necessary for adequate record keeping.**

The Commission recommends that

100. Licensed facilities provide sperm that has been treated with the aim of separating X- and Y-bearing sperm only to individuals who have a clear medical indication for this procedure (for example, X-linked disease). For individuals who do qualify for receipt of sperm treated in this way, there should be

- **(i) disclosure of objective information to clients about the lack of reliability of any technique used;**
- **(ii) existence of a system of record keeping with respect to the sex of the child that results; and**
- **(iii) submission of an annual report to the National Reproductive Technologies Commission with these data.**

101. Assisted insemination services report to the National Reproductive Technologies Commission on their activities in a standard form, at least annually.

102. Assisted insemination services be required to apply to the National Reproductive Technologies Commission for licence renewal every five years.

and that

103. Assisted insemination licences be revocable by the National Reproductive Technologies Commission at any time for breach of the conditions of licence.

The Role of the Assisted Insemination Sub-Committee

We have referred to the Assisted Insemination Sub-Committee in our licensing recommendations for sperm collection, storage, distribution, and the provision of assisted insemination services. However, it is worth providing a brief review of the Sub-Committee's functions, in light of the central role it will play in regulating practices in this area, thereby ensuring a safer and more effective AI system in Canada.

The Assisted Insemination Sub-Committee would be established and chaired by the National Reproductive Technologies Commission. It would be one of six permanent Sub-Committees, along with those dealing with infertility prevention; assisted conception services; prenatal diagnosis; the provision of fetal tissue; and embryo research. Like National Commission members themselves, we recommend that at least half the members of the Assisted Insemination Sub-Committee be women, and that all members be chosen with a view to ensuring that they have a background and demonstrated experience in dealing with a multidisciplinary approach to issues, as well as an ability to work together to find solutions and recommend policies to address the issues raised by assisted insemination and other methods of assisted conception in a way that meets the concerns of Canadian society as a whole.

The Assisted Insemination Sub-Committee would have several functions. It could decide to establish ad hoc working groups to deal with one or more of these functions, if appropriate:

- Setting and revising, from time to time, the licensing requirements for sperm collection; sperm storage and distribution; and the provision of assisted insemination services (including donor and recipient consent requirements; record-keeping procedures; data collection and reporting requirements; etc.) to be applied through the National Reproductive Technologies Commission licensing process. The latest guidelines of the American Fertility Society could be helpful in this regard.

- Developing standard information materials, counselling materials, and consent forms to be used in the provision of AI services.
- Establishing policies and standards for screening donors and testing sperm, and establishing standards for the cryopreservation and safe storage of sperm.
- Developing standards and guidelines for the collection, recording, encoding, and secure storage of identifying and non-identifying donor information, recipient information, and information relating to AI births.
- Overseeing the National Reproductive Technologies Commission's national data base of donors, recipients, and AI births; and establishing appropriate procedures for making identifying information available, under court order, in the case of medical necessity.
- Analyzing the country-wide information that is gathered about technologies and practices, which can be used as a basis for the Assisted Insemination Sub-Committee's guideline- and standard-setting activities, as well as by the provinces in their planning and resource allocation decisions.
- Consulting with the provinces, directly or through the Conference of Deputy Ministers of Health, on matters relating to AI funding and services, where this is useful or needed.
- Discussing and setting policy on new issues as they arise, engaging in direct consultation with the public as needed, and ensuring appropriate levels of regulation on a continuing basis.
- Promoting public awareness and debate regarding assisted insemination in Canada, in part through the publication of relevant data and information in the National Reproductive Technologies Commission's annual report.

The Assisted Insemination Sub-Committee's monitoring, information-gathering, and reporting activities will help to ensure that the Canadian public is better informed about the AI system in Canada. Public accountability in this area will also be enhanced by the composition of the Assisted Insemination Sub-Committee, which should include both National Commission and outside membership, so as to include a broad representation of perspectives and interests. We recommend that the Sub-Committee include membership from relevant professional associations, federal and provincial/territorial health ministries, individuals representing the concerns of donors, recipients, and children born through the use of AI, as well as other interested and affected segments of the public, including, in particular, women. We are of the view that the Sub-Committee's continuing regulatory oversight over sperm collection, sperm storage and distribution, and the provision of assisted insemination services will establish important safeguards in this area, and ensure safe, more effective, and more equitable delivery of AI services in Canada.

