Advisory Committee on Assisted Reproductive Technology

Advice to the Minister of Health on the Use of Frozen Eggs in Fertility Treatment

December 2008

Subject:	**USE OF FROZEN EGGS IN FERTILITY TREATMENT**	
Date:	9 DECEMBER 2008	**File Ref:** AD20-86-11-2
Attention:	HON TONY RYALL, MINISTER OF HEALTH	

PURPOSE OF REPORT

The purpose of this report is to advise you, pursuant to section 6 of the HART Act, on the use of frozen eggs in fertility treatment. Section 6 relates to procedures or treatments that may be declared established procedures.

Section 6 (2) requires that, when tendering such advice to you, ACART must provide you with a report that sets out the following:

- information about the procedure or treatment
- an assessment drawn from the published and peer reviewed research, of the known risks and benefits to health of the procedure or treatment
- advice as to whether, in its expert opinion, the known risks to health of the procedure or treatment fall within a level of risk that is acceptable in New Zealand
- an ethical analysis of the procedure or treatment
- advice as to whether, in its expert opinion, the Minister should recommend that the procedure or treatment be declared an established procedure.

EXECUTIVE SUMMARY

The Advisory Committee on Assisted Reproductive Technology (ACART) recommends that the use of frozen eggs become an established procedure. This would allow women to use previously frozen eggs in fertility treatment and to donate any surplus frozen eggs to other women. ACART's reasons for this recommendation are:

- the collection and freezing of eggs is currently an established procedure, and there would have to be strong reasons to prevent women from subsequently using their frozen eggs
- although it is still a relatively new technique, the available evidence suggests that the risks to the resulting child associated with the use of frozen eggs are no greater than those associated with the use of frozen embryos or IVF generally, given that damaged eggs will be identified and discarded or will not fertilise
- for some women, particularly those undergoing cancer treatment, egg freezing and subsequent use will be the only option available to preserve their fertility

- egg freezing and subsequent use also offer an alternative to those who, for religious or spiritual reasons, find the freezing of embryos unacceptable
- there are few ethical issues associated with the use of frozen eggs, and ACART considers that these are best managed in discussions between clinician and patient.

As this is still a developing technology, ACART will continue to monitor its use internationally. In addition, should you agree that it be declared an established procedure, ACART will discuss with the Ministry of Health mechanisms to collect information to specifically monitor the use of frozen eggs in New Zealand.

RECOMMENDATIONS

Regulation of the use of frozen eggs in fertility treatment

ACART recommends that you:

(a)	**Agree** that the use of frozen eggs be declared an established procedure pursuant to section 6 of the HART Act 2004.	Yes/No
(b)	**Note** that if you agree to (a) above, it would be given effect by amending the HART Order in Council 2005 Part 2 (3) to remove the exclusion to the established procedure on the use of eggs that have undergone cryopreservation (freezing).	Noted
(c)	**Note** that ACART will discuss with the Ministry of Health the best way to monitor the application and health outcomes of assisted reproduction, including the use of frozen eggs, in New Zealand.	Noted

Related issues: Communications

ACART recommends that you:

(d)	**Note** that the HART Act requires that "Promptly after providing the Minister with a report [under section 6 of the HART Act 2004] the Chairperson of the advisory committee must ensure that the report is published on the Internet."	Noted
(e)	**Note** that ACART intends to publish this report on its website by 30 January 2009.	Noted

(f)	**Note** that ACART will send a copy of the summary of submissions to those who requested it at the same time as it publishes this report on its website.	Noted

Sylvia Rumball
Chair, Advisory Committee on Assisted Reproductive Technology

Minister's signature:
Date:

PAPER

Background

1. In New Zealand, women can freeze their eggs but cannot subsequently use them. This is because when the technology was assessed in 2005, it was considered that there was too little information to judge its safety. The use of frozen eggs was, therefore, excluded from the established procedures which were declared in the Human Assisted Reproductive Technology (HART) Order in Council 2005.

2. On ACART's establishment in September 2005, the then Minister of Health, Hon Annette King, asked the Committee, amongst other things, for advice on the use of frozen eggs. ACART has kept the technology under review, having commissioned a literature review in early 2007, followed by an update in early 2008.

3. Based on the information received in early 2008, ACART prepared a discussion document and undertook public consultation from late July to early September 2008.

4. In its consultation document, ACART set out its proposed advice to the Minister of Health, which was that the use of frozen eggs be declared an established procedure for individual treatment purposes and for donation for treatment purposes.

