Reproductive Ethics

Edited by Justin Healey

ISSUES IN SOCIETY
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Reproductive Ethics is Volume 442 in the ‘Issues in Society’ series of educational resource books. The aim of this series is to offer current, diverse information about important issues in our world, from an Australian perspective.

**KEY ISSUES IN THIS TOPIC**

Assisted reproductive technology (ART) is a group of procedures used to assist people in achieving a pregnancy. Recent advancements in the use and availability of ART treatments such as in vitro fertilisation (IVF), gamete intrafallopian transfer (GIFT), gamete donation and surrogacy have raised numerous ethical considerations.

This book explores reproductive concerns and opposing opinions on a range of issues including: the ethics of IVF treatment for older women; success rate claims of commercial clinics; access by IVF offspring to the identities of their donor parents; the fate of excess frozen embryos; public funding of IVF; payment for egg and sperm donation; ‘social egg freezing’ by younger women delaying motherhood; the dilemmas of preimplantation genetic screening; the sex selection debate; collection of gametes and embryos from dying and deceased loved ones; and commercial surrogacy arrangements.

Are existing guidelines and laws in Australia in step with the many ways we can now reproduce ourselves? Or are we going too far in dictating the terms of human fertility?

**SOURCES OF INFORMATION**

Titles in the ‘Issues in Society’ series are individual resource books which provide an overview on a specific subject comprised of facts and opinions.

The information in this resource book is not from any single author, publication or organisation. The unique value of the ‘Issues in Society’ series lies in its diversity of content and perspectives.

The content comes from a wide variety of sources and includes:

- Newspaper reports and opinion pieces
- Website fact sheets
- Magazine and journal articles
- Statistics and surveys
- Government reports
- Literature from special interest groups

**CRITICAL EVALUATION**

As the information reproduced in this book is from a number of different sources, readers should always be aware of the origin of the text and whether or not the source is likely to be expressing a particular bias or agenda.

It is hoped that, as you read about the many aspects of the issues explored in this book, you will critically evaluate the information presented. In some cases, it is important that you decide whether you are being presented with facts or opinions. Does the writer give a biased or an unbiased report? If an opinion is being expressed, do you agree with the writer?

**EXPLORING ISSUES**

The ‘Exploring issues’ section at the back of this book features a range of ready-to-use worksheets relating to the articles and issues raised in this book. The activities and exercises in these worksheets are suitable for use by students at middle secondary school level and beyond.

**FURTHER RESEARCH**

This title offers a useful starting point for those who need convenient access to information about the issues involved. However, it is only a starting point. The ‘Web links’ section at the back of this book contains a list of useful websites which you can access for more reading on the topic.
CHAPTER 1
Assisted reproductive technology in Australia

What is assisted reproductive technology?
A GUIDE FROM THE VICTORIAN ASSISTED REPRODUCTIVE TREATMENT AUTHORITY

Assisted reproductive technology (ART) refers to technologies and associated methods used to assist people in achieving a pregnancy.

ART is used:
- As infertility treatment for couples
- By women who can not become pregnant without treatment
- By women who can not carry a baby in pregnancy or give birth without treatment
- To reduce the chance of a child inheriting a genetic disease or abnormality.

ART covers a wide spectrum of technologies. Simple techniques are often attempted initially, as they are less invasive than more advanced options.

These techniques include:
- Ovulation induction
- Artificial insemination, also known as intrauterine insemination
- Donor insemination.

Advanced techniques are:
- In vitro fertilisation (IVF)
- Intracytoplasmic sperm injection (ICSI)
- Preimplantation genetic diagnosis (PGD).

Counselling is provided to ensure that people are fully aware of their treatment’s process and any associated risks.

HOW EGGS ARE NATURALLY FORMED IN THE FEMALE BODY

It is useful to understand how eggs are normally formed in a woman’s body to understand which stage is being targeted in the relevant ART method.

The pituitary gland in the brain regulates the menstrual cycle by producing two hormones: follicle-stimulating hormone and luteinising hormone. The follicle-stimulating hormone stimulates the growth of several follicles in the ovaries, which are fluid-filled sacks containing one egg in each. As the follicles grow, one becomes dominant and the other follicles stop developing.

Eventually, the luteinising hormone is released by the pituitary gland, and this causes the egg to mature. When the follicle bursts and releases the egg, ovulation...
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Artificial insemination, also known as intrauterine insemination (IUI), is a procedure where semen is placed directly into the cervix or uterus rather than through intercourse. This can greatly increase the chances of conception, especially in cases where sperm viability is an issue. Sperm are often obtained from a donor, allowing for a child to be conceived without the use of a male partner's semen.

**SIMPLE TECHNIQUES**

**Ovulation induction**

This process is regulated by the pituitary gland, by controlling the release of both luteinising hormone and follicle-stimulating hormone into the bloodstream. The luteinising hormone aids in the production of testosterone, which together with the follicle-stimulating hormone, stimulates the production of sperm.

**Artificial insemination or intrauterine insemination**

Artificial insemination, also known as intrauterine insemination, is used to treat women who have normal and healthy fallopian tubes, but for some reason can not achieve conception. This may be due to mechanical difficulties with intercourse, or the presence of a man whose semen is not able to achieve an erection or has structural problems of the penis after trauma or surgery. Artificial insemination might also be used when semen has been frozen because of a male partner’s absence or before cancer treatment.

The process of artificial insemination involves insertion of a male partner’s semen through the female’s cervix and into the uterus at or near the time of ovulation. This procedure can be performed during a natural menstrual cycle, or hormonal stimulation can be used if the woman has irregular menstrual cycles.

It is also possible to conduct artificial insemination at home, and most ART clinics will provide information as to how to do this.

If a few attempts with artificial insemination do not achieve pregnancy, the use of IVF or ICSI may be discussed. See below for information regarding these procedures.

**DONOR TREATMENT**

There are several ways that donor sperm, eggs, or embryos can be used to facilitate ART treatments.

**Donor insemination**

Donor insemination using the sperm of a donor is utilised when:

- A male partner does not produce sperm, or
- A male partner does not produce normal sperm, or
- There is a high risk of a man passing on a genetic disease or abnormality to a child.

Donor insemination may also be used as part of IVF for single women, or women in same-sex relationships. The process of donor insemination is the same as artificial insemination (as outlined above), but the sperm used is that of a donor, rather than the male partner within a relationship.

**Donor eggs**

Treatment with donor eggs is possible if a woman can not produce eggs or her eggs are of low quality. This may occur due to age or premature ovarian failure (where the woman has stopped producing eggs). Use of donor eggs may also be an option in cases of recurrent miscarriage, or if there is a high risk of the woman passing on a genetic disease or abnormality to a child.

**Infertility and its causes**

Infertility is typically defined as not being able to get pregnant after 12 months of unprotected sexual intercourse. More broadly, infertility includes the inability to carry a pregnancy to term. In Australia, it is estimated that infertility affects around 15% of couples of reproductive age. There are a variety causes of infertility: in around 40% of couples infertility relates to a sperm problem; in another 40%, there is a female reproductive cause; and sometimes there is a combination of factors, or the infertility is unexplained (idiopathic).

**Fertility of adult females may be affected by:**

- Age
- Problems with fallopian tubes
- Endometriosis
- Ovulation problem
- Fibroids
- Pelvic inflammatory disease
- Sexually transmitted infections
- Excess weight
- Being a smoker

**Fertility of adult males may be affected by:**

- Low sperm production
- High numbers of abnormal sperm
- Genetic problems
- Problems with DNA of sperm
- Problems with tubes connected to the testes.

**Sources**

- Victorian Assisted Reproductive Treatment Authority, Fertility and infertility, www.varta.org.au
- Jean Hailes, Fertility and pregnancy, https://jeanhailes.org.au

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In these cases, the egg donor undergoes the initial steps of IVF to collect her eggs. When this has been done, sperm from the male partner of the recipient woman, or donor sperm, will be combined with the donor eggs. Two to five days later, when embryos are formed, embryo transfer will be carried out and an embryo will be inserted into the woman’s uterus. Hormone tablets must be taken in preparation for the embryo transfer, and for approximately 10 weeks after the embryos have been transferred.

**Donor embryos**

Treatment using donated embryos is also possible if a person or couple needs donor sperm and donor eggs. Although rare, some couples choose to donate frozen embryos that they no longer need (after IVF procedures, for example) for use by people undergoing IVF. The embryo is transferred into a woman’s uterus in the few days after ovulation occurs.

**ADVANCED TECHNIQUES**

**In vitro fertilisation (IVF)**

Technically, IVF is the name given to any process used to conceive a child outside the body. IVF is used in a range of circumstances to assist with conception but is often the sole means of achieving pregnancy for women whose fallopian tubes are damaged or blocked due to disease. As a result of the damage or blockage, there is an obstruction between the egg and sperm, and IVF is required to allow this fertilisation to occur.

In IVF, the woman’s eggs are collected, along with sperm from the male partner or donor. The egg and sperm are left in a culture dish in a laboratory to allow the egg to be fertilised by the sperm. This creates an embryo, which is then placed back into the woman’s uterus in a procedure called the embryo transfer.

Sometimes more than one embryo develops in the laboratory, and it is possible to freeze these embryos for use in later transfer procedures.

**Gamete intrafallopian transfer (GIFT)**

GIFT was launched as a more ‘natural’ version of IVF. Instead of fertilisation occurring in a culture dish in a laboratory, the woman’s eggs are retrieved from her ovaries and inserted between two layers of sperm in fine tubing. This tubing is then fed into one of the woman’s fallopian tubes, where the egg and sperm are left to fertilise naturally.

These days, GIFT is very rarely used. However, it may be used as an option for couples or donors who don’t want to use IVF for religious reasons, providing that the woman’s fallopian tubes are functioning.

**Intracytoplasmic sperm injection (ICSI)**

ICSI is used for the same reasons as IVF, but especially when a man has sperm-related problems such as low sperm count. Essentially, ICSI follows the same process as IVF, except ICSI involves the direct injection of a single sperm into each egg to achieve fertilisation. After this, the process is exactly the same as described for IVF.

**Preimplantation genetic diagnosis (PGD)**

PGD is largely used as a means for reducing the risk of an individual or couple passing on a specific genetic or chromosomal disease or abnormality to their child. PGD may also be appropriate for women older than 38 or for individuals or couples who have experienced repeated miscarriage or repeated IVF failure.

In PGD, embryos are generated through the process of IVF and then one or two cells from the embryo are screened for a genetic condition prior to the transfer of the embryo into a woman’s uterus. The screening gives information regarding the genetic status of the embryo, enabling selection of unaffected embryos prior to implantation and before pregnancy is established. This allows the individual or couple to choose not to be impregnated with an affected embryo, rather than face a difficult choice of whether or not to terminate a pregnancy.

A list of conditions that PGD is commonly used to identify can be found at the Victorian Assisted Reproductive Treatment Authority’s Preimplantation Genetic Diagnosis page.

More information about all the above ART methods can be obtained from ART clinics.

**SURROGACY**

Surrogacy is a form of ART in which a woman (the surrogate mother) carries a child for another person or couple with the intention of surrendering the child to that person or couple immediately after birth.

For detailed information regarding surrogacy, please see the Victorian Assisted Reproductive Treatment Authority’s Surrogacy FAQs page.
Women now have clearer statistics on whether IVF is likely to work

Many couples undergo multiple rounds of IVF. The new statistics on the chances of a successful pregnancy reflect that, reports Georgina Chambers

Australian women considering IVF will now, for the first time, have a more meaningful idea of their chances of having a baby, whether it’s their first or subsequent round of IVF.

Overall, for women starting IVF, 33% have a baby as a result of their first cycle, increasing to 54–77% by the eighth cycle.

Our research, published today, reports the probability of IVF success from a patient’s perspective after repeated cycles, rather than how it is usually reported, for each cycle.

This will help women of all ages to make informed decisions, with their fertility doctor, about whether to start IVF, or if they have already started, whether to proceed to their next cycle.

Unlike previously reported statistics, our data better reflects that IVF can include both fresh and frozen embryos, and that many women undergo multiple IVF cycles over a course of treatment.

Infertility affects about one in six couples
While estimates vary, infertility affects about one in six couples, causing significant personal suffering to as many as 186 million people around the globe.

Assisted reproductive technologies – more generally referred to as in vitro fertilisation or IVF – have revolutionised how we treat infertility. Now, more than 70,000 treatment cycles are performed in Australia and New Zealand each year.

A typical IVF cycle involves stimulating a woman’s ovaries to produce multiple eggs, retrieving those eggs, which are then fertilised in the laboratory to create embryos. These embryos grow for two to six days before one, or occasionally two, fresh embryos are transferred to a woman’s womb.

Extra embryos are frozen and if necessary thawed and transferred in a subsequent cycle or cycles (known as ‘frozen/thaw’ cycles).

What we did
We used data from the Australian and New Zealand Assisted Reproductive Technology Database, which contains information on all IVF cycles performed in Australia and New Zealand.

We looked at data from 56,652 women starting IVF treatment for the first time who underwent 120,930 IVF cycles between 2009 and 2014. We excluded women who used donated eggs or embryos.

We linked all fresh and frozen/thaw IVF treatments to the initial episode of ovarian stimulation for each individual woman, which allowed us to report by ‘complete’ treatment cycles.

What we took into account
Around 30% of women drop out of treatment after an unsuccessful IVF cycle, mainly because of the physical and emotional demands of treatment, a poor chance of success with continued treatment and the cost.

A complete IVF treatment cycle

Around 30% of women drop out of treatment after an unsuccessful IVF cycle, mainly because of the physical and emotional demands of treatment, a poor chance of success with continued treatment and the cost.

A complete IVF treatment cycle

The conservative cumulative live-birth rate assumed these women would not have achieved a live birth if they continued with treatment. The optimal cumulative live-birth rate assumed these women would have had the same chance of a live birth as those who did continue with treatment.

The range between the conservative and optimal cumulative live-birth rates gives a reasonable appraisal of the probability of a woman achieving her first live birth.

**WHAT WE FOUND**

Overall, for women starting IVF, 33% had a baby as a result of their first cycle, increasing to 54-77% by the eighth cycle.

The cycle-specific rate varied by the age at which women started treatment and the number of previous cycles performed, but the cumulative live-birth rate continued to rise with repeated cycles.

Women who started IVF before they turned 35 had the highest success rates. For example, women under 30 had a 44% chance of a live birth in their first cycle, and a cumulative live-birth rate of between 69% (conservative) and 91% (optimal) after six cycles; women aged 30-34 had only marginally lower rates than these.

Women aged 40-44 had an 11% chance of a live birth in their first cycle, and a cumulative live-birth rate of between 21-34% after six cycles.

**THE IMPLICATIONS**

We hope providing success rates in this more meaningful way is reassuring for women and couples. Looking at the success rate over a course of treatment, most women will take home at least one baby. In fact, two out of three women who start IVF before they are 35 will, as a conservative estimate, take home a baby after three cycles.

However, these are population estimates and every couple is different. Our analysis does not take account of individual factors that affect the chance of IVF success. These include: how long the couple has had trouble conceiving, the level of body fat (measured as body mass index or BMI), and ovarian reserve (a measure of the reproductive potential of the ovaries).

Whether women should start IVF treatment or continue, it should ultimately be a decision for the fertility doctor and patient, taking into account all medical and non-medical factors.

This type of analysis can also be used to inform policy on IVF treatments as it allows policymakers to look at the success of IVF over a full course of treatment, better reflecting clinical practice than success rates with individual cycles.

**DISCLOSURE STATEMENT**

Georgina Chambers is employed by the University of New South Wales (UNSW Sydney) and is Director of the National Perinatal Epidemiology and Statistics Unit (NPESU), UNSW Sydney. The Fertility Society of Australia funds the NPESU to manage the Australian and New Zealand Assisted Reproductive Technology Database (ANZARD). She has received an institutional grant unrelated to this study from the Australian Research Council (ARC), for which Virtus Health, a publically listed IVF company, was the partner organisation (2010-2013). She also holds two current NHMRC Project Grants related to fertility treatment and outcomes. She is an ordinary member of the Fertility Society of Australia.

**Georgina Chambers** is Associate Professor, Director of the National Perinatal Epidemiology and Statistics Unit, UNSW.

ASSISTED REPRODUCTIVE TECHNOLOGY IN AUSTRALIA AND NEW ZEALAND

A report summary of the latest ART data, courtesy of the National Perinatal Epidemiology and Statistics Unit at the University of New South Wales

Assisted reproductive technology (ART) is a group of procedures that involve the in vitro (outside of body) handling of human oocytes (eggs) and sperm or embryos for the purposes of establishing a pregnancy. Each ART treatment involves a number of stages and is generally referred to as an ART treatment cycle. The embryos transferred to a woman can either originate from the cycle in which they were created (fresh cycle) or be frozen (cryopreserved) and thawed before transfer (thaw cycle).

There were 81,062 ART treatment cycles reported from Australian and New Zealand clinics in 2016 (74,357 and 6,705 respectively) representing a 4.0% increase in Australia and 7.4% increase in New Zealand on 2015. This represented 14.8 cycles per 1,000 women of reproductive age (15-44 years) in Australia, compared with 7.0 cycles per 1,000 women of reproductive age in New Zealand. Women used their own oocytes or embryos (autologous cycles) in 94.1% of treatments. Embryos that had been frozen and thawed were used in 38.1% of autologous cycles.

There were 39,980 women who undertook 76,255 autologous fresh and/or thaw cycles in Australia and New Zealand in 2016. On average, 1.9 fresh and/or thaw cycles per woman were undertaken in 2016, with more cycles per woman in Australia (1.9 cycles per woman) than in New Zealand (1.5 cycles per woman). The number of cycles where embryos were selected using preimplantation genetic testing (PGT) increased from 5,773 in 2015 to 7,425 in 2016 (28.6% increase).

Over the last five years there has been an increasing trend in the proportion of cycles where all oocytes or embryos are cryopreserved for potential future use (freeze-all cycles) from 7.2% of initiated fresh cycles in 2012 to 22.6% of initiated fresh cycles in 2016. This practice is used for a variety of reasons, including reducing the risk of ovarian hyperstimulation syndrome (OHSS), improving endometrial-embryo synchronicity, as part of a PGT cycle, for fertility preservation, or as a deliberate treatment option used by clinicians.

PATIENT’S AGE

The average age of women undergoing autologous cycles was 35.8 years in 2016, similar to previous years. The average age of women undergoing ART treatment using donor oocytes or embryos was approximately five years older at 40.4 years. Approximately, one in four (24.5%) women who underwent an autologous cycle in 2016 were aged 40 or older. The average age of the male partner of the women undergoing autologous and recipient cycles was 38.1 years, with one-third (33.0%) aged 40 or older.