Conclusion

The Commission's recommendations in this chapter address the need for action in two broad areas: mandatory licensing of assisted insemination services to ensure that they are provided safely, uniformly, and equitably; and family law reform to clarify and standardize in all provinces the parentage of children born as a result of donor insemination and to protect the integrity of families formed in this way.

Establishing the licensing system we propose will overcome the significant shortcomings the Commission's review revealed in the current provision of assisted insemination services in Canada. By making standards for safe collection, storage, and use of sperm part of the conditions of licensing for facilities that wish to provide AI services, the health and safety of women and their partners and children will be safeguarded. Women and couples who wish to self-inseminate will also have a source of safe sperm. In addition, people will get the information and counselling they need to make informed decisions about whether they want to have children in this way. Licensing and regulation by the National Reproductive Technologies Commission will also ensure that record-keeping practices are improved and standardized across the country, so that DI children and families have access to the information they need to protect and promote their physical health and emotional well-being.

Assisted insemination has the potential to be a safe, inexpensive, and relatively low-tech reproductive option for Canadian women and couples whose circumstances and values make this an acceptable choice for them in forming a family. The integrated national approach we propose, together with the family law reform we recommend, will help to ensure that this potential is realized.

Appendix 1: International Approaches to DI

The United Kingdom, the United States, and Australia have not implemented an actual DI system; instead, they have dealt with the various issues surrounding DI as separate concerns. Britain's *Human Fertilisation and Embryology Act* (1990) set up a central registry regarding gamete donation, and AI itself is offered both privately and within the public health system. The act also states that donor information, including donor identities, must be kept on record, and children have access to non-identifying information when they reach the age of majority, although parents are not required to inform children that they originated from DI. The *Family Law Reform Act* (1987) severs the parental rights and

responsibilities of the sperm donor and legitimizes the paternity of the male partner of a DI recipient.

In the United States, where DI is offered as a commercial service, regulation falls to the individual states. Most states have addressed the issue of the filiation of the child, but not whether a child should have access to donor information. Fourteen states require that the donor's identity be kept (though under seal unless specified by court order in the case of grave medical importance) but otherwise do not establish a right of children to either identifying or non-identifying information.

South and Western Australia have focussed on the release of donor information. Each has passed legislation requiring that records of donors and recipients be kept; Western Australia allows the release of non-identifying information to the child and to his or her social parents. Both jurisdictions allow the release of identifying information with the consent of the donor.

Other jurisdictions have dealt with DI in a more systematic way. Sweden, for example, has passed a far-reaching *Act on Insemination* (1985), which addresses each stage of DI within a state-controlled framework. All donor sperm collection and cryopreservation is done by public hospitals; donors are given a "gift" of approximately $38.00 Canadian; all inseminations take place in public hospitals under the supervision of a physician qualified in gynaecology and obstetrics and with licensed counselling facilities; and specific practice regulations and guidelines for screening donors, freezing sperm and retesting for HIV, and the insemination procedure itself are adhered to.

The legislation limits DI to married or cohabiting heterosexual couples. The Swedish system does not compel DI parents to tell their children how they were conceived but allows the DI child to have access to the identifying information about the donor upon reaching the age of majority (although DI parents do not have access to this information). If upon reaching the age of majority a DI child requests a meeting with his or her genetic father, the donor is obliged to do so. The donor gives his consent to this meeting at the time of donation. Under the Swedish system, information about the donor and his identity is kept on file for 70 years.

France has regulated the practice of DI within a national framework since the early 1970s. The Centre d'étude et de conservation des oeufs et du sperme humains licenses sperm clinics according to rigorous practice (married donors with children) and record-keeping criteria, and France's state-run health insurance covers all AI costs. A controversial bill (adopted in 1992 in first reading but not passed) places further restrictions on DI — the practice will continue to be limited to heterosexual couples in which the man is sterile or carries a genetic disease. The bill also clarifies the legal status of DI families and reinforces donor anonymity; a married man who has consented to his partner's insemination cannot renounce paternity, a sperm donor cannot demand paternity rights, and the donor's identity is completely protected. The potential French legislation does not allow designated gamete donation.

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Specific References

1. Fresh sperm can live up to three days in the optimum conditions present in a woman's vagina — body temperature, structural factors, and cervical and vaginal mucus combine to create the perfect environment to preserve sperm. Outside this environment, two hours is considered the outer limit of sperm life (Noble, E. *Having Your Baby by Donor Insemination: A Complete Resource Guide.* Boston: Houghton Mifflin, 1987).