5. ACART also proposed that frozen eggs could be donated for use in research. Responses to this proposal will be incorporated into a separate piece of work reviewing the interim *Guidelines on the Use of Gametes and Non-Viable Embryos in Research*.

Submissions

6. Twenty one submissions were received. The summary of submissions is attached as Appendix A. This section highlights the issues raised in submissions.

7. Most submitters agreed that the use of frozen eggs should become an established procedure. Three submitters considered that it is an experimental procedure that should proceed subject to guidelines and ECART approval as either a clinical trial or innovative practice.

8. Specific issues raised in submissions related to:

    - social reasons for egg freezing and subsequent use
    - the potential for women to store their eggs to bear children later in life, possibly post-menopause
    - the need for guidelines on extending the storage period for gametes and embryos beyond ten years, so that women storing their eggs would know what criteria would apply if they wanted to extend the storage period

- donation of frozen eggs to other women for their use in fertility treatment
- the importance of informed consent and the need to specify requirements
- concerns about the posthumous use of frozen eggs
- issues related to minors storing eggs
- the importance of monitoring.

Social reasons for egg freezing and subsequent use

9. Only a few submitters commented on the use of eggs for 'social' reasons e.g. where a woman does not yet have a partner. One of these submitters was supportive. The others were concerned that allowing social use might encourage its use, even though they considered its use was not supported by the evidence, given the relatively low chance of a successful pregnancy. See paragraphs 39-40.

The potential for women to store their eggs to bear children later in life, possibly post-menopause

10. One submitter supported women being able to bear children later in life. Another expressed concern at the potential for this and considered that ACART should undertake work to address this matter. ACART will begin a project in 2009 on access to fertility treatment for non-medical reasons. Age is within the scope of this project.

Guidelines on extending the storage period for gametes and embryos beyond ten years

11. One submitter considered that ACART should develop guidelines so that women freezing eggs for social reasons would know the criteria for extending the storage period beyond ten years at the time they store their eggs. ACART will consider the priority of this work in the context of developing its 2009/10 work programme. ECART, fertility clinics and the Ministry of Health will be consulted on the work programme before ACART seeks your comments and approval.

Donation to other women of frozen eggs for their use in fertility treatment

12. Five submitters opposed frozen egg donation and another two considered that it should be allowed only within families. The other submitters were supportive and emphasised the importance of informed consent. See paragraphs 36-37.

The importance of informed consent and the need to specify requirements

13. Key issues raised related to the novelty of the procedure, the risks involved and the likelihood of a successful pregnancy and birth. Generally, submitters wanted a more detailed set of requirements than that specified in the existing regulatory framework. See paragraphs 32-33.

Posthumous use of frozen eggs

14. A number of submitters raised concerns about the posthumous use of frozen eggs and the need for consents to be up to date. See paragraphs 34-35.

Minors and the ten-year storage period

15. One submitter considered that girls should not have to apply to ECART for an extension to the ten year limit on storing gametes until they reach adulthood. ACART will take this comment into account when it develops guidelines on extending the storage period.

Monitoring

16. Submitters strongly emphasised the importance of monitoring the application and health outcomes of the use of frozen eggs in New Zealand, should it be made an established procedure. See paragraph 30.

Donation of frozen eggs for use in research

17. The consultation also covered the donation of frozen eggs for research purposes. ACART will incorporate submissions on donation for research into its revision of the interim *Guidelines on the Use of Gametes and Non-Viable Embryos in Researc*h.

Advice and recommendations on the use of frozen eggs in fertility treatment

Information about the use of frozen eggs

18. While three babies were born from egg freezing in the 1980s, the technology was not systematically used in clinical practice until the late 1990s. Reasons for this included the vulnerability of the egg and relatively poor success rates at an early stage. As many of the early concerns were based on findings from animal studies, those concerns may be unfounded in regard to humans. Instead, they may relate specifically to differences in the eggs of the various species studied.

19. Subsequent evidence from studies using human eggs, together with findings of recent clinical egg freezing programmes, suggest that it is a viable option for appropriate patients. Between five and six hundred babies have now been born world-wide from frozen eggs.

Assessment of the known risks and benefits to health

Risks to the egg

20. The process of freezing and thawing eggs can damage them. This is mainly due to the vulnerable state of the egg, together with its large size and high water content.

21. Damage reduces an egg's ability to fertilise and could result in abnormal chromosome numbers after fertilisation.[1] However, damaged eggs can be identified and discarded so that there is no impact on embryos formed and children born from frozen eggs.