TREATMENT OUTCOMES AND NUMBER OF BABIES

Of the 81,062 initiated cycles, 66,664 (82.2%) resulted in either an embryo transfer or all oocytes/embryos being cryopreserved. Of the initiated cycles, 22.5% (18,269) resulted in a clinical pregnancy and 17.9% (14,515) in a live delivery. The overall clinical pregnancy rate for cycles reaching embryo transfer was 33.0%. The live delivery rate per initiated autologous fresh cycle was 16.4% after freeze-all cycles were excluded. The live delivery rate for fresh cycles reaching embryo transfer was 23.7%. The live delivery rate per initiated autologous thaw cycle was 27.3% and for thaw cycles reaching embryo transfer cycle was 28.4%.

There was a higher live delivery rate in younger women. For women aged under 30, the live delivery rate per embryo transfer was 36.9% for autologous fresh cycles and 33.5% for autologous thaw cycles. For women aged over 44, the live delivery rate was 1.2% and 11.8% per embryo transfer for autologous fresh and thaw cycles.

There were 15,198 babies born (including 15,057 liveborn babies) following ART treatment in 2016. Of these, 13,596 (89.5%) were from Australian clinics and...
1,602 (10.5%) from New Zealand clinics. Eight in ten of the liveborn babies (80.1%) were full-term singletons of normal birthweight.

**CYCLE-SPECIFIC SUCCESS RATES**

ANZARD includes data items that make it possible to follow a woman’s consecutive ART treatment cycles. A cohort of 15,475 women were followed from the start of their first autologous non freeze-all fresh cycle during 2014, through subsequent fresh and thaw cycles until December 2016 or until they achieved a live delivery. The cycle-specific live delivery rate per initiated autologous cycle for all women was 22.5% in their first cycle, and 11.9% after eight cycles. Of women who did not achieve a live birth in a specific cycle, approximately one in four did not return for further ART treatment.

**TRENDS IN ART PROCEDURES**

Treatment trends in the last five years have shown a greater shift from cleavage stage transfers to blastocyst transfers (from 59.8% in 2012 to 78.4% in 2016); an increase in vitrification as a cryopreservation method (from 76.8% of thaw blastocyst transfer cycles in 2012 to 87.8% in 2016). The use of intracytoplasmic sperm injection (ICSI) as a percentage of embryo transfer cycles in has decreased from 64.7% in 2012 to 62.9% in 2016.

The proportion of embryo transfer cycles transferring a cryopreserved embryo increased from 42.9% of embryo transfer cycles in 2012 to 54.1% in 2016. Of the 14,515 live deliveries resulting for ART treatment, 58.1% resulted from thaw cycles, compared to 41.9% in 2012.

In the last five years the live delivery rate per fresh embryo transfer cycle increased from 22.9% to 23.9%, and the live delivery rate per frozen/thaw embryo transfer cycle increased from 22.0% to 28.2%. This is correlated with the shift to freeze-all cycles. Overall, live delivery rates per embryo transfer have risen from 22.5% in 2012 to 26.2% in 2016, a 16.7% improvement.

**MULTIPLE BIRTH TRENDS**

A continuing trend in ART treatment in Australia and New Zealand has been the reduction in the rate of multiple deliveries. With a 42% decrease from 6.5% in 2012 to 3.8% in 2016. This was achieved by clinicians and patients shifting to single embryo transfer, with the proportion increasing from 73.2% in 2012 to 87.7% in 2016. Importantly, this decrease in the multiple delivery rate was achieved while overall live delivery rates per embryo transfer increased from 22.5% in 2012 to 26.2% in 2016.

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FINANCIAL MOTIVES DRIVE SOME DOCTORS’ DECISIONS TO OFFER IVF

Patients must be able to make informed decisions about whether to pursue IVF – and when to stop, write Wendy Lipworth, Brette Blakely and Ian Kerridge

Around one in 25 Australian babies are conceived using assisted reproductive technologies (ART), including in vitro fertilisation (IVF). These interventions are almost all offered in private fertility clinics, backed by a thriving fertility industry.

Women who are deemed eligible for IVF can have an unlimited number of cycles subsidised by Medicare, but out-of-pocket costs can range from several hundred to several thousand dollars per cycle.

Our research, published today in the journal *Human Fertility*, suggests the money being made from IVF could be subtly changing the advice doctors give.

**Informed consent**

Although IVF is a well-established procedure, it is not without its risks. These include ovarian hyperstimulation syndrome, where hormone levels rise too much (causing abdominal swelling, nausea, vomiting and diarrhoea); obstetric complications such as premature delivery; and psychological distress, especially if the process fails.

Although long-term outcomes for children conceived using IVF appear to be similar to non-IVF children, questions remain about possible harmful impacts, including developmental abnormalities and cancer.

Given the financial, physical and psychological burdens of IVF, patients must be able to make informed decisions about whether to pursue these treatments in the first place, and when to stop. So it’s concerning that couples are often oversold the likelihood of success.

This ‘overselling’ may be a result of the way information about ‘success rates’ is conveyed. A 30 year-old woman has a 40% chance of a live birth after a single complete IVF cycle (so, after all viable embryos have been transferred). A 40 year-old woman, in contrast, may have a 10% chance of a live birth following a complete IVF cycle.

The same 30 year-old might have a 70% chance after six complete cycles, while the 40 year-old might only have a 25% chance.

Success rates of IVF may appear deceptively higher if success is defined as clinical pregnancy (of just six to eight weeks), or live birth at a stage that is generally incompatible with sustained life (as early as 20 weeks or 400 grams).

Alternatively, rates may appear lower if they are reported per embryo transfer rather than per complete cycle.
Commercialising IVF

In 2014, two major players in the ART industry were floated on the stock exchange for more than A$300 million each. This reportedly boosted some fertility specialists’ annual salaries to more than A$1 million. But what about the effect of commercialisation on patients and taxpayers?

To investigate this question, we conducted in-depth interviews with a range of professionals involved with ART in Australia, including obstetricians, policy advisors, researchers and counsellors.

Interviewees said financial motives were influencing ART practices in Australia, with some women offered IVF who don’t actually need it. Others are offered repeated cycles of treatment, even when they aren’t likely to succeed.

This dynamic was seen to be facilitated by the current Medicare system. The safety net protects patients by limiting the amount they have to pay out-of-pocket once they reach a certain threshold.

But it can also potentially encourage over-servicing and over-charging. There is no cap on the number of procedures that can be offered or the fees that can be charged. Doctors can therefore offer additional services for higher fees without patients incurring significant additional costs. This has serious implications for the health system. As one of the people interviewed in the study observed:

I just think the business model and the fact that it takes advantage of Medicare, and the fact that the Medicare safety net helps spread the risk of out-of-pockets from the patient to the taxpayer is just basically being used to make some people a lot of money.

Importantly, nobody who was interviewed suggested that ART clinicians were deliberately misleading patients for their own financial benefit. The problem identified was subtler and reflects a deep ambivalence at the heart of medicine.

On the one hand, doctors are expected to be committed to their patients, research participants or the general public, and not concerned primarily with their own enrichment. The problem identified was subtler and reflects a deep ambivalence at the heart of medicine.

On the other hand, doctors need to earn a living and, in Australia at least, do so in a health system that supports – and even depends upon – publicly subsidised private practice.

There is no reason these interests are incompatible but their co-existence raises questions about how commercial interests may influence practice.

The commercialisation of ART raises questions not only about the motives and behaviour of clinicians, but also about how those seeking ART services should be viewed.

marketplace, no matter how much they cost or how unlikely they are to succeed. This idea is, of course, predicated on the assumption that consumers will be provided with accurate information about risks, costs and benefits which, as many others have noted, cannot be assumed.

Although the Human Fertility study was small and does not represent the views of all professionals involved with ART in Australia, it reveals that concerns about the impact of commercial interests in ART have not simply been drummed up by the media for dramatic effect. It is time for an honest discussion about the Australian fertility industry, and about the role of money in medicine more generally.

DISCLOSURE STATEMENT
Wendy Lipworth receives funding from the National Health & Medical Research Council (NHMRC) and Australian Research Council (ARC). For this project, Brette Blakely received funding from the NHMRC. Ian Kerridge has received ARC research grant funding for research into oocyte donation. He was also a member of the NHMRC Working Party that developed the NHMRC Ethics Guidelines on the Use of Assisted Reproductive Technology in clinical practice and research (2017).

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YOUR QUESTIONS ANSWERED ON DONOR CONCEPTION AND IVF

Thanks to IVF and donor conception, infertile couples, single women and lesbian couples now have a better chance of starting families. But while you might know someone who has gone through the process, it’s rarely openly discussed.

A panel of experts in law, embryology, sociology, psychology and donor conception answer these questions about donor conception and IVF, first published by The Conversation

Q1. How much are men compensated for donating sperm and women for donating eggs?

A. Deborah Dempsey, sociologist:

In Australia, human eggs and sperm cannot be treated as goods that are bought or sold. It’s permissible to pay egg and sperm donors ‘reasonable expenses’ (such as travel and parking) and medical costs incurred in the process of making their donation. Although the actual sum paid varies, for sperm donors it is generally around A$250 per donation.

For egg donors, it is substantially more as it’s a much more invasive medical procedure. Women are required to self-inject drugs for several days to hyper-stimulate their ovaries and need to be monitored to ensure there are no serious side effects. Eggs must be extracted by a medical practitioner, and this usually requires an anaesthetic and a half-day stay in hospital.

If there is too great a financial gain attached to providing eggs and sperm, one concern is that people will be motivated by money rather than a desire to help infertile men or women, and this could cause harm. Potential donors, for instance, may be more likely to conceal a health condition that could be passed on to intended parents or children because they wanted to receive the fee.

The issue of compensation is currently a hot topic due to a national shortage of both egg and sperm donors in Australia. In April, one group of fertility clinics made headlines for offering A$5,000 payments to cover egg donors’ expenses. Debate centred around whether this flat fee could be considered an ‘inducement’ to participate, just as it did several years ago when a different clinic offered A$7,000 to Canadian students willing to come to Australia for a working holiday and to donate sperm.

I agree with a number of other scholars who argue it’s time we looked seriously at whether the principle of ‘reasonable expenses’ is useful in taking into account the actual risks, costs and inconveniences incurred by egg and sperm donors, and the interests of children born from such donation.

Q2. Where do donors come from?

A. Loretta Houlahan, embryology lecturer:

Clinic-recruited donation is probably the most well-known method of donation. Because of the critical shortage of donor eggs and sperm in Australia, some clinics are now recruiting from overseas. This is generally permitted if it complies with local laws.

Patients can also ask someone they know to donate to them. This is commonly a friend or family member, however, some people may find their donor through online forums as well. Advertising online is subject to many legal restrictions, so be careful if you go down this route.

Sperm donation can also occur outside the clinic environment. Private insemination with donor sperm is not necessarily illegal, but potential medical and legal issues can arise from these arrangements. Unlike clinic-recruited donors, private donors are not screened for infectious diseases and donors often advertise online without their true identities being confirmed.

There are also no restrictions on the number of children that can be fathered from a single donor in a private donation scenario. One Sydney ‘freelance sperm donor’ claims to have fathered 18 children. In contrast, clinic-recruited donors are only allowed to produce a limited number of families. They can also be removed from use if abnormalities are detected in the offspring.

There are pros and cons to both clinic and private donation, however, patients should seek medical and legal advice if they choose the latter.

Q3. What sort of identifying information is filed about open donors on the information register?

A. Fiona Kelly, legal scholar:

Under Australian guidelines, all donors in Australia are required to be ‘open donors’. Anonymous donors ceased to be available across the country in 2005, though some states abolished anonymity earlier.

The guidelines require fertility clinics in Australia to collect the following information from sperm and egg donors:

- Name, any previous name, date of birth and most recent address
- Details of medical history, family history, and any genetic test results that are relevant to the future health of the person conceived by egg or sperm donation (or any subsequent offspring of that person) or the recipient of the donation
- Details of physical characteristics
- Details of physical characteristics
- Details of physical characteristics

Clinics are also obliged to tell egg and sperm donors that it is their ethical responsibility to keep the clinic informed about any changes to their health that may be relevant to the persons born or the recipients of their donation, and about changes to their contact details.

Clinics are not required to proactively gather additional health information or change of address details. So it’s possible that the information a donor-conceived person receives when they turn 18 is not up to date.
In some states and territories, such as Victoria and New South Wales, donor information is held in a central register, while other states and territories require the clinics to maintain the data.

Q4. When and how should you tell children they’re donor-conceived?

**A. Damian Adams, donor conception researcher:**
Discovering you’re donor-conceived later in life can potentially lead to confusion, anger and distrust of the family members who kept the secret from you.

Some researchers argue that telling children earlier in life causes less harm. Associate Professor Ken Daniels, a sociological researcher into donor conception, writes that “a child should never be able to remember a time when he/she did not know”. Others suggest it should at least occur before the identity construct window of adolescence occurs.

As there is currently no evidence that more problems arise by telling early, doing so while young has the least potential to create problems.

There are numerous books on the market that can assist parents in how to tell, as well as numerous online resources. One of the better ones is run by the Victorian Assisted Reproductive Treatment Authority (VARTA) which has been running very successful *Time to Tell* campaigns for many years and has numerous informative pages on their website dealing with this.

Q5. What kind of contact can donors expect when their offspring are adults?

**A. Roger Cook, psychology scholar:**
When offspring reach adulthood it’s possible for them to initiate contact with their donor, the outcome of which is varied. Some offspring reach strong relationships with their donor parent and some do not. There are, of course, some offspring who do not want to make contact.

Typically, however, if both the donor and the offspring are enthusiastic and prepared for contact, an ongoing relationship can emerge but it’s not usually a parenting relationship. Often, the young adult can develop and maintain positive relationships with his or her biological father or mother but retain affection for the parents who raised them.

Q6. What are the options for gay men to start a family?

**A. Deborah Dempsey, sociologist:**
Australian gay men’s pathways to creating families with children are diverse, although relatively limited compared to men in the United States.

Australian gay men’s history of involvement in known sperm donation for lesbian and single heterosexual friends and acquaintances dates from at least the 1980s. Some men are able to negotiate ‘donor dad’ or parental relationships with children conceived in this way.

Since the early 2000s, it has become popular for Australian gay men to form families through surrogacy, particularly commercial surrogacy arrangements abroad.

For gay men who are US residents, adoption is a well-documented path to parenthood. Though laws in some Australian states do not permit gay men or lesbians to adopt. And relatively few children are available for adoption in Australia.

La Trobe University researcher Jennifer Power and her colleagues investigated family make-up in the 2012 *Work, Love and Play* study. Of the 88 gay and bisexual men who described themselves as ‘actively involved’ in parenting a child:

- 39% had become parents in a previous heterosexual relationship
- 23% were parenting children conceived through surrogacy
- 19% had become parents through known sperm donation to lesbian couples or single women
- 11% were foster parents or permanent carers.

Q7. What logistical barriers do lesbian couples face when starting a family?

**A. Deborah Dempsey, sociologist:**
Lesbian couples using clinical donor insemination, known donor insemination or IVF to form families with children must navigate a complex range of logistical, social and emotional issues.

Finding a suitable known donor can be difficult because of the need for compatible expectations about parenthood. Men may want more or less involvement than the lesbian parents feel comfortable with; they may feel awkward or uncertain about the responsibilities attached to giving sperm; or their partners may not approve of the idea.

For some lesbian couples, deciding who will become pregnant and whose eggs will be used will be straightforward and for others, it will be emotionally difficult. It really depends on how the women view the issue of being genetically related to the child, and their feelings about how important it is to become pregnant and give birth.

In some US states, a procedure called ‘reciprocal IVF’ is offered so both women can have a biological relationship to the child. One woman provides the egg, while
the other becomes pregnant and gives birth. However, this procedure is currently only possible in Australia if the couple has fertility problems.

Q8. Who goes on the birth certificate when using a sperm or egg donor? And what about if the couple is same-sex?
A. Fiona Kelly, legal scholar:
Where a couple or single woman has used assisted reproduction (ART) to conceive, the donor is not named on the birth certificate. Rather, the recipient parent(s), who are the legal parents of the child, are named, provided they were married or in a de facto relationship at the time of conception.

In all states and territories, the woman who gives birth to a child born as a result of ART is the ‘mother’ of that child. When a married woman or a woman in a de facto relationship with a man becomes pregnant as a result of assisted reproduction her partner is presumed to be the father, provided he consented to the procedure.

All Australian jurisdictions also presume the same-sex partner of a birth mother who has used ART to conceive is a legal parent of a child born. In other words, same-sex couples and opposite-sex couples are treated identically.

The language that is used on birth certificates may vary. For example, in Western Australia, the partners may register as ‘mother’ and ‘parent’; ‘mother’ and ‘mother’; or ‘parent’ and ‘parent’. In the ACT, a person may be registered as ‘mother’, ‘father’ or ‘parent’.

Several states make a notation on the child’s birth certificate, indicating that further information is available about the child’s birth. The notation ensures the child can determine that he or she is donor-conceived, particularly in the event of the child not having been informed by their parents of the nature of their conception.

Q9. How much does IVF cost?
A. Loretta Houlahan, embryology lecturer:
Back in 1987, the cost of IVF treatment was about A$3,500 to A$4,500 and the pregnancy rate was around 40-50% after three attempts. At the time, Professor Carl Wood, one of the pioneers of Australian fertility treatment, said:

As the test-tube procedure has been developed only recently, it is reasonable to assume that with further improvements the cost may be reduced and the success rate increased.

Arguably, the reverse has occurred with live birth rates reported to be as low as 4% at one IVF clinic. Further, despite a large proportion of IVF now being subsided by Medicare, the going rate for a fresh IVF cycle is around A$10,000, with out-of-pocket expenses commonly over A$4,000 before private health insurance rebates.

Using donor sperm or eggs costs more again, with clinic-recruited donor sperm usually costing around A$1,000 per treatment. Although, actually paying a donor for their eggs or sperm remains illegal.

Q10. What are the success rates for IVF?
A. Loretta Houlahan, embryology lecturer:
Fitness guru Michelle Bridges recently caused a stir when she suggested her ability to conceive naturally at 44 was because of her and her partner’s healthy lifestyle.

While lifestyle factors such as smoking and weight will play a role, the biggest contributing factor to infertility is the woman’s age. So while Michelle Bridges’ 12-week body challenge may reduce your body mass index, drinking protein shakes and running on the treadmill cannot turn back the clock.

The highest success rates are reported in women under 30 who have around a 26% chance of having a baby with IVF. Women over 40 have around a 6% chance, and as for women 44 or older such as Michelle, the chance of going home with a baby is less than 1%. Michelle was lucky. Most women her age would need donor eggs.

There is also a wide discrepancy between the success rates of IVF providers. The last report showed overall results ranged from 4% at one clinic to 30.9% at another.