2. Ontario Ministry of Health, Ad Hoc Group. *Recommended Guidelines for Therapeutic Donor Insemination Services in Ontario.* Toronto: Ministry of Health, 1987; Canadian Fertility and Andrology Society. *Guidelines for Therapeutic Donor Insemination.* Montreal: CFAS, 1988.

3. Human immunodeficiency virus, the virus thought to lead to acquired immunodeficiency syndrome (AIDS).

4. Royal College of Obstetricians and Gynaecologists, Fertility Committee. *Infertility: Guidelines for Practice.* London: RCOG Press, 1992, p. 18.

5. Adapted from Harkness, C. *The Infertility Book: A Comprehensive Medical and Emotional Guide.* San Francisco: Volcano Press Inc., 1986, pp. 189-90. Sperm is evaluated for several qualities; it may be abnormal in more than one of these. Although 100 million sperm per millilitre of ejaculate is the average count in normal men, the sperm count is considered normal if it is between 20 and 100 million per millilitre.

Factor	Evaluation criteria	Results
Sperm count	Sperm is placed, one layer thick, on a counting grid under a microscope. One area of the grid is counted and the number multiplied by 1 million. There is a 10% margin of error.	A count below 20 million is reported as "low sperm count."
Motility	Two to three hours after ejaculation, the percentage of moving sperm in high-power microscopic fields is estimated, and the degree of forward progression is rated 1-4, from none to excellent.	Grades 1 and 2 are reported as "poor motility," grades 3 and 4 as "good motility."
Morphology	100 sperm cells are examined for shape and maturity, and categorized as 1) normal (mature with oval shape), 2) amorphous (immature shape or size), 3) tapered, 4) double-headed, 5) micro (too small), or 6) macro (too big).	If fewer than 60 percent fall into category 1, abnormal morphology is reported.

Viscosity	The liquidity of sperm 20-30 minutes after ejaculation is measured by pouring it drop by drop.	If semen is gelled, poor viscosity is reported.
Volume	Measuring the amount of semen that is ejaculated — 2-5 cubic centimetres (cc) is considered normal.	Less than 2 cc is reported low volume, over 5 cc is reported excessive volume.

6. Ibid., p. 192.

7. MacIntyre, S., and A. Sooman. "Non-Paternity and Prenatal Genetic Screening." *Lancet* 338 (October 5, 1991): 869-71. Non-paternity rates on the general genetic literature are quoted as being "in the range of 10%," but variables that may affect paternity rate are sample ascertainment, birth order, age, cultural and ethnic group, reason for testing, and laboratory technique. Overall, it appears that general population studies in the United Kingdom, France, and the United States are in the range of 1 to 5 percent.

8. United States. Congress. Office of Technology Assessment. *Artificial Insemination Practice in the United States: Summary of a 1987 Survey.* Washington: Office of Technology Assessment, 1988.

9. Wikler, D., and N. Wikler. "Issues and Responses: Artificial Insemination." In Research Volumes of the Royal Commission on New Reproductive Technologies, 1993.

10. Stephens, T., and J. McLean. "Survey of Canadian Fertility Programs." In Research Volumes of the Royal Commission on New Reproductive Technologies, 1993.

11. Ibid.

12. Canada. Statistics Canada. *Demographic and Income Statistics for Postal Areas, Canada.* Cat. No. 17-202. Ottawa: Minister of Supply and Services Canada, 1990.

13. Golombok, S., and J. Rust. "The Warnock Report and Single Women: What About the Children?" *Journal of Medical Ethics* 12 (1986): 182-86.

14. Those who chose known donors wanted the child to have the ability to meet his or her biological father later in life, and wanted to know the donor so that they would be aware of any medical complications that might arise in the future. Some lesbians are using sperm donated by a male relative of their female partner, in order to make a genetic link to the two families.

15. The Commission's readability analysis of education and consent materials used a scale to determine how many years of education were needed to fully comprehend what was written.

16. Canadian Fertility and Andrology Society, *Guidelines for Therapeutic Donor Insemination*, p. 6: "d. In addition to adequate physician, nursing and laboratory staff, the following expertise is also needed: ... i. A clinical geneticist ... ii. A clinical psychologist to provide counselling of recipients at all stages of work-up and treatment."

17. Daly, K.J., and M.P. Sobol. "Adoption as an Alternative for Infertile Couples: Prospects and Trends." In Research Volumes of the Royal Commission on New Reproductive Technologies, 1993, p. 15.