Outcomes for children

22. There has been no genetic or developmental follow-up study of babies born from frozen eggs, possibly because so few children have been born in any single fertility centre. Nor has there been any systematic reporting of pregnancy and birth data.

23. One study of 13 babies reported normal birthweight, normal chromosome numbers and no malformations. In another study, no chromosomal abnormalities were observed following amniocentesis sampling of five pregnancies. A third study reported 48 healthy babies born, with no major malformations.

24. Information to date suggests that health outcomes for children born from frozen eggs are similar to those for children born as a result of other IVF procedures.

25. These studies, however, report on only a small proportion of the total number of babies born from frozen eggs. More studies are needed to accurately assess the longer term health outcomes for babies born from frozen eggs.

Maternal health outcomes

26. No adverse maternal health complications have been reported following the use of frozen eggs, although miscarriage does occur.

Benefits

27. Egg freezing is relatively less successful than embryo freezing, which is a well established part of fertility treatment. In general, embryo freezing will be preferred over egg freezing.

28. There are, however, situations where the freezing and subsequent use of frozen eggs will be preferred over embryo freezing, including:

    - where embryos cannot be formed due to there being no sperm for fertilisation on the day
    - in the case of young single women (or girls) with malignant conditions or related treatments that threaten their fertility
    - where the individual/couple undergoing fertility treatment have ethical objections to creating and freezing multiple embryos.

[1] Much of this damage reported in studies has been attributed to the use of an inferior cryoprotectant, which has since been replaced by another cryoprotectant, and also to differences in eggs between the different species used in research.

Acceptability of the risks associated with the use of frozen eggs

29. There are very few known risks associated with the use of frozen eggs. ACART's analysis indicates that the known risks fall within a level of risk that is acceptable in New Zealand for the following reasons:

    - For some women (particularly those undergoing treatment for cancer), egg freezing and the subsequent use of those frozen eggs will be the only option available to them to have genetically-related children.
    - The miscarriage rate is similar to the miscarriage risk associated with the use of frozen embryos (though numbers are too small to make a meaningful comparison at this stage).
    - There has been a sufficient uptake of the technology, with approximately five to six hundred births in other countries, to provide early indications of outcomes.
    - No country has banned egg freezing (although the Hungarian Ministry of Health is considering a moratorium pending further research).
    - There are few ethical issues associated with the use of frozen eggs, and ACART considers these issues are best dealt with between the clinician and the patient.
    - ACART considers the use of frozen eggs to be consistent with the purposes and principles of the HART Act.

30. There is, however, a lack of data on outcomes for children born from frozen eggs. ACART, therefore, intends to continue to monitor the international literature and datasets and, if feasible, to specifically monitor their use in this country. ACART will discuss this with the Ministry of Health.

Ethical analysis

31. Overall, ACART considers that there are few ethical issues associated with the use of frozen eggs.

Informed consent

32. Informed choice is a key ethical issue associated with the use of frozen eggs. Fertility services and associated health professionals are subject to the Code of Health and Disability Services Consumers' Rights 1996, which confers ten rights on consumers of health and disability services, including the right to make an informed choice and give informed consent.

33. In addition, more detailed requirements for informed consent, specific to assisted reproduction, are set out in the Fertility Services Standard, which sets out the regulations under which fertility professionals are required to operate. The standard requires, amongst other things, that:

- full information be provided, both in writing and verbally, on all aspects of the treatment, which would include:
  - an acknowledgment that the use of frozen eggs may be unsuccessful
  - suggestions of any alternative options
  - details of the components of the procedure
  - a list of all risks and possible side effects or complications
  - an explanation of all terminology
- information be provided about the experimental nature of using frozen eggs and the lack of evidence about the health of children born from frozen eggs
- adequate time and opportunity be provided for patients to discuss their treatment with competent staff.

Posthumous use of frozen eggs

34. The technology of egg freezing potentially allows for the future use of eggs from a woman who has died since having her eggs frozen. The Fertility Services Standard requires providers to have procedures in place for dealing with situations where the consenting person dies or becomes incapable of varying their consent.

35. ACART is undertaking a separate project in relation to the posthumous use of gametes and embryos. This may in future lead to specific recommendations to you. In the meantime, ACART considers that the posthumous use of frozen eggs can be managed adequately by providers operating in accordance with the Fertility Services Standard.