There is also evidence to suggest having a younger male partner may improve IVF outcomes in women. This doesn’t necessarily mean women should go out looking for a young male sperm donor, it just shows there are many factors at play, many of which are out of patients’ control.

Q11. Is sex selection legal in Australia? Should it be?
A. Deborah Dempsey, sociologist:
Sex selection using assisted reproductive technology is only legal in Australia to reduce the risk of transmission of a serious genetic condition, such as Duchenne muscular dystrophy.

Sex selection of embryos created through IVF is done using a technique called preimplantation genetic diagnosis (PGD). This technique enables the removal of one or more cells from an embryo so it can be tested for genetic abnormalities prior to implantation.

Clinics providing PGD must be accredited by the Fertility Society of Australia, which requires them to comply with National Health and Medical Research Council ethical guidelines.

Some Australians would like to use PGD for ‘family
balancing’ reasons. Australians often consider it ideal to have at least ‘one of each’ in their family, although in many parts of the world there is a cultural preference for sons. Australians are known to travel overseas to obtain sex selection services in countries where clinicians will perform PGD for non-medical reasons.

While I understand that some parents have a very strong desire to have children of both sexes, my personal view is the practice is undesirable and discriminatory. If we take the ‘family balancing’ idea seriously enough to legally facilitate it, we are perpetuating the view that boys and girls are so different from each other that families with children of one sex are ‘unbalanced’ and somehow deficient.

There would also be no impediment to using the procedure to support more extreme forms of gender discrimination, for example, in cases where families favour having sons.

Q12. How long can donor eggs and sperm stay in the freezer?

A. Loretta Houlahan, embryology lecturer:
Donor eggs and sperm are often frozen before they’re given to recipients. This allows donors to be tested for infectious diseases and genetic abnormalities, transported interstate or overseas, if needed, and to be readily available for patients who need them.

Some people express concerns about the survival rates of donor eggs or sperm that were frozen many years ago. But as long as they’re stored correctly, there is no biological limit on the amount of time eggs or sperm can remain in frozen. Just like Elsa in the movie Frozen, the cold never bothered them anyway, and staying frozen doesn’t reduce their thaw survival rates.

The main problem with eggs and sperm that were frozen many years ago is that the older freezing methods were not as good as the new ones. Eggs frozen using the now-outdated ‘slow frozen’ method have poorer survival rates than those that have been vitrified (‘snap frozen’).

There is also limited information about the success of egg freezing in general. So while we know eggs can survive the thaw process, we don’t know how many babies are being born from this process.

Sperm isn’t usually vitrified like eggs are, but advances in sperm freezing technology have also improved success rates over time.

So, to sum it up, donor eggs and sperm can theoretically remain frozen indefinitely – although there are legal restrictions on this.

Q13. How difficult is it to obtain information about overseas donors/surrogates?

A. Damian Adams, donor conception researcher:
Australian clinics are mandated to follow National Health and Medical Research Council’s guidelines which stipulate that all donor-conceived people (since the guidelines came into effect in 2005) are entitled to know identifying information on the donor once they reach 18 years of age. Subsequently, if clinics are sourcing eggs or sperm from overseas, the information available must meet our guidelines.

We are yet to see whether any donor-conceived people have trouble accessing this information as those conceived under these guidelines are yet to turn 18. Those conceived prior to this will be at the mercy of whatever agreement the Australian clinic and the overseas clinic had in the supply of those gametes and associated information. The donor-conceived are then also reliant on a foreign business maintaining and looking after those records.

Anecdotal evidence from older donor-conceived people overseas does not paint a rosy picture of possible outcomes from seeking information, although it is hoped that their practices have also changed for the better as has been the case in Australia.

Q14. How are donor eggs and sperm transported interstate and overseas?

A. Loretta Houlahan, embryology lecturer:
After eggs and sperm are frozen, they need to be kept in liquid nitrogen, which is about minus 196 degrees Celsius. This can make transportation tricky, as liquid nitrogen is really dangerous, and if it was to leak it could easily kill the courier or anyone else around at the time.

Luckily, scientists have come up with a special device called a ‘dry shipper’ which allows frozen embryos, eggs and sperm to be transported safely while keeping everyone safe. Dry shippers absorb the liquid nitrogen in the walls so it doesn’t leak, but it still keeps everything cold. Very occasionally, this process can fail, but most transportation occurs successfully without any damage to patient material.

Q15. What barriers do donor-conceived people face in obtaining information about their biological mother or father?

A. Damian Adams, donor conception researcher:
This is highly dependent on when the person was born and which state they were born in. Those conceived from 2005 onwards around Australia, and 1998 onwards in Victoria, are entitled to access identifying information. Prior to those dates, donations were primarily anonymous.

For those conceived under anonymous conditions there are, however, voluntary registers in Victoria, Western Australia and New South Wales which offspring can put their details on in the hope that the donor will also place their details on the register. If the donor is not on the register – or if they were conceived in another state – the offspring will be reliant on assistance from the clinic.

Research my colleagues and I published in 2012 on accessing information in Australia showed some people found dealing with the clinics quite difficult (others have found them helpful), and if information was available that there was no national consistency
on what information was recorded. In some instances, records had been destroyed or redacted. We have also seen instances of registers failing to match people who were later matched through DNA testing.

So, some younger offspring may find it easy, while older offspring may find it difficult or even impossible.

Q16. Can donor-conceived people access information about their donor if they were conceived before anonymity was abolished?

A. Fiona Kelly, legal scholar:
The only state in which donor records have been opened retrospectively is Victoria. As of June 2015, all donor-conceived people who were conceived in Victoria may apply for access to their donor’s identifying information, with the donor’s consent.

In other states, there is no right of retrospective access. However, in a number of states, such as NSW and WA, donor-conceived people may place their names on a voluntary registry. If both the donor-conceived person and the donor register, access is permitted by mutual consent.

Q17. Will using donor eggs from a younger woman increase my chances?

A. Loretta Houlahan, embryology lecturer:
Women over 40 are the main recipients of donor eggs. Using donor eggs from a younger woman significantly increases the chances of success.

However, using donor eggs doesn’t eliminate all complications. Women who use donated eggs have a higher risk of developing serious complications, specifically high blood pressure and pre-eclampsia. Although it was thought these dangers may have been linked to the age of the birth mother and not the egg donor, the real reason remains unknown.

There is also a difference between fresh and frozen eggs to consider. Fresh is best because the success rate with thawed eggs remains unclear. However, this option is not always available where donor eggs are involved. Until only recently, egg freezing was considered experimental so we are still learning a lot about this process.

Q18. What motivates men to donate sperm, and women to donate eggs?

A. Roger Cook, psychology scholar:
Both sexes are motivated, at least in part, by a sense of altruism. In the past, some men were enticed to donate by payments, albeit very low amounts. This became somewhat after laws were introduced prohibiting anonymous donation. Donors must now be prepared to be identified and allow contact with their donor children.

This has reduced the number of men donating, as the necessity of identification is incompatible with their sense of privacy.

Another motivation for some men is a desire to be biological fathers, particularly when they’re unlikely to form a parenting relationship with a woman.

Women are usually more reluctant than men to give away their DNA, except when they have had their own experience of IVF. This is likely related to the significance of pregnancy and child birth experience, which men experience in a different way.

Women who donate their eggs have been through infertility treatments such as IVF, and therefore have some understanding of the distress that follows such circumstances. Their motivation is to help other women who are not able to produce their own viable eggs.

Q19. Why do I need ICSI (sperm injections) if I use donor sperm?

A. Loretta Houlahan, embryology lecturer:
A common source of confusion for patients is why they need to use intracytoplasmic sperm injection (ICSI) when using donor sperm. ICSI is usually preserved for treatment where the male partner has a low sperm count and costs a lot more than a standard IVF treatment.

The main reason ICSI is used is because of the critical shortage of donor sperm. To enable supply to meet demand, the donor sperm sample may be diluted. This way it can be used in more patient treatments. The downside to this is that because diluted samples contain such a low volume of sperm, ICSI is required for the insemination procedure.

ICSI is also required to inseminate frozen-thawed eggs. In order to freeze eggs, the ‘cumulus cells’ that surround them need to be removed. In natural conception, as well as standard IVF, the cumulus cells act like a maze and the sperm are required to find their way through these cells to get to the egg.

It also acts like a barrier to limit the number of sperm that reach the end point. Without the cumulus cells intact, the risk of more than one sperm fertilising the egg is too high, so ICSI is used to avoid an abnormal fertilisation. With ICSI, the embryologist can ensure only one sperm enters the egg.

Damian Adams is PhD candidate, Flinders University.
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Fiona Kelly is Senior Lecturer in Law, La Trobe University.
Loretta Houlahan is Casual Lecturer, Master of Clinical Embryology, Department of Obstetrics and Gynaecology, Monash University.
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The Conversation

UPDATED ASSISTED REPRODUCTIVE TECHNOLOGY GUIDELINES

The National Health and Medical Research Council has recently updated its Ethical guidelines on the use of assisted reproductive technology in clinical practice and research.

This update replaces the 2007 ART guidelines and provides contemporary ethical guidance for the conduct of ART in the clinical setting.

The ART guidelines articulate ethical principles and, when read in conjunction with federal and state or territory legislation, create a robust framework for the conduct of ART in Australia.

The revised guidelines are developed around a set of guiding principles, with practical advice and examples on how to apply and use these principles in the clinical setting.

The ART guidelines consider an individual’s circumstances and the tailoring of information, counselling and consent processes to each individual or couple considering involvement in ART activities. This is paramount for the ethical conduct of ART.

“These guidelines promote current practice and community sentiment that ART activities will be conducted in a manner that shows respect, minimises potential harms and supports the ongoing wellbeing of all parties, including persons born as a result of ART,” said NHMRC CEO Professor Anne Kelso AO.

“The guiding principles also support informed decision-making, fair and reasonable access to ART services and the use of effective and efficient practices.”

The revision of the ART guidelines was overseen by the Australian Health Ethics Committee (AHEC), with advice from an expert working committee. The working committee comprised members with relevant knowledge and expertise in ethics, reproductive technology, reproductive law and regulation, religion and consumer issues.

Two rounds of public consultation informed the development of the ART guidelines and addressed a number of complex ethical issues including:
- The information needs of individual consumers and their access to appropriate counselling services
- Sex selection for non-medical purposes
- Surrogacy
- Gamete and embryo donation
- Preimplantation genetic screening.

AHEC has also identified a number of issues that require further consideration. These are issues that are outside of the scope of the ART guidelines, are issues identified in the ART guidelines as requiring further community discussion, or are on the horizon and may require consideration in the future.

A summary of the major revisions is available on the NHMRC website.

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ETHICAL ISSUES IN REPRODUCTIVE MEDICINE

The Australian Medical Association explains its stance on assisted reproductive technologies and surrogacy in this extract from its latest position statement.

ASSISTED REPRODUCTIVE TECHNOLOGIES

In vitro fertilisation (IVF)

• IVF may require a gamete (sperm or ova) or embryo donor. Donation should follow counselling and be carefully regulated to avoid abuses, including coercion of potential donors. It is inappropriate to offer money or benefits in kind to encourage donation but donors may be reimbursed for reasonable expenses.1

• Gamete donors should have the right to withdraw consent to donation at any time prior to insemination or fertilisation. Embryo donors should have the right to withdraw consent to donation any time prior to transfer of the embryo into the uterus of the recipient. Consent cannot be withdrawn once the donated gamete or embryo has been used.

• Individuals should be fully informed of the risks and benefits, both physical and psychological, and realistic outcomes of IVF. They should be informed of the psychological and social supports available, and referred for assistance when appropriate.

• In order for the child and their family to be medically informed throughout the child’s life, they should be able to access health and genetic information related to the donor(s).

Surplus gametes or embryos

• ART may result in the production of gametes or embryos that are not used to treat those from whom they were procured. These ‘surplus’ gametes and embryos may be stored, cryo-preserved for future use, donated to other patients, disposed of, or donated for research. These available options must be explained clearly and precisely to individuals before donations are made. Any patients considering ART should be aware of the significant ethical, legal, and social implications of gamete and embryo donation.

Preimplantation genetic diagnosis (PGD)

• PGD should be restricted to fatal or seriously and permanently disabling diseases. Genetic selection should not be undertaken on the basis of sex (except in order to avoid hereditary sex-linked disease) or on the basis of characteristics or traits that are unrelated to disease.2

Artificial insemination and ovulation induction

• Similar principles apply to artificial insemination and ovulation induction.

SURROGACY

• Surrogacy may involve a ‘traditional’ surrogacy, where a pregnancy is conceived through insemination with sperm from a commissioning male or a ‘gestational surrogacy’, where the surrogate acts as a ‘gestational carrier’ of the embryo created using the commissioning parents’ gametes.3

• Once such a pregnancy has commenced, the doctor’s ethical and medical obligations to the surrogate mother and child are the same as those owed to any pregnant woman and her future child. A pregnant woman has the same rights to privacy, to bodily integrity, and to make her own informed, autonomous health care decisions as any other competent individual, consistent with the legal framework of that jurisdiction.4

• The commissioning parents will have their own health care needs related to the surrogacy; for example, in relation to the process of gamete donation.
Bioethical concerns regarding reproductive technology

Overview of ethical issues from the Adelaide Centre for Bioethics and Culture

Assisted reproductive technology (ART) is a medical intervention developed to improve an ‘infertile’ couple’s chance of pregnancy. ‘Infertility’ is clinically accepted as the inability to conceive after 12 months of actively trying to conceive. The means of ART involves separating procreation from sexual intercourse – the importance of this association is addressed in bioethics.

Some techniques used in clinical ART include: artificial insemination; in vitro fertilisation (IVF); gamete intrafallopian transfer (GIFT); gestational surrogate mothering; gamete donation; sex selection and preimplantation genetic diagnosis. Issues addressed in bioethics are the appropriate use of these technologies and the techniques employed to carry out procedures for quality and ethical reviews.

Assisted reproductive technology and its use directly impact the foundational unit of society – the family. ART enables children to be conceived who have no genetic relationship to one or both of their parents. Children can also be conceived who will never have a social relationship with one or both of their genetic parents, e.g. a child conceived using donor sperm. Non-infertile people in today’s society including both male and female homosexual couples, single men and women, and post-menopausal women are seeking the assistance of ART.

Concerns in all situations include the child and his or her welfare, including the right to have one biological mother and father. The fragmented family created by ART can disconnect genetic, gestational and social child-parent relationships which have typically been one and the same in the traditional nuclear family.

Other important bioethical issues include the appropriate use of preimplantation genetic diagnostic screening, use, storage and destruction of excess IVF embryos, and research involving embryos. ART research requires human participants, donors and donated embryos, oocytes and sperm.

Ethical issues that arise in ART research surround the creation and destruction of embryos. One approach in bioethics involves preserving justice, beneficence, non-maleficence and the autonomous interests of all involved. Bioethicists contribute to ethical guidelines and moral evaluations of new technologies and techniques in ART as well as to public discourse that leads to development of national regulations and restrictions of unacceptable practices.
O
ver the past two decades, the frozen preservation of embryos has become routine practice in IVF. What currently happens to embryos next is controlled by overlapping and complicated rules that confuse and disempower IVF users.

Several embryos are usually produced in an IVF cycle but only one, or at most two, are transferred at one time to minimise the chance of multiple births. Additional embryos are then stored at clinics for use in future transfer cycles.

Very few, if any, patients envisage an extended period of storage for these remaining embryos, which is done for a number of reasons. A couple may be undecided about whether they want to have more children, for instance, or want to wait a while before having another child. A spontaneous pregnancy may follow IVF treatment or a couple may not be able to decide on how the stored embryos should be used or whether they should be disposed of.

As a result, more than 120,000 human embryos are now in storage across Australia. While the majority will be used in future IVF cycles, many thousands will never be needed, leading to difficult choices for parents. Over the past decade in Victoria alone, over 20,000 embryos were discarded as a result of mandatory storage limits set by law.

We undertook the Enhancing Reproductive Opportunity project to find out whether IVF patients felt they were able to make the decisions they wanted to make about the use or disposal of their stored embryos.

The project drew on the experiences of more than 400 past and present IVF patients from more than 20 clinical sites across Australia. It spans two decades of experiences covering matters such as storage limits, use after the death of a partner and embryo donation for reproduction.

Our sole inclusion criterion was that an individual or couple had engaged in IVF treatment and stored embryos. Our feminist-oriented approach is particularly mindful of the greater physical risks and emotional toll experienced by women involved in IVF, as well as women’s more limited reproductive years in contrast to men. Unlike most such research, which is focused on embryo donation for research, our work asks whether people were able to make the family formation decisions they desired.

We found that current IVF rules on issues such as storage limits and destruction practices are intrusive and disrespectful. Mandatory time limits in some states compel destruction of stored embryos after ten years, for instance, while rules in other states prevent a surviving partner from deciding on the use or donation of embryos.

Policies and practices in modern-day IVF don’t do enough to acknowledge the emotional significance of embryos, particularly to women who undergo a painful and invasive procedure to create them. One of our interviewees, Danielle, said:

What I would like to see happen is a more empathetic understanding that embryos come with a set of emotions and meanings attached outside of fertility, outside of science; because we can’t predict how people will feel about their embryos, that we have to respect individual responses. Clinics have to be sufficiently flexible to accommodate individual needs and to understand the meanings that people attach to gametes.

We don’t believe that embryos should be granted a moral or legal significance in and of themselves as distinct entities. Rather, their value is relational – embryos matter because of what they mean to those for whom they were generated. This meaning is intensely personal, and infinitely variable. We would like to see a framework of law, policy and practice capable of honouring this meaning as much as is possible.

The focus of government regulation of IVF to date has largely been on the prohibition of negative or undesired practices. We think that this needs to change. The focus of external agencies should be to facilitate positive practices, by such actions as giving information to enable informed consent and external provision of support services.

We propose a separation of responsibilities between fertility clinics and government agencies, with key information, advice, support and dispute resolution services being provided independently of clinics.

Human embryos have different meanings to different people, but it’s clear that they matter most to the women who underwent IVF to create them. Surely, the law should respect this and only intrude into decisions about stored embryos made by women and their partners when there’s a clear need to do so.

**DISCLOSURE STATEMENT**

This research was funded by the Australian Research Council and additional funding from UTS: Law.

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**THE CONVERSATION**


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18 Reproductive Ethics

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ART – ASSISTED REPRODUCTIVE TECHNOLOGIES

Assisted reproductive technologies (ART) are infertility treatments for women who are having trouble getting pregnant. They are methods used to achieve a pregnancy either through artificial or partially artificial means.

IVF: a specific area of RTL NSW interest

In vitro fertilisation (IVF) is one ART method. It’s where eggs from a woman are mixed with a man’s sperm outside of her body. Usually, multiple embryos are created, with one or two of them returned to her uterus to try to achieve a pregnancy.