18. Views expressed by the Toronto Branch of the Canadian Adoption Reunion Register, at the Commission's Public Hearings, Toronto, Ontario, November 20, 1990.

19. The Yukon *Children's Act* states that the legal father of a child born through assisted conception is the husband/cohabiting partner of the mother if he has given his consent in advance of the insemination, and that the sperm donor has no parental rights. This means if the mother does not have a partner, the child has no legal father.

Newfoundland law specifies that where the man is married to or cohabiting with a woman at the time she is inseminated and he consents to the insemination, he, and not the donor, is considered the legal father. Even without consent, the man will be considered the father if he has demonstrated his intention to treat the child as his, unless he can prove that he did not know about the DI conception.

The revised Quebec *Civil Code* (in force January 1, 1994) specifies that the use of third-party genetic material does not constitute a filial bond between the third party and the child born of that procreation. The 1981 Code already specified that a child born as a result of DI is presumed to be the legitimate child of the mother and her spouse, if the husband gave his consent to the insemination. According to the revised Code, the husband can challenge the presumption of paternity if he did not consent and did not act as a parent to the child. The Code does not recognize common-law unions; therefore, despite a common-law partner's consent to DI, the Code is of no application and therefore the partner could bring an action to disavow paternity. In other words, a common-law spouse may be presumed to be the father, but, unlike a married spouse, he can attempt to refute the presumption. The revised Code does provide for an action in responsibility against such a common-law partner.

20. Sloss, E., and R. Mykitiuk. "The Challenge of the New Reproductive Technologies to Family Law." In Research Volumes of the Royal Commission on New Reproductive Technologies, 1993. All Canadian jurisdictions, with the exception of Nova Scotia, have legislation that deals with a "rebuttable presumption of paternity" with respect to children born into a stable heterosexual relationship. Legal presumptions are assumptions arising from a given set of facts that require the production of evidence to overcome the assumption. One such assumption is that a husband is the legal father of a child born within a marriage. However, that assumption is at most a starting point and it can be "rebutted," or refuted by evidence that he is not the biological father (such as a blood test). Any "interested person" can bring forth that evidence. In light of the prospect that a person could refute an assumption of paternity, it is therefore theoretically possible that a donor could produce evidence of his biological link to the child so that a "court would likely entertain his action in paternity as against the presumed father of the child." In the situation where a donor seeks custody/access to "his" child, he must refute the presumption *and* persuade the court it would be in the child's best interests that he be granted custody/access. In those jurisdictions with DI-specific consent legislation, the person giving consent to the insemination is legally presumed to

be the father of the child. The difference here is that this presumption is *irrebuttable*, meaning that it is irrefutable, and that person's legal status as father cannot be challenged by anyone. More specifically, in the Yukon, Newfoundland, and Quebec, a sperm donor would not be able to claim any parental rights.

21. Ibid. However, some courts in the United States have decided that in such a circumstance the man could not challenge his paternity. If he renounced paternity later than birth, that is, he acted as a father to the child while knowing he was not genetically linked, he may not be able to absolve himself of responsibility to contribute to the support of the child. In addition, some jurisdictions have legislation defining "parent" as including "a person who has demonstrated a settled intention to treat the child as his or her own even where there is no biological connection." This is an extended definition of the term "parent," and again was for the purpose of support.

22. For some purposes, it is legally possible that a child could have two "parents" of the same sex where support or custody/access legislation provides for extended definitions of the words "parent" and "child." In such a circumstance, should the non-genetically linked woman fall within an extended definition of "parent," she would not be a legal stranger.

23. Sloss and Mykitiuk, "The Challenge of the New Reproductive Technologies to Family Law," refers to one case that seems to support the claim that discrimination in Canadian courts against lesbian families works against the best interests of the child. Although the issue was *child support* not *custody*, the British Columbia case of *Anderson v. Luoma* (1986) is illustrative of where a court has adopted a "conventional, heterosexual conception of the family." Briefly, the genetic/gestational mother applied for child support from her lesbian partner. The women had cohabited for 10 years, and during that time the respondent had supported the plaintiff and the two DI children. The court refused to order support, holding that the relevant legislation "does not purport to affect the legal responsibilities which homosexuals may have to each other to children born to one of them as a result of artificial insemination." The court stated further that the act applies to the "spousal and parental relations of men and women in their role of husband, wife and parent." This limitation of the child's support to their legal mother deprives the child of the opportunity for two lines of support.

24. Stephens and McLean, "Survey of Canadian Fertility Programs," Table 35.