Donating frozen eggs for treatment purposes

36. Egg donation is an established procedure under the HART Act. The Act does not distinguish between the donation of fresh and frozen eggs.

37. ACART considers that the use of frozen eggs should not be restricted to a woman's own use. There is no reason to prohibit the donation of frozen eggs for treatment purposes, provided that women receiving donated frozen eggs understand the risks associated with their use and the procedure's relative novelty as a form of treatment. ACART considers that relevant requirements in the Fertility Services Standard can adequately manage informed consent in relation to receiving donated frozen eggs.

Religious belief

38. Contemporary New Zealand is home to a variety of religions. For some, the use of any assisted reproductive procedure may be unacceptable. Others agree with some forms of treatment, but find unacceptable embryo freezing and the dilemma of having to decide what to do with embryos that are surplus to reproductive requirements. The use of frozen eggs would be more acceptable than the use of frozen embryos for people with these concerns.

Use of eggs for social reasons

39. A woman might want to freeze and use her eggs to preserve her fertility for personal reasons (for example, where she does not have a current partner or currently lacks the material resources to support a child). ACART considers that the current evidence would not support a woman's belief that she would be preserving her fertility, given that the birth rate from the use of frozen eggs remains relatively low.

40. ACART considers that egg freezing is at best a backstop measure for those women who are at risk of completely losing their fertility, and that it would be unwise for women to rely on egg freezing for social reasons. ACART considers that decisions on egg freezing for these reasons are, however, best made in discussion between the clinician and the patient. This would ensure that the woman (or couple) is given full information on the procedure and could make an informed choice.

<u>Advice on whether the use of frozen eggs should become an established procedure</u>

41. ACART recommends that the use of frozen eggs in fertility treatment should become an established procedure for:

    (a) individual treatment purposes

    (b) donation for treatment purposes.

42. If you agree, the decision may be given effect by amending the HART Order in Council 2005 Part 2 (3) to remove the exclusion to the established procedure on the use of eggs that have undergone cryopreservation.

Appendix A

SUMMARY OF SUBMISSIONS: THE USE OF FROZEN EGGS IN FERTILITY TREATMENT

Introduction
On 23 July 2008 the Advisory Committee on Assisted Reproductive Technology (ACART) released a discussion document, *Consultation on the Use of Frozen Eggs in Fertility Treatment*.

It proposed that the use of frozen eggs be declared an established procedure.

The discussion document was mailed to 120 individuals and groups that had previously registered an interest with ACART, including government agencies, academics, providers of fertility services, fertility consumer groups, ethics committees, bioethics organisations and religious groups.

The consultation was advertised in all major metropolitan newspapers and in the *Sunday Star Times*.

Submissions closed on 5 September 2008. ACART received 21 submissions.

Q1: Given [the] risks and benefits [associated with the use of frozen eggs in fertility treatment], what is your opinion on ACART's proposed advice to the Minister of Health? Please give reasons for your views.

Several submitters were opposed to the use and/or donation of frozen eggs in fertility treatment. Stated reasons included:

- opposition to all interventions that enable children to come into being using laboratory methods
- the risks to the egg and the future child
- that a woman is steward of the eggs given to her by her creator and that they are not her property to donate
- a child conceived from a donated egg is denied a relationship with the mother which is a violation of human rights.

A further submitter was opposed to the use of frozen eggs for reproductive purposes considering there is not enough evidence of safety, but agreed with their use in research, provided it is subject to normal conditions governing research using human tissue.

Most submitters supported making the use of frozen eggs an established procedure and allowing their use in research, though with provisos, including that:

- there is monitoring, including long-term monitoring of child outcomes
- there is an emphasis on adequate informed consent
- clarity on what basis frozen eggs may be used for research and what consent requirements are necessary in the context of right 7(10) of the

- clarity on whether frozen eggs could ever be used for research posthumously, as the donor would not be able to give specific consent, even if general consent for use of 'spare' eggs was given at the time of freezing
- there be a clear separation between fertility use and donation for research so women do not feel obliged to agree to donation when vulnerable.

Three submitters considered that the use of frozen eggs should be subject to guidelines and ethical review by ECART. Reasons included:
- the evidence does not fully support the safety of the procedure
- patients are being used to trial a procedure which is still experimental
- the outcomes for children are unknown.

Q2: What is your view on the information that ACART suggests should be collected to monitor the use of frozen eggs in fertility treatment?