RTL NSW stance

The problem with IVF is that it relies on numbers for success – namely, a number of embryos. When only 1 or 2 are implanted in a woman’s uterus, many more are left behind unused. These embryos are often discarded, destroyed, frozen and forgotten, or given over to medical research. These are voiceless victims of IVF and they are the reason why we oppose IVF.

QUICK FACTS TO SUPPORT OUR POSITION

• In Australia alone, it’s estimated there are than more than 120,000 human embryos in storage.¹
• Alarming statistics out of Great Britain highlight our position. Between 1991-2012, an estimated 1.7-million embryos created for IVF in that nation were thrown away.
• That same report out of Great Britain shows only 7 per cent of those created embryos lead to pregnancy.²

IVF – THE PLAGUE OF THE ‘SNOW BABIES’

Have you ever heard of a ‘snow baby’? Despite the fact there are hundreds of thousands of them, few people have. ‘Snow babies’ is the nickname given to the leftover frozen embryos after a woman goes through in vitro fertilisation, or IVF. IVF, of course, is a medical process that assists a woman who has had trouble having a baby to get pregnant.

The secret to success for IVF is numbers. IVF usually entails the creation of multiple human embryos outside of the woman’s body. Multiple eggs from the woman are fertilised with a man’s sperm. The embryos are then allowed to develop for several days. Then one, or more, of the new embryos is implanted in the woman’s uterus with the intention of establishing a pregnancy.

The problem with IVF then becomes the hidden issue no one wants to talk about, or that no mother or couple really wants to think about. Or in many cases, hadn’t even thought about. That issue – what to do with the embryos who weren’t implanted in the mother.

Women and/or couples are faced with the decision on whether to donate them to another infertile woman or to freeze them for a future pregnancy. If they choose that second option, they’re reminded once or twice a year about that choice with a bill that’s usually for hundreds of dollars for storing their frozen embryos. These frozen embryos are the ‘snow babies’. In Australia alone, it’s estimated there are than more than 120,000 human embryos in storage.¹

What happens to most of these embryos is really sad and alarming. Many are killed by thawing. Other embryos are killed when they are donated for embryonic stem cell research. For that to happen, the parents of these embryos had to make a life-changing decision they probably never even considered when beginning the IVF process.

Because of this, Right to Life NSW is strongly against IVF. The practice fails to protect the lives of millions of embryos who are created, but never used. IVF puts tens of thousands of women and couples in a difficult position about having to decide the fate of their unused embryos. Finally, IVF fails to take into account the rights of each and every embryo created during the process. Their right to life is lost in a terrible numbers game. They are the forgotten ‘snow babies’.

THE LAW

A new study from the University of Technology, Sydney (UTS) released in 2013 shows women are confused by

The problem with IVF is that it relies on numbers for success ... When only 1 or 2 are implanted in a woman’s uterus, many more are left behind unused. These embryos are often discarded, destroyed, frozen and forgotten, or given over to medical research. These are voiceless victims of IVF and they are the reason why we oppose IVF.
overlapping and complicated rules concerning the use or destruction of frozen embryos held in storage after in vitro fertilisation.

At issue, how long the embryos can be kept in frozen storage. Lead researcher, Professor Jenni Millbank says, “Current rules around stored IVF embryos are intrusive and disrespectful. Law should not set blanket storage periods that enforce destruction of embryos after a set period; nor should they prevent donation if that is desired.” The researchers acknowledged the emotional difficulties many women have when it comes to their embryos and what to do with them. The group called for changes in the law, policies and practices in the area of IVF and frozen embryos.

In Australia, in vitro fertilisation (IVF) and assisted reproductive technology (ART) methods are licensed by the Infertility Society of Australia. The National Health and Medical Research Council provides ethical guidelines for IVF research and practice. In Australia, it is illegal to buy or sell any human tissue, including sperm, eggs and embryos.

New South Wales is the only state in Australia that hasn’t introduced legislation to regulate the practice of IVF, as well as other ART methods. NSW operates in accordance with the National Health and Medical Council’s ethical guidelines for the ART.

Embryo donation is legal in all Australian states and territories. In NSW, embryo donation is regulated by the Assisted Reproductive Technology Act of 2007 and the Assisted Reproductive Regulation of 2009. Both provide details of who can donate, how many times they can donate and how long embryos can be kept in storage. In NSW, donated embryos can be stored for 10 years from the date the embryo was obtained from the donor.

THE SCIENCE

The in vitro fertilisation (IVF) treatment cycle involves five main steps:1
- A hormone is administered to the woman over a number of days to induce the maturation of multiple eggs.
- Egg pick-up from ovarian follicles under anaesthesia.
- Fertilisation of the collected eggs by incubating them with sperm over a few hours in the laboratory.
- Embryo maturation during which a fertilised egg is cultured for 2-3 days to form a cleavage embryo (6-8 cells) or 5-6 days to create a blastocyst (70-100 cells).
- Transfer of one or two fresh embryos into the uterus in order for a pregnancy to occur.

It is common to produce several embryos. But statistics from many IVF centres show that usually one, or at most two, embryos are placed inside the woman’s uterus. That minimises the chances of multiple births.

The remaining embryos are then stored at clinics. Many of those will be used in future IVF cycles. But many of the remaining unused embryos won’t be needed, leaving a mother or both parents to face a difficult choice on what to do with their embryos.

As for the success rate of IVF, in 2009, approximately 35,000 women in Australia and New Zealand went through IVF. There were 70,000 cycles performed in these women, resulting in the births of 13,000 children.2

THE FACTS

- For women: The success rate for IVF is continuing to go up. But in the end, it’s still below 40% for women as having as many as five IVF cycles. The cost of each of those procedures is thousands of dollars. Regardless of the outcome, women are faced with the difficult decision about what to do with their unused embryos. University of Technology, Sydney researcher, Professor Jenni Milbank worked with other researchers on IVF and its impact on women. She writes about the decision women face, “Policies and practices in modern day IVF must acknowledge the emotional significance of embryos, particularly to the women who underwent painful and invasive treatment to create them.”

- For men: The fathers of unused embryos face these same, difficult, life-changing decisions that women face about what to do with the unused embryos which aren’t implanted in the body of their wife or partner.

- For society: One of the more troubling aspects of IVF is how the process has given some parents a mentality which views a baby as something that can be bought. Also, many IVF clinics screen for genetic disorders. Many embryos are then destroyed based on those disorders, and not given a chance for life.

- For the unborn embryos: They are the voiceless in all of this. They are created as part of process that only succeeds because of sheer numbers. They are the ones who don’t make it into a woman’s body to be given a chance at life. Many more who do make it that far also don’t survive the pregnancy. Then there are those who are killed, left to die, or donated to medical research – all without any say of their own.

NOTES

2. www.dailymail.co.uk/news/article-2255107/1-7-million-embryos-created-IVF-thrown-away-just-7-cent-lead-pregnancy.html

Rethinking funding and priorities in IVF – should the state pay for people to have babies?

Should the government pay to bring new babies into the world who otherwise wouldn't have existed? Ethicists Julian Savulescu and Kelton Tremellen investigate

How much should the state spend on helping people to have children? At present, government support for infertility treatment is approximately A$2,400 million a year. The success of fertility treatments such as IVF is good if you are under 35 years of age, but once a woman hits 40 it plummets, falling to an almost futile one-in-80 chance of producing a baby for women 45 years and older. This raises the question – is IVF a cost-effective use of taxpayers’ money? And what about for older women?

Decisions about funding are usually made on grounds of cost-effectiveness. In Australia, the cost-effectiveness threshold is about A$40,000 per QALY. A QALY is a quality adjusted life year. Thus the government will spend, for example, A$40,000 to add a year of full health, or improve the quality of life by 10% for 10 years.

Is IVF cost-effective? It depends on how we measure it.

THE LIFE OF THE CHILD

If we count the life of the child who is produced by reproduction as a benefit, then IVF for infertility is highly cost-effective. Latest annual figures state that more than 13,000 babies are born through IVF treatment, at an average cost to government of A$19,000 per child.

Likewise preimplantation genetic diagnosis to test for genetic disorders in potentially fertile couples is cost-effective. Genetic testing costs on average A$3,000-5,000 per cycle of IVF, plus the additional IVF treatment costs. Even for a 45-year-old woman, at A$5,000 per cycle, total cost to bring about a live birth would be A$400,000. But this buys a whole life of 80 QALYs, so works out to be A$5,000 per QALY, well below the threshold and great value for money.

While the Australian government does pick up the tab for the majority of IVF costs, it pays absolutely nothing towards the costs of genetic testing, which are borne by the prospective parents. This appears to be a strange position when one considers the costs associated with care for a child born with cystic fibrosis, estimated to be over A$30,000 a year.

Let’s say the person with cystic fibrosis lives 30 years. This gives a total cost of nearly A$1 million for lifetime care. Genetic testing costs maximum about A$5,000 and IVF about A$19,000. That is A$1 million versus A$24,000.

It is thus vastly more cost-effective to provide genetic testing for free and have children born without cystic fibrosis. It could be that fears of ‘designer babies’ are holding back improving access to this life-saving and economically sound medical care.

If we count the value of the life of a child produced by IVF as a benefit, it is a hugely cost-effective medical procedure.

THE LIFE OF THE PARENTS

There is great philosophical debate about how to value bringing new people into existence. For example, it is much worse to kill someone than to decide not to have a child (using contraception or abstinence). Killing someone harms them but failing to bring someone into existence harms no one. Likewise, it is often said that bringing someone into existence does not directly benefit any individual.

For this reason, it can be argued that the relevant harms and benefits are those to the parents. That is, the success of IVF should not be counted in terms of the life of the child produced but in terms of the unhappiness, anxiety and other mental distress couples or individuals feel at not being able to have a child. This makes IVF much less cost-effective because the benefits are so much smaller.

If we count the value of the life of a child produced by IVF as a benefit, it is a hugely cost-effective medical procedure.

IMPERSONAL REASONS

Should the life of the child count in us deciding how to fund and prioritise IVF? We think it should, but in a way that is different to counting its full value. Consider the simple case of genetic selection to avoid a genetic disease such as cystic fibrosis.

If IVF and genetic testing are used to select a healthy embryo, call her Jane, we avoid hundreds of thousands of dollars in lifetime healthcare costs and all the difficulty and misery of a life with cystic fibrosis. But did the genetic selection benefit Jane? No – if it were not performed, another child, call him Peter, would have been born with cystic fibrosis.

This is puzzling. We want to say it is good that people don’t have genetic diseases in the future, but when this is achieved by genetic selection it does not appear to benefit anyone. Of course parents and society benefit by not having to care and worry about treatment for cystic fibrosis. But we also feel intuitively that a world without cystic fibrosis is a better world.

Sometimes these reasons are called ‘impersonal reasons’, reasons that are unconnected to harm and benefit to persons. These reasons give us some cause to act. But they appear weaker than ordinary person-affecting reasons, which involve direct harm and benefit to persons. For example, it is worse to give someone cystic fibrosis who was previously healthy than it is to fail to have genetic selection and so conceive a child with cystic fibrosis.
Nonetheless, impersonal reasons to care about the next generation are an important ground for making the world a better place – for example, by selecting policies aimed at reducing carbon emissions. Such policies will inevitably affect the timing of reproduction, and so the identity of who is born. Nonetheless the world is better for these different future people.

The implication of this for IVF and genetic selection is that we have some direct impersonal reasons to support these. These arguments extend to having children. It is better if there are children in the future.

Should the life of the child count in us deciding how to fund and prioritise IVF? We think it should, but in a way that is different to counting its full value.

Many European and Asian countries are suffering from having too few young people to support their ageing populations. Of course the limitation of resources places an upper limit on how many people there should be. But in the absence of such a limit, it is better if there are more happy, healthy people.

These arguments suggest much more funding should be put into IVF and genetic selection to avoid serious disease. But they also extend to other non-disease traits. It is better if people have talents and gifts, are happy, co-operative, empathetic, altruistic and so on.

What goes on the list of personally and socially valuable traits is contentious, but there is consensus on some traits. Psychopathy is not a trait there is a reason to preserve, or to select for. We should support selecting against it, just as we should support preventing disease.

Genetic selection should be supported to have children who will have better lives, not merely healthier lives. It ought to be a priority.

Now that whole genome analysis is becoming cheap and widely available, it ought to be employed where IVF is already being used for infertility or avoiding genetic disease. But should we lift laws that prevent access to IVF for healthy couples?

Should the state support genetic selection where there is not a high risk of genetic disease or infertility? The answer to this question will depend on just how much genetic selection is capable of adding to the quality of the lives of the next generation or the benefits to future society.

At present, most complex traits like intelligence have many genes contributing. When only 20 embryos are produced, it is not possible to select across a large number of genes. For this reason, genetic selection is unlikely to be cost-effective when dealing with polygenic traits.

Nonetheless, laws banning such genetic selection ought to be lifted. And if technologies that amplify genetic selection for polygenic traits become available, perhaps the state ought to provide these.

Including the value of new people in our moral and economic thinking would cause us in many cases to give greater economic support to IVF and genetic selection than we currently do.

DISCLOSURE STATEMENT
Julian Savulescu receives funding from Australian Research Council. Kelton Tremellen owns shares in Monash IVF – a public company listed on the ASX.

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AGEING AND ASSISTED REPRODUCTION: WE NEED TO TALK

Australian Medical Association president questions the ethical and financial implications of IVF technology use by older women, reports Adrian Rollins

AMA President Dr Michael Gannon has called for the “mother of all debates” over the funding and regulation of assisted reproduction following revelations that a 63-year-old Tasmanian woman has become a first-time mother using IVF technology.

Dr Gannon criticised the mother’s decision to use IVF to conceive a child at such an advanced age as “selfish and wrong”, and said the community needed to consider carefully who should have access to assisted reproduction technology, and the consequences it can have for children, parents and broader society.

“As a community, we need to consider the rights of the child, the rights of society, the responsibilities of proper parenting, the health of the parents, the health risks to the child at birth and beyond, and the costs to the health system and the taxpayers that fund it,” the AMA President said.

“This must not be narrowly viewed as a women’s rights issue. Nor is it about ageism.”

Dr Gannon, who is a Perth-based obstetrician, sparked a firestorm of comment after he responded to news of the birth by commenting on Twitter that the use of IVF to have a child so late in life was “madness”. He said the not only were women “not designed” to give birth in their 60s, but the decision disregarded the rights of the child and the burden on taxpayers.

Critics accused Dr Gannon of making a moral judgement about the mother and downplaying the role of the father, who is 78 years old.

But the AMA President said there were compelling medical, social, financial and ethical reasons for ensuring that such cases did not become commonplace.

“As a community, we need to consider the rights of the child, the rights of society, the responsibilities of proper parenting, the health of the parents, the health risks to the child at birth and beyond, and the costs to the health system and the taxpayers that fund it.”

Most IVF clinics in Australia do not offer treatment to women beyond the age of 53 years, and the Tasmanian mother went overseas to be impregnated with a donor embryo before returning to Australia and giving birth at 34 weeks at Melbourne’s Frances Perry House private hospital.

Dr Gannon said there was good reason why Australian IVF services would not treat a woman so late in life. He said that from around the age of 30 years onward problems associated with pregnancy and birth gradually increased, including miscarriage, chromosomal abnormalities, pre-eclampsia and the risk of stillbirth: “None of this is avoidable, and no amount of antioxidant supplements or kale smoothies can arrest the inevitability of ageing”.

By the time women were in their 50s and 60s, the effect of ageing on their blood vessels meant they were more susceptible to chest infections, asthma, diabetes and hypertension later in life. Because it potentially missed out on crucial in utero brain development, the child could also experience learning problems and developmental delay.

Costs to society and taxpayers also needed to be considered, he said. It cost about $2,500 a day to care for a baby in the Neonatal Intensive Care Unit, much of it subsidised by the taxpayer, and such demands diverted resources from other parts of an already-stretched health system.

He said the decision of couples denied IVF in Australia to seek treatment overseas was “not simply an expression of choice, or a case of ‘user pays’. The health system picks up the bill”.

Dr Gannon said the birth of a child to a 63-year-old mother was not what the pioneers of IVF had in mind when they developed the technology in the late 1970s.

“This amazing technology has brought much joy to many across the world. But just because medical science can do something does not mean we have to do it, or should do it,” he said.

“Stories like this cannot become the norm. Let’s talk to Australian women and men about starting their families in their 20s, not normalise the dubious use of medical science and powerful hormones to wake the womb from its normal, physiological, post-menopausal sleep.”

FOUR MYTHS ABOUT IVF IN OLDER WOMEN

Reports that a 62-year-old Spanish woman has given birth after IVF treatment have led many to question whether there should be age limits with such treatment. Lina Alvarez, a doctor in north-west Spain, isn’t the oldest person to have had success with IVF. Earlier this year, in India, Daljinder Kaur is said to have given birth at the age of 72, prompting calls from the Indian Medical Council for a ban on fertility treatment in women over the age of 50.

In many countries where there is funding assistance for IVF there is a limit to obtaining treatment over a certain age. In Britain, for example, the bar is set at age 42. But Alvarez received private treatment. So why care about her age? And what business is it of the rest of us whether she has access to IVF?

There are several arguments that typically surface in debates about age and fertility treatment – and they are all deeply flawed.

1. Having an older mother is harmful

It is sometimes claimed that children will be harmed if older mothers are allowed access to IVF. This might be because older mothers will not be able to meet the physical demands of lifting, playing with and caring for a small child. It might be because it would be a bad thing for a child if their mother were to die while they are still young.

However, in some countries women of Alvarez’s age on average can expect to live to the age of 85. This means most older mothers around her age will live to see their child grow up and leave home. Many children already receive regular care from grandparents (44% in the UK) and we do not usually think that this is bad for the child. While some older women may struggle with the physical demands of childcare, that will also be true of some younger women.

Essentially, this argument only works if we think that the lives of children born to older mothers are going to be so bad that it would be better that they had never been born. However, this isn’t at all likely.

2. Being pregnant while older is harmful

Doctors sometimes worry about high rates of complications with pregnancy in older women. Older mothers do have higher rates of a number of medical problems during pregnancy, including high blood pressure, diabetes, and premature labour. But most won’t.
One study found that around 80% of women aged over 45 had no major medical problems during pregnancy and more than 80% gave birth at full term.

There are good reasons for women to be aware of those risks of complications, and to take them into account when making decisions about whether or not to become pregnant. But for women without major health problems already, the risks of pregnancy are not so high that they can’t go ahead.

3. IVF doesn’t work in older women
National fertility treatment guidelines in the UK justify not providing NHS IVF treatment to women aged over 42 because of low success rates. For example, the live birth rate following IVF in women over the age of 44 is only 2%.

Yet these ‘success’ rates are based on IVF treatment with the woman’s own eggs. For women who receive donor eggs or embryos, the chances of a live birth are based on the donor’s age, not on that of the recipient. Where the egg donor is young, older women have the same sort of chances of ‘success’ with IVF as younger women. Donor eggs also avoid the increased risks of major chromosomal problems in the baby (for example Down syndrome) that are seen in older mothers.

4. IVF shouldn’t be publicly funded
People may feel that in a stretched public health system there are other important priorities to fund rather than paying for fertility treatment. For example, funds could be directed instead to improving staffing levels in birthing units, screening for infection, or cancer treatment. But this argument could apply to any fertility treatment, not just for older women. If we are going to provide at least some publicly funded IVF treatment, we should make sure that we provide it fairly, and consistently.

But whether or not public IVF should be funded, these arguments shouldn’t stop someone paying for private fertility treatment, as Alvarez did. One important question is whether patients who have private fertility treatment should have to pay the public health system costs if they later develop medical complications, or their child is born prematurely.

One London obstetrician reported large strains on maternity services from women who had received IVF treatment overseas. Usually, in a public health system, we don’t make patients pick up the bill for costs that result from their own free choices. But in cases like this, one possibility might be to require patients to take out medical insurance policies before they access private treatment.

None of these points mean that it is necessarily a good idea to have children at a later stage in life. There are good reasons to advise (if possible) having a child at an earlier age, when fertility rates are higher, there are fewer health risks and IVF is less likely to be needed.

There are also good reasons to make sure that women who seek out fertility treatment are fully aware of the risks involved and perhaps for doctors to decline treatment where risks are deemed to be very high. But ultimately, this could apply to younger as well as older women. As such, strict age limits on access to IVF are discriminatory and not justified.

First published by The Conversation in conjunction with Oxford University’s Practical Ethics blog.

DISCLOSURE STATEMENT
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The Conversation

Secrets and lies: why donor-conceived children need to know their origins

Donor conception is a complex issue – families need more support to talk to their children about it, writes Jennifer Power

In all Australian states and territories, laws are now in place to ensure that when children born via donor conception turn 18, they have a right to access information about the identity of their donor. However, research suggests that most heterosexual parents who conceive via donor conception never tell their children.

Donor insemination became widely available in the 1980s with the emergence of sperm freezing technology. However, in these early days few jurisdictions had clear regulatory frameworks around donor conception and record keeping was often inconsistent.

In Australian studies, fewer than 35% of couples surveyed had told their children they were donor-conceived. This is consistent with overseas research, which suggests the majority of parents never tell their children.

The lack of regulation allowed for, and was facilitated by, a culture of shame and secrecy around infertility and donor insemination. It was common for medical practitioners to advise parents not to tell their children they were donor-conceived. The prevailing wisdom was that anonymity and secrecy was better for children, families and donors.

Victoria was one of the first jurisdictions in the world to introduce laws banning anonymous gamete (sperm, eggs and embryos) donation and requiring donors to consent to the release of identifying information to donor recipients aged 18 or over. These laws came into effect in 1998.

By 2005, anonymous donation was prohibited nationwide. However, many donor-conceived children still struggle to access information about their donor, due to laws not being retrospective in many states, or because records have been destroyed.

When Victorian donor-conceived children born after the introduction of the first laws regulating donor conception were due to turn 18, the Victorian Infertility Treatment Authority in 2006 ran a campaign entitled Time to Tell. This encouraged families to talk to their children about being donor-conceived.

As the use of new reproductive technologies had become more common, stigma around this had decreased. This brought concerns about the rights of donor-conceived children to the forefront. The new laws supported the rights of children to access information about their donor, but this did not necessarily support parents to tell their children they were donor-conceived.

However, studies had begun to reveal potential problems that arose from not telling children. While in general, people who are donor-conceived are not disadvantaged in terms of wellbeing or connectedness to their family, problems can occur when they learn of the circumstances of their conception later in life.

When this happens, people may feel betrayed by their
WHY TELL?

Identity
For many donor-conceived people, knowing their origins is an important part of understanding who they are.

Medical reasons
As knowledge about the inheritance of disease increases, it becomes more important to know your genetic history.

Birth certificate
When donor-conceived children born from 2010 apply for their birth certificate as adults, they will be informed that more information is available about their birth. If they are not already aware they are donor-conceived, they are likely to find out when they ask about this additional information.

DNA testing
DNA and blood-group tests are becoming more common. These tests can show that two people, who thought they were related, are in fact not related. Receiving such important and personal information via test results can damage trust and family relationships.

Consanguinity
There is a very small but potential risk that a donor-conceived person may meet and form a sexual relationship with a half-brother or half-sister. Knowing and being comfortable discussing their origins with others may reduce this risk.

Family relationships
Secrets can create a great burden. They can undermine trust and cause conflict in a family. Being secretive about their conception may indicate to a child that their parents are ashamed.

Being open about donor conception may help your child understand that families are created in many ways. Donor-conceived people who learn about their conception in unplanned or unpleasant ways can feel betrayed or deceived. It is far better that parents tell them in a planned, loving way.

Source: Victorian Assisted Reproductive Treatment Authority (October 2016), Time to Tell.

For others, the pain of infertility is raw and avoiding the issue is emotionally easier.

Some parents intend to tell but never find the right time or words to do this. But a common concern is that children will no longer see their ‘non-genetic’ parent as their real parent.

Donor-conceived people often feel that knowing about their donor is an important part of forming and understanding their identity. But biology in itself does not create family relationships.

Biological relatedness is central to idealised Western notions of family and kinship, even though the reality of contemporary family life is much more complex than this. Step and blended families, families created through adoption or fostering, same-sex parented families and networks of close friends all involve non-biological family relationships. Many children are raised by, and form strong parental attachments with, adults to whom they are not genetically related.

This is not to say that biology is irrelevant. Many people’s sense of place in the world is connected to their biological heritage. Donor-conceived people often feel that knowing about their donor is an important part of forming and understanding their identity. But biology in itself does not create family relationships.

The problem with secrecy around donor conception is that it contributes to the notion that biology is more important than lived family ties. It implies that a child having a genetic link to someone else undermines the importance of those parents who have raised that child.

By contrast, openness about donor conception allows parents to emphasise the strength of their family connection and includes their children in the creation of the family narrative.

Laws that ensure donor-conceived people have access to identifying information about donors encourages greater openness around donor conception; although some people argue the laws need to go further, mandating parents to tell their children.

The complexity of this issue points to a continued need for resources to support families to talk to their children about donor conception.

DISCLOSURE STATEMENT
Jennifer Power has previously received funding from the Australian Research Council, Relationships Australia, VicHealth and ACON. She currently works on a project funded by the Commonwealth Government.

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Issues in Society | Volume 442

Reproductive Ethics
Women who donate their eggs deserve compensation – here’s why

Paying up to $5,000 in a carefully regulated market would recognise the inconveniences associated with donation, argues Meredith Nash

Women are generally born with about a million eggs. Yet, women with reproductive problems or ‘older’ women (over the age of 40) often cannot conceive with their own eggs. The solution is to use donor eggs because it can improve their chances of pregnancy.

The problem is, the demand for egg donors in Australia has increased significantly over the years and donor eggs are in short supply.

So, should women who donate their eggs for reproduction be compensated? This controversial question has been asked repeatedly in Australia ever since Britain changed its laws on compensation for egg donation this year. In my view, the answer is yes.

In April, the maximum rate of compensation for British eggs donors rose from £250 (A$385) to £750 (A$1,155). As a result, the number of women who have approached clinics to donate eggs ‘surged’. The increase in donations has also reduced the waiting times for women who require donor eggs for procedures such as in vitro fertilisation (IVF), a process of fertilising eggs with sperm outside of a woman’s body.

In Australia, the law prevents individuals from buying or selling any human tissue and this includes eggs, sperm and embryos. To that end, women cannot be paid for donating their eggs. They may only be paid for ‘out-of-pocket’ expenses associated with donation such as travelling to the clinic and taking time off work. Women cannot be compensated for the inconvenience or risk associated with donation.

There are generally two arguments against compensation: women might be exploited if they are offered large sums of money to donate; and paying donors for eggs commodifies the human body, meaning it turns it into a product to be sold in the marketplace.

As a result of our legal regulations, it’s very difficult to find an altruistic donor in Australia. The waiting lists are interminably long (many lists have been closed given the critical demand for donor eggs) and women must often find their own donor, such as a friend or relative.

For women who cannot find an altruistic donor at home, increasingly, the solution is to become a
reproductive tourist and travel to countries such as India, where egg donors and surrogates are compensated and there are virtually no waiting times for eggs.

There is something wrong with this picture. While I think it’s unethical to pay egg donors $10,000 or more as they are in some clinics in the United States (‘high demand’ donors in the US are paid up to $50,000), it is not justified to avoid compensating donors altogether.

Egg donation is a time-consuming, invasive procedure. A potential donor will have to travel to a clinic several times for various tests before she is even accepted as a donor.

If she is accepted, she will have injections to stimulate her ovaries to mature her eggs for retrieval. During this time, she will require more examinations to monitor her response to the fertility drug. Side effects of the drugs may be mild to severe, including enlarged ovaries and bloating. In the most serious cases, a donor could experience blood clotting and fluid in the lungs.

Eggs are retrieved from the donor surgically. This can take up to one hour and donors often report feeling mild pelvic discomfort afterwards.

Women should be compensated for being inconvenienced and risking their health.

EXPLOITATION AND COMMODIFICATION
There are generally two arguments against compensation: women might be exploited if they are offered large sums of money to donate; and paying donors for eggs commodifies the human body, meaning it turns it into a product to be sold in the marketplace.

Getting paid a lot of money to donate eggs could be tempting for women to donate. But this does not mean it’s necessarily coercive or exploitative.

If we view payment as compensation for a donor’s inconvenience and risk and not payment for a product (eggs), then it would be impossible to justify the high sums paid to donors in the US, for example, because every donor is equally inconvenienced by the process.

Furthermore, the majority of egg donors in the West are middle-class women. So it’s unlikely that the ‘typical’ donor in Australia has ‘no choice’ but to sell her eggs.

With regard to the commodification argument, every service in our economy is sold. If there is something wrong with commodifying eggs as per Australian law, then we also could argue that it is also wrong to pay for reproductive services altogether.

The bottom line is that if payments that are too high ‘exploit’ women, then payments that are too low or non-existent are equally exploitative. Why is it that egg donors are expected to act altruistically when everyone else involved in the process is compensated for their work?

The key question is how much should Australian donors be compensated. Paying up to $5,000 in a carefully regulated market, for example, would recognise the inconveniences associated with donation and make it worthwhile for egg donors.

As in Britain, compensation will also reduce the waiting times for donated eggs in Australia and the number of couples that go overseas for fertility services. Let’s treat donors with the respect that they deserve.

DISCLOSURE STATEMENT
Meredith Nash does not work for, consult, own shares in or receive funding from any company or organisation that would benefit from this article, and has disclosed no relevant affiliations beyond her academic appointment.

Meredith Nash is Lecturer in Sociology, University of Tasmania.
Rights of donor children must come before egg donation compensation

Those who know the identity of their donor from a young age are less likely to experience psychological problems, according to Mhairi Cowden

University of Tasmania academic Meredith Nash recently argued on The Conversation that women who donate their eggs for fertility treatments should be financially compensated. It’s a risky and time-consuming process, she argued, which should be acknowledged financially. Compensation would also lead more women to donate their eggs and address the supply shortfall.

But what she doesn’t address is the rights of the child created from such donation – arguably the most important concern and one that must be addressed before encouraging more women to donate their eggs. Children born from donated gametes (egg and sperm) must have access to identifying information about their donors.

Many donor-conceived children who don’t know the identity of their donor experience emotional difficulties and struggle with identity. As one man conceived by donated gametes in the 1970s described:

After having children of my own and holding them in my arms, I came to realise what my conception had truly deprived me of. I had lost kinship, my heritage, my identity and my health history. This realisation was crushing, depressing and immensely painful.

But recent studies show that if donor-conceived children are told how they were conceived and have the opportunity to know the identity of their donor from a very young age, they are less likely to experience psychological problems.

DONOR CONCEPTION IN AUSTRALIA

The regulations governing egg and sperm donation vary significantly between Australia’s states and territories.

Four states – Victoria, South Australia, Western Australia and New South Wales – have legislation governing donor conception.

Many donor-conceived children who don’t know the identity of their donor experience emotional difficulties and struggle with identity.

Legislation in Victoria and NSW provide donor-conceived children the right to know the identity of their donor once they reach the age of 18 by contacting the state register. Western Australia allows individuals 16 and older access to identifying information after compulsory counselling. South Australia does not expressly recognise this right and has no register; individuals must contact the clinic directly.

The other states and territories are governed by the National Health and Medical Research Council’s (NHMRC) ethical guidelines, which states children “are entitled” to know the identity of their donor. But the guidelines don’t outline how this should be enforced.

Consequently, the approach to donors, parents and donor-conceived children varies greatly between jurisdictions and the rights of donor-conceived people are routinely violated. And there is no clear procedure for ensuring parents tell their children they are donor conceived. Without knowing you are donor-conceived you cannot exercise your right to know your genetic parents.

Victoria not only enables access to identifying information about donors, it has also taken steps to ensure parents tell children they are donor-conceived. The Victorian Assisted Reproductive Treatment Authority (VARTA) provides public Time to Tell seminars, support and information around these complex issues.

But Victoria is an outlier. Last year’s Senate inquiry into donor conception found that in some clinics in states ungoverned by legislation, anonymous donation
continues in breach of NHMRC guidelines.

The Senate committee called for various regulatory reforms including a national register of donors. Such a register would facilitate contact between donors, donor-conceived people and their siblings across state and territory borders, and would protect the rights of children born in states currently without registers.

The approach to donors, parents and donor-conceived children varies greatly between jurisdictions and the rights of donor-conceived people are routinely violated. And there is no clear procedure for ensuring parents tell their children they are donor-conceived.

DIFFICULT QUESTIONS
Donating eggs is not only a physically demanding process but can also be emotionally and psychologically demanding. Potential donors must be prepared to consider the rights and interests of the resulting child, the role they may play in that child’s life and the relationship they have to the recipient parents. Encouraging women to donate with the incentive of compensation without the corresponding support and counselling is a risky strategy.

If the true aim of compensation is to increase the rate of donation, we must be aware that a direct consequence of this is facilitating the birth of more children with the knowledge that the regulatory system on which they may later rely on, is not equipped to deal with their needs.

The United Kingdom provides a good example of strong regulation and legislation governing the rights of donor-conceived people. The establishment of a central authority and a central register means many of the problems we face here in Australia are avoided. In the context of the UK, taking measures to increase donation seems appropriate.

Ultimately, egg donors should be compensated. But this should take the form of true compensation for the risk of donation. And first, we need strong regulatory protections for those children born from donated gametes.

Mhairi Cowden is Associate, Children’s Policy Centre, Australian National University.

The Conversation
EGG FREEZING: MORE WOMEN ARE PUTTING MOTHERHOOD ON ICE, but is it making us complacent about fertility?

THE USE OF SOCIAL EGG FREEZING TO DELAY MOTHERHOOD IS ON THE RISE, ACCORDING TO THIS ABC NEWS REPORT BY KELLIE SCOTT

At 32, Brisbane’s Ange Anderson is painfully aware her fertility will soon start to rapidly decline. But the Nova newsreader doesn’t want to rush into having kids when she meets the right guy, so she is putting her babymakers on ice.

Many like her are choosing to freeze their eggs, known as oocyte cryopreservation, to delay motherhood either to focus on their career, wait for the right partner or simply because they don’t feel ready.

It’s known as ‘social egg freezing’, and it’s on the rise. Others, sometimes as young as 12, have their eggs collected for medical reasons, such as before undergoing cancer treatment which can have a detrimental impact on female fertility.

But while egg freezing is giving women more reproductive choices, there are concerns its portrayal as an ‘insurance policy’ is resulting in unintended childlessness when women become complacent about their declining fertility.

Anderson recently came out of a long-term relationship and was seeing a lot of media about the opportunity for women to freeze their eggs.

“When I turned 30, I always thought I’d have one or two kids by then because I’ve always been maternal,” she said.

“I didn’t want to miss out on the opportunity to become a mum, so I thought freezing my eggs was worth investigating.”

Anderson consulted with a clinic and underwent the necessary testing. Fortunately results showed she has a good ‘storage of eggs for her age’, so she can wait a couple of years until taking the $10,000 plunge to harvest them.

“If the results had have been different, I would have taken out a small loan to have it done now,” she said.

Knowing she can freeze her eggs has taken the pressure off, allowing her to focus on meeting ‘the right guy’...
and travel more of the world before settling down. “When going on dates I don’t just want to think about his potential as a husband and father, but the qualities of the person,” she said.

“There is so much more I want to do before becoming a parent.”

**‘IT’S ONLY EVER A BACKUP’**

Consultant Simone Campbell from the City Fertility Centre in Brisbane said many women visited the clinic purely to discuss their options.

She said the best age to start thinking about egg freezing was early 30s.

“Unfortunately a lot of the women who come and see me in their late 30s to discuss it – that’s not the best time to freeze eggs,” Dr Campbell said.

“If we can have people thinking about it earlier, they can at least assess the situation and make an informed decision.”

Dr Campbell said success rates of conception using frozen eggs was under-researched, but collecting 20 healthy eggs from a 32-year-old may result in a 70 to 80 per cent chance of ‘taking home a baby’.

“We need to see generations of people until we can really gauge that.

“It’s only ever a backup ... if a woman freezes eggs at 32 and comes back at 37, we will try and use her fresh eggs first.

“It’s a mini insurance policy that has no definite pay-off at the end.”

Dr Campbell said it was important for women to understand there were medical risks associated with the egg collection procedure.

“It’s a safe process, but we know that there is a risk of bleeding from ovaries [for example].”

**MANAGING EXPECTATIONS**

A 2016 study from University College London found the success rate of oocyte cryopreservation was now on par with IVF pregnancy rates.

But it said expectations around the likelihood of conceiving using frozen eggs was a concern.

“It is paramount that women receive the correct information about oocyte cryopreservation and its success rates, and do not accept it as an ‘insurance policy’ as it is often portrayed,” the University College London study said.

“Further, the decision by companies such as Apple and Facebook to offer ‘social egg freezing’ to their employees, may lead to women feeling pressured to delay childbirth.”

It also highlighted the need to calculate costs carefully. A 2012 study from Northwestern University Feinberg School of Medicine found if a woman were to freeze her eggs at age 25 and return to them at 40, it would be less cost-effective than undertaking assisted reproductive techniques at the age of 40 if difficulties conceiving were encountered.

Perinatal Psychology director Bronwyn Leigh said women could manage their expectations by being informed.