There was strong support for monitoring, given the uncertainty to date in the information. One submitter considered that the monitoring regime must be in place before the use of frozen eggs becomes an established procedure or allowed to proceed subject to ECART review. Two submitters sought clarification of who would be responsible for monitoring and how the data would be collected and evaluated.

In addition to the issues listed in the consultation document, submitters suggested that ACART also needs to collect the following information:
- the clinic where egg freezing and subsequent embryo transfer is performed
- ethnicity of mother
- age of mother at time eggs were collected
- age of mother at time eggs were used
- number of eggs thawed per year
- reason for thawing
- how thawed eggs were used, ie, personal use, donation for reproductive purposes, donation for research
- outcome where thawed eggs were used
- fertilisation rate
- miscarriage rate (including early miscarriage prior to detection of a fetal heartbeat)
- length of time eggs have been stored before use
- attempted pregnancies
- clinical pregnancies
- abortions for abnormalities
- live births
- how multiple births are counted as this could affect the interpretation of the data.

A number of submitters considered that ACART also needs to collect long-term information as children develop and mature.

One submitter considered that ACART should also include any information provided by the clinic to Reproductive Technology Accreditation Committee (RTAC) as part of its monitoring regime.

One submitter who considered that the use of frozen eggs should be introduced on the basis of a clinical trial proposed that a principal investigator be appointed to organise and oversee data collection, analysis and reporting to ACART.

One submitter considered that the proposed monitoring would be difficult as:
- some of the parents will be self-selected as sub-fertile, others will have undergone egg freezing prior to medical treatment, others may be delaying child bearing
- numbers will be small and clinics may be using different techniques.

This submitter suggested that ACART consider:
- deciding with what group the monitored group are to be compared
- monitor the subsequent development of children born from frozen eggs, though given small numbers this may need to be done through international research and developments
- monitoring the length of time the eggs are stored to determine whether this is related to successful outcomes.

Q3: Has ACART identified all the ethical issues relevant to the use of frozen eggs in fertility treatment? Do any of these issues affect ACART's proposed advice that the use of frozen eggs should be allowed in fertility treatment? If so, how?

<u>Additional issues to those raised by ACART</u>
A number of submitters noted the following as ethical issues not identified in the ACART consultation paper:
- it reduces women to the level of animals – women who cannot conceive naturally should accept this or adopt
- it removes conception from its natural human situation and adversely impacts on human dignity
- damage to the egg and embryo development
- ability for children to access genetic information.

<u>Storage</u>
Several submitters considered that the ten-year storage limit should not apply to minors and that the HART Act should be changed so that they do not have to face making an application to ECART until they are adults.

One submitter considered that the parents should provide consent to the use of eggs or ovarian tissue if their daughter does not survive, however, if she

does survive, then she should provide consent once she is "Gillick"[2] competent. Thus, the original consent would need to be revisited.

One submitter considered that guidelines for extending storage should be put in place as soon as possible so that women making a decision to store their eggs for social reasons are aware at the time of freezing of the criteria for extension of storage time.

Two submitters considered the use of frozen eggs would have the advantage of reducing the ethical dilemmas created by the storage of embryos.

Posthumous use

Several submitters raised issues in relation to posthumous use of frozen eggs. These were:

- if an adult dies leaving frozen eggs, the wishes in her consent form must apply and consents must be kept up to date
- the posthumous use of gametes should not be allowed as it intentionally deprives the child of a relationship with a mother and father in order to meet adults' needs.

Use for social reasons

Several submitters commented on the use of frozen eggs for social reasons. One supported allowing this use but considered it an unlikely option at this stage, given current success rates. Two others did not support it, and expressed concern that allowing the use of frozen eggs could lead to its use for social reasons, even though it is clinically contra-indicated.

A further submitter considered that technological improvements may in time mean that this is a feasible option for women wishing to defer motherhood to a much older age and considered that ACART should give guidance on access to technologies by post-menopausal women.

One submitter considered that older women, including post-menopausal women, should have access to assisted reproductive technologies.

Informed consent

A number of submitters identified informed consent as the key issue.

Q4: Should the use of frozen eggs in fertility treatment become an established procedure? If not, why, and how should the use of frozen eggs be regulated?

Several submitters considered that it should be prohibited for reasons given in response to earlier questions.

[2] In Gillick v West Norfolk and Wisbech AHA, the Court decided that whether or not a child can give an effective consent to medical treatment depends on the child's capacity to make an informed decision.

A number of others considered that it should be an established procedure, some with the proviso that a monitoring regime be established.