“Women should be well-informed by multiple sources, including fertility specialists, about the realities of conception at various ages and with frozen eggs,” she said.

“Expectations need to be compared with the reality that conception is a complex process with multiple factors at play.”

Dr Leigh said fertility could not be taken for granted at any age.

“Maternal age, and the health of eggs, are key variables in trying to conceive, but that is not a complete picture.”

But for Anderson, she will be waiting until her mid-30s to again weigh up her options.

“If I’m not fortunate [to have children], I have so many friends with babies that call me aunty, and my own niece and nephew ... I’ll just have a farm of dogs instead,” she laughed.
Fertility preservation is the collection and storage of a person’s gonadal tissue and/or gametes in an attempt to help the person retain their ability to procreate.

An individual may have medical and/or personal or social reasons for choosing to collect and store their gonadal tissue and/or gametes. For example, certain medical conditions and/or treatments can harm a person’s fertility, and some individuals may have personal or social reasons for delaying parenthood beyond their most fertile years, increasing their risk of age-related infertility.

The guidelines below emphasise the guidelines in Chapter 4 and the importance of informed decision-making and the management of expectations within the context of the available clinical evidence.

Guidelines for the collection and storage of gonadal tissue or gametes for fertility preservation from persons unable to provide valid consent are also included below.

**Manage the collection and storage of gonadal tissue or gametes for fertility preservation**
Clinics should have a policy in place to manage the collection and storage of gonadal tissue or gametes for fertility preservation, including from persons unable to provide valid consent.

**INFORMATION GIVING, COUNSELLING AND CONSENT**

**Provide relevant information and counselling**
Clinics must ensure that those considering the collection and storage of their gonadal tissue and/or gametes are provided with all relevant information in accordance with paragraphs 4.1, 4.2.1-4.2.2 and 4.2.6.

Clinics must provide those considering the collection and storage of their gonadal tissue and/or gametes with access to counselling by a professional with appropriate training, skills, experience and competency to support their decision-making, in accordance with paragraph 4.3.1.

**Obtain valid consent**
Clinics must ensure that valid consent for each specific procedure is obtained in accordance with paragraphs 4.5, 4.6.3-4.6.5 and 4.7.

**PERSONS UNABLE TO PROVIDE CONSENT**

There may be situations in which it is ethically acceptable to collect and store the gonadal tissue or gametes of persons who are unable to provide consent in accordance with paragraphs 4.5-4.6. Assessments should be made on a case-by-case basis.
CHILDREN AND YOUNG PEOPLE

Assess the ethical acceptability of the proposed collection and storage of gonadal tissue or gametes for a child or young person

The collection and storage of gonadal tissue or gametes for a child or young person may be ethically acceptable if:

- Storage of the gonadal tissue or gametes is the best means of preserving the fertility of the child or young person
- The risks and discomfort of the procedure to the child or young person can be minimised
- The child or young person, if capable, and their parent(s), guardian or otherwise authorised person consents to the proposed collection and storage (see paragraphs 8.5 and 8.6)
- The collection and storage is not for the reproductive needs of another individual (see paragraphs 5.2.1 and 8.24).

There may be situations in which it is ethically acceptable to collect and store the gonadal tissue or gametes of persons who are unable to provide consent.

Where there is any doubt about the ethical acceptability of the proposed collection and storage of gonadal tissue or gametes for a child or young person, a clinician should seek advice from an independent body.

Provide relevant information and counselling and obtain valid consent

Clinics must ensure that person(s) authorised to consent to the collection and storage of gonadal tissue or gametes from a child or young person are provided with all relevant information and have access to appropriate counselling services (see paragraph 8.2).

Clinics must ensure that valid consent for each specific procedure is obtained from the person(s) authorised to consent to the collection and storage of gonadal tissue or gametes from a child or young person (see paragraph 8.3).

Respect the developing capacity of a child or young person to participate in decision-making

Clinics must respect the developing capacity of children and young people to be involved in decisions about the collection or ongoing storage of their gonadal tissue or gametes. When the child or young person is not legally competent but sufficiently understands the issues, clinicians should encourage the child to take part in the decision-making process.

Where appropriate, clinics must ensure that the child or young person is also provided with all relevant information and has access to appropriate counselling services.

When the child or young person reaches the appropriate age of consent, as determined by relevant legislation, clinics must manage the transition of responsibility for the stored gametes from the person(s) authorised to consent, to the individual. The individual’s valid consent must be obtained for the continued storage of their gonadal tissue or gametes (see paragraphs 4.6.3 and 4.6.4).

PEOPLE WITH IMPAIRED DECISION-MAKING ABILITY

Provide relevant information and counselling and obtain valid consent

Clinics must ensure that the collection and storage of gonadal tissue or gametes from a person with impaired decision-making ability, such as with a cognitive impairment, intellectual disability or a mental illness, is conducted in accordance with the principles outlined in paragraphs 8.4-8.6.

For all paragraph references, refer to the complete guidelines which can be downloaded at: www.nhmrc.gov.au/guidelines-publications/e79

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Egg freezing won’t insure women against infertility or help break the glass ceiling

MARKETING EGG FREEZING AS A WAY TO EXTEND WOMEN’S REPRODUCTIVE LIVES IS SIMPLY FALSE, OBSERVES LORETTA HOULAHAN

Modern women are increasingly delaying having children. In Australia, the median age of mothers has increased from 25.4 years in 1971 to 30.8 in 2013. The most recent data from 2012 showed the average age of women receiving assisted reproductive treatment was 35.8.

Prohibitive workplace practices and unsympathetic employers are often cited as some of the reasons for the delay, as is the financial burden of taking time off work to raise children. To combat this, women are turning to science.

A recent study from Israel suggests that women who know they can easily access IVF if they need to are more inclined to delay motherhood to focus on developing their careers. The authors of this study, who were economists without expertise in assisted reproduction, said “this is especially relevant as companies consider funding for employees to freeze their eggs as well as other fertility-extending measures”.

According to these economists, “by giving people a form of insurance against later life infertility, women who wanted to pursue a career were able to do so”.

Indeed, the practice of offering egg-freezing perks to employees is increasingly common. Facebook and Apple are in on the act, as are some of our local IVF clinics.

However, women should be cautious before they take up these sorts of offers from their employers. IVF and egg freezing will not will insure women against infertility as the authors of the study suggest, nor will this technology help break down the glass ceiling. Indeed, it is possible your boss may just try to freeze your wages along with your reproductive potential.

Until only recently, egg freezing was considered experimental, and there is only limited data about its safety and efficacy. The latest results show that success rates with frozen eggs are about 10% lower than with fresh. (It should be noted there remain inconsistencies in information about thaw survival rates and fertility outcomes, and previous studies have shown that the results are comparable to fresh.)

However, even with fresh eggs, you have only around a 26% chance of a live birth per fresh cycle. The chance of success will depend on the age of the woman at the time of egg collection, among other factors. So if it is true that frozen egg cycles are 10% less successful than fresh cycles, you would be looking at around a 15% chance of having a live birth per frozen egg cycle.

And therein lies the problem, as once you’re 45 you can’t just do another egg-collection cycle. If you freeze your eggs at 30, and then wait until your mid-forties to thaw them out, you’ll be left with however many were collected in the first instance. So while egg freezing may be better than doing nothing, you would hardly call it insurance.

Doctors usually aim to collect around 10 eggs per cycle. However, the end result will depend on the...
individual, and not all eggs will necessarily be suitable to freeze. Depending on how many eggs were collected, you would really want to do more than one cycle to give you the best chance of success later in life. And that’s just to have one baby. If you want a larger family, you’ll need many more cycles.

Each egg-collection cycle costs around A$10,000 or more, and there is no Medicare rebate for social egg freezing. I certainly don’t know too many Australian employers who would be willing to fund all of that.

Even if they were, the above estimates were made using self-reported clinic data from the Australian & New Zealand Assisted Reproduction Database (ANZARD) report. However, it’s unclear whether or not this data can be trusted.

Recently, doctors at the Monash IVF Group of clinics raised concerns about patient care and the way the company reports its IVF success rates. According to a recent news report, the doctors claim the company is overstating its treatment success rates and hiring inexperienced medics. And when doctors don’t trust the treatment and success rates provided by their own clinic, you know something is ‘fundamentally wrong’.

It should be noted that Monash IVF denied media reports that its staff had concerns about patient care. The company also stated it complies with industry reporting practices. Regardless, this latest incident will only serve to amplify pre-existing fears about IVF industry practices in general.

Notwithstanding concerns about the unclear success rates of egg freezing and the issue of IVF success rate reporting, the problem of pregnancy and parental discrimination in the workplace still exists. According to Job Watch Employment Rights Legal Centre, the number of calls from women who reported they were discriminated against at work because they were pregnant has doubled in the past ten years.

The Victorian Equal Opportunity and Human Rights Commission even produces a booklet warning working women of the ‘risks’ they face while pregnant; and these risks do not include those incurred from eating raw fish or soft cheeses.

So when egg freezing is billed as some sort of insurance policy to protect against the perils of advanced maternal age and is marketed as the key to women breaking through the glass ceiling, and there is also a legitimate concern about the way IVF clinics market and disclose their results to patients, one can’t help but wonder if some of the major beneficiaries of the egg-freezing campaign will be IVF clinics, their shareholders and the workplace boss.

Marketing egg freezing as a way to extend women’s reproductive lives is simply false and it does not address the underlying social reasons for why women freeze their eggs in the first place. Egg freezing might break the bank, but it’s not going to break down the glass ceiling.

It is encouraging that employers and economists are finally recognising some of the barriers women face in employment. However, like so many people and policies in the workplace, IVF and egg freezing simply do not work as effectively as we’d like them to. It’s not a solution to workplace discrimination, it’s not an insurance policy against ageing, and it’s not helpful or fair to pretend that it’s either. And women deserve better.

DISCLOSURE STATEMENT

Loretta Houlahan has previously been employed at Melbourne IVF, Monash IVF and City Fertility Centre. She is a current member on the Patient Review Panel, a lawyer at Parke Lawyers and consults at Australian Workplace Strategies. She works predominantly in the area of employee relations and was also an intern at Job Watch Employment Rights Centre, a community legal centre referenced in this article. These views are her own.

Loretta Houlahan is Sessional Lecturer, Master of Clinical Embryology, Department of Obstetrics and Gynaecology, Monash University.

SEX SELECTION: ETHICAL GUIDELINES

Guidelines for the selection and transfer embryos on the basis of genetic sex, courtesy of the National Health and Medical Research Council

In the context of ART, the term ‘sex selection’ refers to the selection and transfer of an embryo on the basis of genetic sex. Intended parents seeking to select the sex of an embryo may have genetic or non-medical reasons for doing so. The ART guidelines have long considered that the use of sex selection techniques may be ethically acceptable when used to reduce the risk of transmission of a serious genetic condition, disease or abnormality.

Attitudes towards some of the more controversial practices and aspects of ART differ considerably, and are shaped by an individual’s own particular set of values, preferences, and beliefs, or those of their family and/or community.

In recent years, there has been an increasing public and professional debate regarding whether intended parents should be permitted to make an autonomous decision regarding sex selection for non-medical purposes. However, a significant voice against the practice also remains.

SEX SELECTION TO REDUCE RISK OF TRANSMISSION OF A GENETIC CONDITION, DISEASE OR ABNORMALITY

Assess the ethical acceptability of selecting the sex of a human embryo to reduce the risk of transmission of a genetic condition, disease or abnormality

Sex selection techniques may be used to reduce the risk of transmission of a genetic condition, disease or abnormality that would severely limit the quality of life of the person who would be born, when there is evidence to support:

- Claims that the condition, disease or abnormality affects one sex significantly more than the other (see paragraph 8.16)
- That the risk of transmission is greater than the general risk of the condition, disease or abnormality occurring within the general population.

Sex selection techniques may not be used unless the intended parent(s) have been provided with relevant information and counselling, in accordance with paragraph 8.18.

SEX SELECTION FOR NON-MEDICAL PURPOSES

In considering the issue of sex selection for non-medical purposes, the Australian Health Ethics Committee (AHEC) was cognisant of a range of relevant factors, including:

- Existing state and territory legislation regulating ART. State and territory governments are responsible for regulating the clinical practice of ART.
- The regulation and/or availability of sex selection for non-medical purposes internationally. At the time of consideration, sex selection for non-medical purposes was being considered in other jurisdictions internationally.
- Concerns about the standard of care in international clinics. Some international clinics do not have the same standard of care that exists in Australia and people may be exposing themselves, and possibly the person who would be born as a result, to risks and harms.
- Evidence that some adverse events may be slightly increased in children conceived following ART compared to natural conceptions. This becomes an increased concern when considering fertile individuals or couples using ART solely for the purposes of sex selection.
- Whether sex selection for non-medical reasons is a justifiable use of medical resources.
- Whether some attitudes towards sex selection for non-medical purposes are influenced by whether or not the procedure would be publicly or privately-funded.
- Values inherent in Australian society that relate to freedom of choice and autonomy, particularly in relation to reproductive choices.
- Whether there is an ethical difference between a desire to introduce variety to the existing sex ratio of offspring within a family and the desire to design the sex of the offspring based on the preferential selection of a particular sex due to an individual’s or couple’s cultural or personal bias, influences or desires.
- The importance that some individuals or couples place on having both male and female children for the intended family or for the parenting experience, with the possibilities and challenges that this may bring.13
- The possibility that sex selection for non-medical reasons may validate or reinforce gender stereotyping and discriminatory attitudes, and create pressure on the person born to conform to parental expectations regarding gender.
- The possibility that allowing sex selection for non-medical reasons may open the way to the selection of other characteristics such as eye or hair colour, based on an individual’s or couple’s preferences.
- The possibility that access to sex selection for non-medical purposes may reduce potential harms to a family and society by minimising potential family size.
- Concerns that the termination of a pregnancy may be used as an alternative sex selection technique.
AHEC does not endorse, nor wish to perpetuate, gender stereotyping, or cultural or personal biases based on biological sex.

Following lengthy consideration, and the application of the guiding principles in Chapter 2 of these Ethical Guidelines, AHEC concluded that in some circumstances, sex selection for non-medical purposes is consistent with the guiding principles.

AHEC’s majority view is that there is an ethical difference between a desire to introduce variety to the existing sex ratio of a family and the desire to design the sex of the offspring based on the preferential selection of a particular sex due to an individual’s or a couple’s cultural or personal bias, influences or desires.

At the same time, AHEC acknowledges that the motivations of those seeking to use sex selection for non-medical purposes cannot be easily identified. What is presented as a desire to introduce variety could conceal cultural and/or personal biases.

AHEC also recognises that many of the issues surrounding ART are as much social and political as they are ethical. With any controversial practice, society’s readiness to accept a practice is a relevant and important consideration. At the time of publication [2017], there is limited research into the question of whether Australians support the use of sex selection for non-medical purposes.

It is also recognised that the states and territories have the capacity to legislate regarding ART, including on sex selection for non-medical purposes. At the time of publication [2017], only four Australian states have legislation regulating the clinical practice of ART, with sex selection for non-medical purposes prohibited in two Australian states.14

Therefore, despite AHEC’s majority view that there may be some circumstances where there is no ethical barrier to the use of sex selection for non-medical purposes, paragraph 8.14 applies until such time that wider public debate occurs and/or state and territory legislation addresses the practice.

At the time of publication [2017], only four Australian states have legislation regulating the clinical practice of ART, with sex selection for non-medical purposes prohibited in two Australian states.

**Sex selection for non-medical purposes is not currently supported**

Sex selection techniques may not be used unless it is to reduce the risk of transmission of a genetic condition, disease or abnormality that would severely limit the quality of life of the person who would be born (see paragraph 8.13).

**NOTES**

13. The terms ‘male’ and ‘female’ are used here to describe the chromosomal sex of the person who would be born. This chapter is not intended to apply to the gender of the person born, nor their intersex status. 14. See Appendix One for further information.

For all paragraph references, refer to the complete guidelines which can be downloaded at: www.nhmrc.gov.au/guidelines-publications/e79

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**National guidelines oppose IVF sex selection**

New national guidelines oppose a push to allow parents to choose the gender of IVF babies

- The National Health and Medical Research Council has knocked back a push to allow parents to choose the gender of their baby in the newly updated *Ethical guidelines on the use of assisted reproductive technology in clinical practice and research*.
- The NHMRC has banned ART facilities (including IVF clinics) from offering gender selection for non-medical purposes. Clinics must abide by the guidelines in order to retain their accreditation. However Australia’s peak medical council has left the door open for future changes, suggesting sex selection may be ethical.
- The Australian Health Ethics Committee of the NHMRC has recommended the council consider condoning sex selection in certain circumstances, but ultimately concluded the Australian public was not yet ready for such a radical change.
- Several IVF clinics made submissions arguing for families that already have at least two children of the same sex to be able to choose the gender of the third; currently, gender selection is only allowed in Australia on medical grounds to reduce the risk of serious genetic conditions.
- Gender selection for family balancing is already widely allowed overseas and accessed by Australians in the US and Asia.
- There was extensive debate within the working committee and in the media concerning whether would-be parents should be permitted to make an autonomous decision about the sex of their baby for non-medical purposes.
- The ethics committee did not wish to endorse or perpetuate gender stereotyping or sex-based cultural bias, however AHEC hoped a reference in the appendix of the guidelines stating that sex selection may be ethical would stimulate public debate needed to affect legislation.
- The NHMRC also quashed suggestions that sperm donors be offered financial compensation, diverging from the United Kingdom’s decision to provide donors with $1,278 in ‘gratitude’.
- More than 200 submissions during the consultation period raised issues concerning ART, including counselling for would-be parents, commercial and international surrogacy, genetic testing and sex selection for non-medical purposes.

Source: Aubusson, K (20 April 2017), ‘National guidelines oppose push to allow parents to choose sex of IVF babies’, *The Sydney Morning Herald*. 

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Reproductive Ethics

Issues in Society | Volume 442
PARENT PLANNING – WE SHOULD BE ALLOWED TO CHOOSE OUR CHILDREN’S SEX

Ethicist Julian Savulescu thinks bans on non-medical sex selection are unnecessary, don’t mitigate risks and unjustly prevent reproductive freedom

At the time of writing, the National Health and Medical Research Council was accepting public submissions regarding sex selection in IVF procedures. It has previously prohibited non-medical sex selection*. The Ethics Centre asked two bioethicists for their thoughts on the matter.

Current NHMRC guidelines prohibit non-medical sex selection by any means. Victoria, Western Australia and South Australia have specifically legislated to ban sex selection using assisted reproduction.

The guidelines are now under review, providing the Australian public, the NHMRC and professionals an opportunity to re-examine their opposition to sex selection.

Opposition to the legalisation of non-medical sex selection illustrates a misunderstanding of the role of law in civil society. If A wants to do X, and B wants to assist A to do X for a price, the sole ground for interfering in their freedom is they will harm someone. Moral disapproval is not a ground for a legal ban.