Three considered that it should be introduced as a clinical trial and managed and monitored in keeping with the requirements of the NZ Public Health and Disability Act or approval through ECART under the HART Act.

Q5: Should the use of frozen eggs in fertility treatment be limited to the individuals the eggs came from, or should frozen eggs be able to be donated to others for use in fertility treatment?

A number of submitters expressed opposition to donation of eggs, citing opposition in principle to IVF or considering that the only gametes used in fertility treatment should be from a married couple, for their own use.

Other submitters supported donation, focusing on the importance of informed consent. Key issues identified were:

- the need to ensure the recipient understands the additional risks and uncertainties in the use of frozen eggs
- there may need to be further counselling prior to the decision to donate
- there may need to be a time lapse between the donor's treatment where it was unsuccessful and consent to donate
- any decision to donate by a minor must be made by the girl herself once she is competent, and not by her parents when she is a child
- there needs to be a clear direction regarding posthumous ownership and use of eggs.

Two submitters considered that frozen eggs should only be able to be donated to close relatives, particularly siblings.

Q 6: Should frozen eggs be able to be donated for research purposes?

Two submitters expressed opposition to the donation of frozen eggs for research.

A number of submitters agreed that frozen eggs should be allowed to be donated for research, with the following provisos:

- the research does not involve the creation of human or hybrid embryos
- the prohibition on commercialisation be retained
- all other options for the use of the eggs have first been exhausted.

Many submitters stressed the importance of informed consent, including that:

- women have the right to donate to a particular research project over a particular timeframe
- informed consent be given at the time of the research project, notwithstanding any general consents given at the time of egg freezing
- there be a separation between undergoing fertility treatment and completion of the woman's family and the decision to donate

- women not be offered discounts for treatment if they donate some of their eggs
- women be approached to be donors by someone not involved in the research project and, if the research purpose changes after consent is given, and she has not given blanket consent, she should be approached to re-consent
- Right 7(10) of the Code of Health and Disability Services Consumers' Rights should not apply and the woman should give individual consent for the particular research use or consent to unspecified future use of her eggs
- if the woman cannot be contacted after the storage period, the eggs should be destroyed
- donation of frozen eggs from deceased women should not be allowed unless her full and informed consent was given prior to her death.

Q7: Do you have any further comments to share with ACART?

Two submitters commented that the consultation document expresses considerable doubt about the safety of the use of frozen eggs.

Other comments related to the document were:
- the Fertility Services Standard should have been appended
- more information should have been included about the RTAC Code of Practice
- ACART should have any technical reports informing its work peer reviewed.

Two submitters considered that to ensure equity of access, egg collection, freezing and storage should be publicly funded for women undergoing treatment that may impair their fertility.

One submitter considered that nurses, as frontline health professionals should be supported with information relating to such innovative medicine, including research, new techniques and technologies, legal provisions and social and ethical issues.

List of submitters

1.	Goeff Werkmeister, Obstetrics and Gynaecology Specialist and Clinical Director, Timaru Hospital
2.	Philippa Malpas, Lecturer in Medical Ethics, Dept of Psychological Medicine, University of Auckland
3.	Toi Te Taiao: the Bioethics Council
4.	Paul Clarke
5.	An individual submitter who requested their details be kept confidential
6.	Abortion Law Reform Assn of NZ
7.	Interchurch Bioethics Council
8.	Families Commission
9.	NZ Nurses Organisation
10.	The Nathaniel Centre
11.	Women's Health Action Trust
12.	Karen Raaymakers
13.	Brian Quin
14.	Canterbury DHB
15.	NZ Law Society
16.	Voice for Life
17.	Fertility Associates
18.	Lynette and Ian Mason
19.	Voice for Life
20.	Ethics Committee on Assisted Reproductive Technology
21.	Royal Australian and NZ College of Obstetricians and Gynaecologists

Appendix B

Membership of ACART

Lay Members	**Expertise / Perspective**
Professor Sylvia Rumball (Chair)	Ethics
Professor Ken Daniels (Deputy Chair)	Policy
John Forman	Disability
Dr Ian Hassall	Representative of the Commissioner for Children
Professor Mark Henaghan	Law
Cilla Henry	Māori
Maui Hudson	Māori
Professor Gareth Jones	Ethics
Bishop Richard Randerson	n/a
Robyn Scott	Consumer
Non-lay members	
Dr Richard Fisher	Assisted Reproductive Procedures
Associate Professor Andrew Shelling	Human reproductive research