Who would be harmed by allowing sex selection?

The most obvious candidate is the child. Call him John. The basis of most legislation in assisted reproduction is that the best interests of the child must be paramount. However, it is not against the interests of John to be conceived by sex selection. Indeed, if IVF and sex selection were not performed, John would not exist. John owes his very existence to the act of sex selection.

There is another kind of harm often invoked in these kinds of debates – a moral harm. John is being used as a means to his parents’ ends of having a child whom they have stereotyped goals for. John is being used as an instrument.

People intuitively believe that children should be ‘gifts’, not valued for particular characteristics, like sex, intelligence or athletic ability. We ought to give them their own opportunity to make their own life. That is, they should have a right to an open future.

Such objections are best expressed by German philosopher Immanuel Kant, who said people should always be treated as an end, and never a means.

But what Kant actually said is never treat people merely or solely as a means. We treat people as a means all the time – shopkeepers, salesmen, repair people and doctors. We respect adults by obtaining their consent to treat them as a means.

It is not possible to obtain consent from children – particularly not regarding their creation. What then does it mean to treat a child merely as a means?

People have children for all sorts of reasons – to be a sibling to an existing child, to hold a marriage together, to care for parents, to be a companion, to realise the parent’s dreams, to take over the family business or to be king of England. Ethically, these reasons aren’t important. What matters is how well they treat their child, once it is in existence whether male, female, disabled, tall, short – come what may.

Equality of all persons should not be conditional upon any characteristic like sex. But there is a distinction between continued existence and coming into existence. Continued existence should not be conditional on sex.

It might be thought the same follows for admission to life. But the NHMRC does allow medically-motivated...
sex selection to guard against certain diseases and disabilities. This suggests admission to existence can be ‘conditional’ upon being healthy and non-disabled.

What ‘conditional’ means here is ‘based on reasons’. One can have children for reasons, such as being of certain sex, having certain abilities, being healthy or not disabled. As long as one loves the child as end and gives the child an open future and good life, having reasons to have that child is perfectly ethically acceptable.

For example, a father wants to have a son to take to football matches. He therefore instrumentalises the child to his needs by sex selecting. He can still treat the child, once born, as an end by respecting the child’s own decision to pursue an interest in music instead.

The final alleged harm is to society, either by reinforcing sexist stereotypes or disturbing the sex ratio. In some parts of India and China, there are six males to five females.

Such harms could be real and might be a legitimate basis for interfering in liberty. But another basic principle is that the least liberty-restricting (least coercive) means should be adopted to prevent harm.

The present ban on non-medical sex selection is very wide-ranging and coercive. Are there less coercive means which would allow some sex selection but not reinforce sexist stereotypes and disturb the sex ratio?

There are at least three better policies:

1. Sex selection only in favour of girls.
2. Sex selection for family balancing. That is, sex selection for the second or third child, when the existing children are all of one sex and the preference is for the opposite sex. In Australia, this is the commonest reason for sex selection and just over 50% select girls.
3. Incidental sex selection. If a couple is having IVF and genetic diagnosis for infertility and screening of disorders, they could be allowed to express a preference over the healthy embryos, at discretion of their treating doctors.

Each of these strategies is less liberty-restricting and would protect the public interest.

There is no good ground for the current blanket ban on sex selection. Sex selection does not harm the child and any collateral harm (due to discrimination) can be controlled in better ways. A blanket ban is unethical, excessively restricting procreative liberty.

* POSTSCRIPT: In April 2017 the National Health and Medical Research Council (NHMRC) subsequently rejected a push to allow parents to choose the gender of their baby in new national guidelines, but left the door open for future changes, suggesting sex selection may be ethical (see pages 38-39).

Julian Savulescu holds the Uehiro Chair in Practical Ethics and is Director of the Uehiro Centre for Practical Ethics at Oxford University.
PARENT PLANNING – WE SHOULDN’T BE ALLOWED TO CHOOSE OUR CHILDREN’S SEX

Tamara Kayali Browne thinks non-medical sex selection is not ethical, and suggests we only need to ask why parents might want non-medical sex selection to see why it is unethical.

At the time of writing, the National Health and Medical Research Council was accepting public submissions regarding sex selection in IVF procedures. It has previously prohibited non-medical sex selection*. The Ethics Centre asked two bioethicists for their thoughts on the matter.

Using sex selection to prevent medical complications associated with a particular sex is already permitted. Given this, why might parents seek non-medical sex selection? It seems clear to me the primary reason is not to select the child’s sex, but his or her gender.

According to the World Health Organisation, sex is defined by biological and physiological characteristics such as genitalia and chromosomal make-up. Gender, on the other hand, refers to “the socially constructed roles, behaviours, activities, and attributes that a given society considers appropriate for men and women”.

Most parents will not desire a male or female child in the sense of their genitalia. Rather, they will want a child who fulfils socio-cultural definitions of ‘boyhood’ or ‘girlhood’. This is problematic because it assumes our sex determines our adherence to gender-based social norms and behaviours.

At best, acting on assumptions which are not evidence-based is bad science. Yet in this case, gender assumptions also have very serious repercussions within society. Assumptions and stereotypes regarding how each gender should be, act, excel at and strive for, underlie the sexism that pervades our societies.

As such, sex selection is a product of, and perpetuates, false assumptions about gender that keep men and women ‘in their places’. This prevents progress towards equality and freedom from restrictive gender roles and bias.

For children, it means a narrower rather than a

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Sex selection for family balancing is unethical and not assuredly successful. By perpetuating stereotypical notions of gender it validates unwarranted expectations in parents, which children will then have undue pressure to fulfil.
more open future. It also tacitly sanctions the sort of bullying that ‘tomboys’ or ‘sissies’ experience when children dare to transgress gender norms. For adults, it means a step backwards to perpetuating bias and discrimination.

With this in mind, we can see why some of the frequent arguments in favour of non-medical sex selection are unpersuasive.

Consider family balancing. Prospective parents who seek to undergo sex selection for ‘family balancing’ don’t seek to have a variety of sex chromosome or genitalia in the household. Rather, they seek to have a child who espouses the attributes, behaviours, activities and roles typically associated with the opposite gender of the children they already have.

‘Family balancing’ thus relies on the same gender stereotypes and assumptions as any other form of non-medical sex selection. For this reason, sex selection for family balancing is unethical and not assuredly successful. By perpetuating stereotypical notions of gender it validates unwarranted expectations in parents, which children will then have undue pressure to fulfil.

A similar case arises if parents were to tragically lose a daughter (for example) and seek to replace her with a child of the same sex. Presumably, the parents did not enjoy parenting a daughter because she had female sex organs. Rather, they likely enjoyed parenting her because of her attributes and behaviours, the activities she took part in or enjoyed, or even the clothes they felt they could dress her in.

All of these factors have the potential to be present in a son and they are not guaranteed in a daughter. The only barrier to realising this is social bias. If the parents truly understand that each child is different, it becomes hard to explain why the parents seek to undergo the trouble and expense of sex selection.

If the parents truly understand that each child is different, it becomes hard to explain why the parents seek to undergo the trouble and expense of sex selection.

Parental autonomy is often said to justify sex selective procedures. The idea being if parents prefer, or believe they will be better parents to one sex over the other, they should have the right to choose.

In cases where a family has children of both sexes, this belief will affect parents’ relationships with children of the non-preferred sex. If a mother believes only a daughter can facilitate a particular kind of relationship, her prejudice will sever the possibility of having such a relationship with her sons.

In this light, one can see that the gender assumptions which drive sex selection can actually make parents feel deprived of certain parenting experiences. Yet as there is in fact no reason to feel this way, these assumptions about gender curtail the autonomy of both parents and children.

Free of unfounded assumptions, parents may be freer than they realise to form the relationships they desire with children of either sex. This knowledge is freeing for both children and parents.

The wishes of intending parents should not override the need to respect the child who will be born. This is even more the case when those wishes are based on gender stereotypes and assumptions which have no scientific basis.

The wishes of intending parents should not override the need to respect the child who will be born. This is even more the case when those wishes are based on gender stereotypes and assumptions which have no scientific basis.

All children have a right to a maximally open future and this right is curtailed when parents expect their children to act according to a narrow set of gender norms. The stronger the parental preferences to have or avoid a child of a particular gender, the more likely those expectations will harm the child.

Only parents with particularly strong prejudice are likely to undertake such an invasive, risky and expensive procedure. As such, the risk to the child’s right to self-realisation and self-determination is even greater. As a result, the need to uphold their rights is even stronger.

* POSTSCRIPT: In April 2017 the National Health and Medical Research Council (NHMRC) subsequently rejected a push to allow parents to choose the gender of their baby in new national guidelines, but left the door open for future changes, suggesting sex selection may be ethical (see pages 38-39).

Tamara Kayali Browne is a Bioethics Lecturer and Academic Coordinator at the Research School of Biology, Australian National University.

Collection and use of gametes from the deceased and dying: ethical guidelines

Below are updated ethical guidelines relating to the collection and use of gametes from the deceased and dying and the posthumous use of stored gametes and embryos. Courtesy of the National Health and Medical Research Council

The possibility that an individual might be conceived following the death of one of their parents is understandably controversial.

This situation might arise via the:
• Use of gametes or embryos collected and stored prior to death of a spouse or partner
• Collection of gametes from a deceased person, or a person who is dying and their subsequent use.

In such situations, clinicians are faced with a number of considerations, including:
• Relevant state or territory legislation
• Respect for the deceased or dying person
• Respect for the desire of the surviving spouse or partner to have a child
• Possible (and unknown) effects on the welfare of the person to be born, having been conceived following a parent’s death
• Possible (and unknown) effects on the welfare of existing children within the family unit who may be affected by that birth.

Collection and storage of gametes from a person who is dying and has the capacity to provide valid consent

Obtain valid consent

Clinics may facilitate the collection of gametes from a person who is dying if the person has the capacity to provide valid consent (see paragraph 4.5) and consents to the storage of gametes and their use for reproductive purposes after their death (see paragraphs 4.6.3-4.6.5).

Collection and storage of gametes from a deceased person or a person who is dying and lacks the capacity to provide valid consent

Obtain valid consent from a spouse or partner

The acceptability of a spouse or partner making decisions regarding the collection of gametes warrants serious ethical consideration because of the enduring consequences of these decisions on any person who would be born and the potential for the spouse or partner to have a conflict of interest (i.e. a grieving spouse or partner may be focussed on their own desire to have a child, rather than the broader implications for the person who would be born, or the wishes of the person who is deceased or dying).

For these reasons, court authority is required before a clinician may facilitate the collection of gametes from a person who is deceased or is dying and lacks the capacity to provide valid consent.

With appropriate legal authority, clinics may facilitate the collection of gametes from a deceased person or a person who is dying and lacks the capacity to provide valid consent if:
• The request to do so has come from the spouse or partner of the deceased or dying person, and not from any other relative
• The gametes are intended for use by the surviving spouse or partner for the purposes of reproduction
• There is some evidence that the dying or deceased person would have supported the posthumous use of their gametes by the surviving partner, or at the very least, there is no evidence that the deceased or dying person had previously expressed that they do not wish for this to occur
• The surviving spouse or partner provides valid consent for the collection and storage of the gametes (see paragraphs 4.5 and 4.6.3-4.6.5)
• The proposed collection and storage has been approved by an appropriate court authority.

Posthumous use of stored gametes or embryos

In accordance with paragraph 4.1.3, before gametes are collected or embryos are created, clinics must ensure that all responsible parties are provided with sufficient information to facilitate an understanding of the options they will have regarding the use, storage and discard of the gametes or embryos, including the potential for posthumous use (see paragraph 4.6.4).

Therefore, following the introduction of these Ethical Guidelines [2017], consent to store gametes and embryos should include the relevant individual’s clearly articulated position on the posthumous use of their stored gametes or embryos. However, for gametes and embryos stored prior to the introduction of these Ethical Guidelines [2017], the relevant individual’s position on the posthumous use of their stored gametes or embryos may be unknown or undocumented.

Respect the wishes of the person for whom the gametes or embryos were stored

Regardless of the relevant individual’s position on the posthumous use of their stored gametes or embryos, there may be a legal impediment to such use in some states or territories and a court order may first be required.

Where permitted by law, clinics may facilitate the posthumous use of stored gametes or embryos to achieve pregnancy, if:
• The deceased person left clearly expressed directions consenting to such use following their death (see

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Posthumous assisted reproduction

Posthumous sperm retrieval is a procedure in which sperm are extracted from a man after being pronounced legally brain dead. There has been longstanding debate over the ethics and legality of the procedure, and on the legal rights of the child and surviving parent if the gametes are used for impregnation.

ETHICS

There are several ethical issues surrounding the extraction and use of gametes from cadavers or patients in a persistent vegetative state. The most debated concern religion, consent, and the rights of the surviving partner and resultant child.

A number of major religions view posthumous sperm retrieval in a negative light, including Roman Catholicism and Judaism. Consent of the donor is a further ethical barrier. Even in jurisdictions where implicit consent is not required, there are occasions in which clinicians have refused to perform the procedure on these grounds. If no proof of consent by the donor can be produced, implied consent (often in the form of prior actions) must be evident for clinicians to proceed with extraction. Sperm retrieval is rarely carried out if there is evidence that the deceased clearly objected to the procedure prior to his death.

If the procedure is performed and results in a birth, there are several issues involving the legal rights of the child and mother. As posthumous insemination can take place months or even years after the father’s death, it may in some cases be difficult to prove paternity, affecting inheritance and even the legal right of the child to marry (due to possible consanguinity between partners).

LEGALITY

A legislative ban on posthumous insemination exists in the Australian states of Victoria and Western Australia, however there has been a small number of court cases in most Australian states in recent years which have granted the partners of deceased men the right to harvest their sperm in order to achieve a pregnancy.

Allow sufficient time before attempting conception and/or pregnancy

Given the enduring consequences of the decision, clinics should not attempt conception or a pregnancy using stored gametes or embryos unless:

- Sufficient time has passed so that grief and related emotions do not interfere with decision-making
- In addition to the requirements outlined in paragraph 4.1, the surviving prospective parent (the spouse or partner) is provided with sufficient information to facilitate an accurate understanding of the potential social, psychological and health implications of the proposed activity for the person who may be born
- An independent body has reviewed the circumstances and supports the proposed use.

Posthumous use of gametes or gonadal tissue collected from a child or young person for the purpose of fertility preservation

Gametes or gonadal tissue collected from a child or young person for the purpose of fertility preservation (see paragraphs 8.4-8.6) can only be used posthumously if the person for whom they were stored reached adulthood before their death and the conditions of paragraphs 8.22-8.23 are satisfied.

For all paragraph references, refer to the complete guidelines which can be downloaded at: www.nhmrc.gov.au/guidelines-publications/e79

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SURROGACY EXPLAINED

Surrogacy arrangements are medically, emotionally, financially and legally complex, according to this guide from Better Health Channel

Summary
- Surrogacy is not a simple alternative to having a child.
- The process of surrogacy and surrounding issues are complex.
- Surrogacy legislation in Australia may vary from state to state.

Surrogacy arrangements are medically, emotionally, financially and legally complex. For some people who previously were unable to have children, including gay couples and women who are unable to carry a pregnancy, surrogacy offers the opportunity to have a child.

The information provided here relates to surrogacy arrangements in Australia. If you are considering undertaking surrogacy elsewhere you may find the information available on the Victorian Assisted Reproductive Treatment Authority’s website helpful.

THE SURROGATE
A surrogate, sometimes also called a gestational carrier, is a woman who conceives, carries and gives birth to a child for another person or couple (intended or commissioning parents). The surrogate agrees to give the child to that person or couple after the birth.

In most parts of Australia, including Victoria, a surrogate cannot be the genetic mother of the child she carries. This means that her egg cannot be used in the surrogacy arrangement. The future child’s mother and father, or a donor, provide the egg and sperm to form an embryo. This embryo is then transferred to the uterus of the surrogate who carries the pregnancy and gives birth. In Australia, only altruistic surrogacy is allowed. This means that it is illegal to pay the surrogate for her role beyond reimbursing her for medical and other reasonable expenses.

REASONS FOR SURROGACY
A surrogacy arrangement may be considered if:
- A woman is unable to become pregnant or carry a pregnancy because she has had a hysterectomy or is missing part of her uterus, ovaries or other parts of the genital tract
- A woman has a health condition that makes pregnancy dangerous
- A couple in a male same-sex relationship wish to have a child using the sperm of one or the other partner
- A single man wishes to have a child using his sperm
- A woman who has frozen embryos in storage dies and her male partner wishes to use the embryos to have a child.

THINGS TO CONSIDER BEFORE ENTERING A SURROGACY ARRANGEMENT
There are many medical, emotional, financial and legal issues to consider when entering a surrogacy arrangement. There are also matters to be aware of once the surrogate gives birth and gives the child to the intended parents.
General information is provided here but for detailed information about all aspects of surrogacy visit the Victorian Assisted Reproductive Treatment Authority (VARTA) website.

**KEY FACTORS FOR A SUCCESSFUL SURROGACY ARRANGEMENT**

Factors that can contribute to a positive surrogacy arrangement include:
- All parties being in good mental and physical health
- Clear and open communication between all parties
- Clear boundaries and mutual understanding of the relationship and interactions between the surrogate and her family and the commissioning parent(s)
- Having realistic expectations about the chance of a successful outcome
- All parties having a good understanding of the medical processes involved
- Being realistic about the timeline (it can take a year or more before embryo transfer occurs)
- Being prepared for the emotional responses and reactions that can occur during the process
- Agreement between parties regarding what is fair and reasonable payment of the surrogate's expenses (including what expenses will be covered)
- Being aware of and prepared for the financial costs involved
- Agreement between parties on how the pregnancy and birth will be managed.

**SURROGACY LEGISLATION IN AUSTRALIA**

All surrogacy arrangements in Australia must be altruistic (where the surrogate does not get paid for acting as a surrogate, other than being reimbursed for medical and other reasonable expenses).

Most Australian states have specific legislation that outlines the requirements for surrogacy. In the absence of legislation, states and territories are required to abide by national ethical guidelines issued by the National Health and Medical Research Council (NHMRC).

Check with your local IVF clinic or legal advisor for the current surrogacy legislation in your state or territory. There is also information available on each state’s legal position on altruistic surrogacy.

**SURROGACY LEGISLATION IN VICTORIA**

Under the Assisted Reproductive Treatment Act 2008, the following requirements apply:

The commissioning parent(s):
- Must be infertile or unable to carry a baby or give birth, or there is a likely medical risk to the mother or baby if pregnancy is carried out

The surrogate:
- Must be at least 25 years old
- Must have previously been pregnant and given birth to a live child
- Must not use her eggs in the surrogacy arrangement.

It is preferred that the surrogate has already completed her family but this is not a legal requirement.

All parties, including the commissioning parent(s) and the surrogate and the surrogate’s partner (if she has one):
- Must undergo a criminal record check and a child protection order check
- Must have received counselling and legal advice.

Some clinics also require the donor involved in the arrangement to comply with these two requirements.

**THE MEDICAL RISKS OF SURROGACY**

There are certain medical risks involved in surrogacy. They are similar to the risks of other assisted reproductive treatment (ART) procedures.

These risks include:
- For the child – if more than one embryo is transferred this increases the risk of multiple birth. Multiple birth is associated with premature birth, low birth weight and health problems for the babies
- For the egg provider – fertility drugs are given to stimulate the ovaries to produce multiple eggs. There is a small risk that these can cause ovarian hyper-stimulation syndrome (OHSS). OHSS is a potentially serious condition which, in very rare cases, can lead to blood clots, kidney failure and death
- For the surrogate – pregnancy and birth are associated with some risks, including development of gestational diabetes and high blood pressure, bleeding, and needing a caesarean section.

For more detail about the risks involved in surrogacy, consult your fertility specialist.

**WHERE TO GET HELP**

- Your doctor
- An IVF clinic in your state or territory
- Victorian Assisted Reproductive Treatment Authority (VARTA), www.varta.org.au
- Surrogacy Australia, www.surrogacyaustralia.org

This page has been produced in consultation with and approved by the Victorian Assisted Reproductive Treatment Authority.

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SURROGACY: ETHICAL GUIDELINES

The latest guidelines on the ethics of surrogacy arrangements from the National Health and Medical Research Council

There is legislation governing surrogacy in all Australian states and in the Australian Capital Territory. All persons involved in surrogacy must ensure that they are familiar with the relevant legislation and operate within the law. For ART activities requested under a surrogacy arrangement, the guidelines provided below should be followed, unless there is a legal impediment to doing so.

Surrogacy arrangements are between the commissioning parent(s) and the surrogate and should be entered into with each party having appropriate legal representation. It is not the role of clinics to provide legal advice to potential surrogates and/or commissioning parents, however, clinics do have an ethical obligation to ensure that a legal arrangement is in place, before proceeding with the required ART treatment.

COMMERCIAL SURROGACY

Commercial surrogacy, where the surrogate receives financial compensation above and beyond expenses associated with the surrogacy procedure and pregnancy, is ethically unacceptable because it raises concerns about the commodification and exploitation of the surrogate, the commissioning parent(s) and any person born as a result of the surrogacy arrangement.

Do not practise, promote or recommend commercial surrogacy

Clinics and clinicians must not practise, promote or recommend commercial surrogacy, nor enter into contractual arrangements with commercial surrogacy providers (see paragraphs 4.2.7-4.2.10).

It is ethically unacceptable to provide, or offer to provide, direct or indirect inducements for surrogacy services.

ALTRUISTIC SURROGACY

The term ‘altruistic surrogacy’ refers to an arrangement where the surrogate receives no financial compensation or inducement, beyond the reimbursement of verifiable out-of-pocket expenses directly associated with the surrogacy procedure, pregnancy or birth.

Confirm that the surrogacy arrangement is ethically acceptable

Clinics must not facilitate ART treatment under a surrogacy arrangement if there are concerns about whether the arrangement is ethical and/or legal. This includes the arrangement for reimbursement of verifiable out-of-pocket expenses.

Arrangements for any reimbursement of verifiable out-of-pocket expenses should be between the commissioning parent(s) and the surrogate and each party should be encouraged to seek legal advice before reimbursements are given or received to ensure compliance with relevant state or territory legislation.
It is reasonable for the commissioning parent(s) to reimburse a surrogate’s verifiable out-of-pocket expenses directly associated with the procedure or pregnancy, which may include:

- Medical and counselling costs, before, during, and after the pregnancy or birth
- Travel and accommodation costs within Australia
- Loss of earnings\(^{12}\)
- Insurance
- Child care costs when needed to allow for attendance at appointments and procedures related to the surrogacy arrangement
- Legal advice.

Note: There may be state or territory legislation that regulates what out-of-pocket expenses can and cannot be reimbursed under a surrogacy arrangement.

In an effort to reduce the potential for harm for the surrogate, clinics must:

- Ensure that the potential surrogate is medically and psychologically suitable to undertake the requested ART activity
- Perform only a single embryo transfer.

**INFORMATION GIVING, COUNSELLING AND CONSENT**

*Ensure the provision of relevant information and counselling*

Clinics must ensure that sufficient information about the ART treatment is provided to meet the requirements outlined in paragraphs 4.1 and 4.2.1-4.2.2.

Individuals and couples involved in an altruistic surrogacy arrangement must undergo counselling before, during and after ART treatment because of the complex nature of the issues involved.

In addition to the requirements outlined in paragraph 4.3, counselling must include a detailed discussion of the following:

- The potential long-term psychosocial implications for each individual and each family involved, including the person who may be born and any other child within the family unit(s) who may be affected by that birth
- The reason(s) why the potential surrogate wants to become involved in a surrogacy program
- The surrogate’s right to make informed decisions about their own medical care, including before and during the pregnancy and birth
- The possibility that the surrogate may need medical and/or psychological assistance following the birth and that the pregnancy may affect the surrogate’s own health
- The potential significance of the gestational connection and the right of persons born to know the details of their birth, and the benefits of early disclosure
- The possibility that persons born may learn about their birth from other sources (for example from

other family members) and may independently access information about their birth
- The possibility that persons born may attempt to make contact with the surrogate in the future.

Where a potential surrogate has a spouse or partner, the clinic should encourage the potential surrogate to include their spouse or partner in the discussions about the potential surrogacy arrangement, acknowledging the benefits of open disclosure and the potential impact of the decision on the spouse or partner, the couple’s relationship and/or the family unit.

Clinics must not proceed with ART treatment to facilitate an altruistic surrogacy arrangement without first being satisfied that a legal arrangement is in place.

**Obtain consent from all relevant parties**

Clinics must obtain valid consent, in accordance with the requirements outlined in paragraph 4.5, from the relevant party(ies) for each specific treatment or procedure required. Clinics are not responsible for obtaining consent for the surrogacy arrangement itself as this is a legal arrangement between the commissioning parent(s) and the intended surrogate.

Clinics must respect the autonomy of surrogates to make informed decisions about their own medical care.

All relevant parties should be allowed adequate time for consideration of information and the complex issues involved before consent is provided.

**EXCHANGE OF INFORMATION BETWEEN ALL RELEVANT PARTIES**

There should be voluntary exchange of information between persons born via a surrogate, the surrogate and the commissioning parent(s), with the valid consent of all parties. The guidelines in this section specify the minimum level of information that should be accessible to all relevant parties.

**Provide persons born with information about the surrogate**

Persons born via a surrogacy arrangement are entitled to know the details of their birth and to have the opportunity to determine the significance of their gestational connection with the surrogate, in accordance with the principles outlined in paragraphs 5.6, 5.9 and 5.10.

**NOTES**

12. Surrogates who access paid leave during the pregnancy and birth cannot be reimbursed for loss of earnings. Loss of earnings can be demonstrated by the surrogate providing payslips verifying that unpaid leave was taken.

For all paragraph references, refer to the complete guidelines which can be downloaded at: [www.nhmrc.gov.au/guidelines-publications/e79](http://www.nhmrc.gov.au/guidelines-publications/e79)

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SURROGACY BOOMING IN AUSTRALIA DESPITE LEGAL ISSUES

Fertility professionals and advocacy groups say surrogacy is experiencing a quiet boom in Australia after several Asian countries banned foreigners from paying women to carry babies for them.

Following is an ABC ‘Background Briefing’ program radio report by Hagar Cohen

Dr Glenn Stirling, the medical director of Brisbane IVF clinic Life Fertility, says the number of patients they see has risen dramatically, and that new patients arrive almost daily.

“We’d be doing at least, two or three couples a week that are doing surrogacy,” he told Background Briefing.

In Australia it’s illegal to get paid to be a surrogate, but in practice it’s not that simple. Finding a surrogate can be hard work for couples, and the journey is full of risks, according to Sam Everingham from the international advocacy and support group Families Through Surrogacy.

“It’s a very much do-it-yourself model in Australia in terms of finding a surrogate and managing the journey,” he said.

“There’s lots of hush-hush around finding a surrogate. It’s a really tough thing to manage and pull all the pieces together for a couple who just wants to have a family.”

Couples often look for surrogates online, on websites that resemble online dating services. Background Briefing spoke to several women who advertise as surrogates and said they had been offered money ‘on the sly’. One surrogate said she was offered close to $30,000.

Angie and Jason’s story

Angie and Jason had been married for two years when Angie was diagnosed with breast cancer. She responded well to treatment, but the medication left her unable to carry a baby. The couple were desperate to have a family, and began searching for a surrogate online.

“It was tricky because it was something that we’d never done before, never embarked on before,” said Angie.

“How do you choose someone from a website?”

Eventually Angie and Jason settled on a woman, Karen, whose name has been changed for legal reasons, to be their surrogate. After dozens of emails, they met face-to-face.

“We may not have clicked in a friendship sense but I certainly appreciated her for what she had done,” Angie said.

“I just think: what a wonderful thing to even offer without knowing me.”

Breaking the law

However, it wasn’t long before the subject of money came up and things became awkward.

“We’re very generous people,” said Angie. “For someone that is willing to do something so special for us, we would be happy to give them anything.

“What I found uncomfortable was that the husband actually went to my husband and asked for money.”

Karen did not deny this claim, but told Background Briefing she chose to leave the financial transactions to her husband.

When Karen’s husband started asking for money, Angie and Jason didn’t say no.

“At this time he took over our financial life, and that was it.”

There have been no prosecutions under Australian surrogacy laws in the last 10 years, but it’s clear they are being flouted. The reasons are complex and raise deep ethical questions for all parties.

Karen said she felt uncomfortable about the legality of the transaction and she knew that it was illegal in Australia, which was why she told her husband not to involve her. But her motivation was always altruistic, she said, and Angie agrees that the offer was genuine and heartfelt.

Angie’s husband is a surgeon, and Karen said that she and her husband felt he could afford what they had asked for.

“We were doing this for them because they couldn’t have kids, so this was something that they could do for us,” she said.

Calls for legal reform

There have been no prosecutions under Australian surrogacy laws in the last 10 years, but it’s clear they are being flouted. The reasons are complex and raise deep ethical questions for all parties.

But now that India, Cambodia and Thailand have closed shop, surrogacy advocates like Sam Everingham say it’s time for the government to change the rules when it comes to surrogacy.

“Many of the surrogate relationships go bad in the first few months or later in an arrangement,” he said.

“Everybody’s left to their own devices when it comes to what is or isn’t reimbursed, and what is or isn’t done in terms of using a surrogate’s eggs, or using the mother’s eggs.

“It becomes quite tough for people to negotiate this when there aren’t professionals to help them along the way.”

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CAN SURROGACY BE ETHICAL?

Children are not commodities to be bought and sold, and women are not containers to be used as baby makers and then discarded. Let’s stop surrogacy now, argues Renate Klein

Ever since the upsetting story of Baby Gammy came to light – a baby boy abandoned in Thailand by his commissioning parents because he was born with Down Syndrome – the pro-surrogacy lobby in Australia has been very busy. Their argument, drummed into the ears of politicians and repeated by a largely pro-surrogacy media, is simple: make commercial surrogacy available in Australia and, as pro-surrogacy lobbyist Sam Everingham writes, it will be “ethical.”

Ethicist Bernadette Tobin disagrees: “If we thought that by legalising commercial surrogacy in Australia we could give surrogacy an ethically sound underpinning we would be deceiving ourselves.”

So who is right? Will a regulated commercial surrogacy industry do away with the exploitation of women and the harms to children? Or is this a bridge too far for Australia?

The answer from the just released global campaign Stop Surrogacy Now is a resounding ‘No!’ Whether for love or for money, the fact remains that surrogacy is the commissioning of a baby by affluent heterosexual or homosexual couples using a woman of usually lower economic standing as a baby incubator – a breeder.

Surrogacy is dangerous. The surrogate mother – often callously called a ‘gestational carrier’ – is required to submit to a three to four week drug regimen in order to prepare her womb for pregnancy. These drugs can make her very sick, possibly with long-term effects.

In addition to the battery of prenatal tests she must undergo, there is also the risk of pregnancy complications – including ovarian torsion, ovarian cysts, chronic pelvic pain, premature menopause, loss of fertility, reproductive cancers, blood clots, kidney disease, stroke and, in some cases, death.

Women who become pregnant with eggs from another woman are at higher risk for pre-eclampsia and high blood pressure. The health risks are even worse for women who donate eggs, with the increased prevalence of Ovarian Hyperstimulation Syndrome (OHSS) and ovarian cancer many years later. (I'd commend the eye-opening documentary Eggsploitation for stories of women hurt by egg donation.)

What is demanded of a surrogate mother is the manufacture of a perfect baby – this is eugenics in action. If the product is deemed flawed, she must consent to an abortion, selective reduction or foetal surgery in the womb.

At birth, the baby is most often removed by caesarean section, with the birth mother frequently not given the chance to see her child. What is left is a woman with milk in her breasts but nothing in her arms. The attention that for nine months had been lavished on the woman – who is called a hero, an angel, a giver of life by the commissioning couple in an altruistic surrogacy arrangement – in the great majority of cases disappears very quickly. Once the job is done, and the baby handed over, the birth mother, in whose body remain cells of her child for decades, is left to her own devices.

Many surrogate mothers say it was their ‘choice’. What sort of choice is it when one cannot predict the effect of the drugs, the pregnancy and the birth on the woman? And what sort of choice is it for the baby? Did she or he really ‘choose’ to be separated from their birth mother?

I suggest we call out this cruel business for what it is: trafficking in babies; reproductive slavery; a violation of the human rights of both the birth mother and her offspring.

The group of like-minded women and men from around the globe who have just started the campaign Stop Surrogacy Now, are calling on governments to put an end to this exploitative industry “in order to protect women and children worldwide and to end efforts that would seek to legitimise and normalise trafficking children”. Less than five days since the campaign was launched, more than 3,000 people have signed.
Compared to the United States, India, Ukraine and Mexico, Australia is still in the fortunate position of prohibiting commercial surrogacy, and altruistic surrogacy is well regulated in all states except the Northern Territory which has no laws. Moreover, the actual number of babies born through altruistic surrogacy arrangements is negligible.

The National Perinatal Epidemiology and Statistics Unit (NPESU) publishes yearly reports that include data supplied by 37 fertility centres in Australia and New Zealand. The latest available 2011 and 2012 reports state:

“There were 177 gestational surrogacy cycles in 2011, including 131 gestational carrier cycles and 46 cycles undertaken by intended parents. Among the 131 gestational carrier cycles, 34 (26.0%) resulted in a clinical pregnancy and 21 (16.0%) resulted in a delivery. Of all 23 babies born to gestational carriers (21 singletons and one set of twins), 22 were liveborn and one singleton’s outcome was unknown.”

In other words, in 2011 there were 23 babies born from surrogacy in Australia. It is noteworthy that this represented a mere success rate of 16%. In 2012, there were 4 fewer babies born, representing a success rate of only 15.7%. A very small number of babies are born from altruistic surrogacy arrangements in Australia and New Zealand – not exactly the thousands of cases that pro-surrogacy propaganda would lead us to believe.

Would this change with the advent of commercial surrogacy in Australia? Perhaps unemployed women might think that $30-40,000 is worth the risk and discomfort of pregnancy; or that they could always resort to selling their eggs four, five, six times for $5,000 per batch. For the commissioning parents – euphemistically called ‘intended parents’ – the price would be much higher because the surrogacy industry’s lawyers, counsellors, surrogacy brokers and, last but not least, the IVF clinics who delight in this new business opportunity, would all demand their share. The government too might be eager to collect taxes from the various players involved in commercial surrogacy – surrogates and egg donors included.

A $100,000 price tag for a baby can easily be countenanced. And because of the high failure rates, repeat pregnancies make the procedure harder for the birth mother and more expensive for the buyers.

So do Australians really want an expanded fertility industry? I would hope that cool heads prevail and commercial surrogacy is not introduced in this country.

It was only in 2013 that then Prime Minister Julia Gillard delivered a heartfelt apology to mothers and their children who were forcibly removed for adoption in the 1960s and ‘70s. We would do well to remember the trauma and depth of feeling this apology elicited in discussions about surrogacy, which is the intentional removal of a child from his or her birth mother. Do we really want to find ourselves in the position forty years hence of having to deliver yet another apology to children who were harmed by surrogacy.

The first order of business would be to lower the demand for all forms of surrogacy, including so-called ‘altruistic surrogacy’. There is no right to a child. A deep desire for a child does not justify the narcissistic exploitation of another woman’s body and soul, as well as her health – two women, in fact, if an egg donor is also needed.

People who long for children should be encouraged to look to permanent care arrangements for the thousands of existing children in Australia who need a loving home. Having a baby with your own genes is not a prerequisite: it is love and dedication that counts.

Children are not commodities to be bought and sold, and women are not containers to be used as baby makers and then discarded. Let’s stop surrogacy now.

Renate Klein is a biologist, social scientist and long-term women’s health researcher. She was Associate Professor at Deakin University until 2006 and is a publisher at Spinifex Press.

WORKSHEETS AND ACTIVITIES

The Exploring Issues section comprises a range of ready-to-use worksheets featuring activities which relate to facts and views raised in this book.

The exercises presented in these worksheets are suitable for use by students at middle secondary school level and beyond. Some of the activities may be explored either individually or as a group.

As the information in this book is compiled from a number of different sources, readers are prompted to consider the origin of the text and to critically evaluate the questions presented.

Is the information cited from a primary or secondary source? Are you being presented with facts or opinions?

Is there any evidence of a particular bias or agenda? What are your own views after having explored the issues?

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Brainstorm, individually or as a group, to find out what you know about reproductive ethics.

1. What is assisted reproductive technology, and what are some examples?

2. What is a surrogate? List a few examples of why people may consider a surrogacy arrangement?

3. What is commercial surrogacy, and is it legal in any state or territory in Australia?

4. What does the term ‘social egg freezing’ refer to, and what are the reasons for the growth in its popularity among women of reproductive age?

5. Under Australian ethical guidelines, all egg and sperm donors are required to be ‘open donors’. Explain what the term ‘open donor’ means.
Complete the following activities on a separate sheet of paper if more space is required.

Form into groups of two or more people to discuss the ethical considerations for each of the following topics. Use the spaces below to compile your answers. Include an explanation of the topic with examples of any potential ethical concerns you may have. Share your findings with other groups in the class.

**AGEING AND ASSISTED REPRODUCTION**

________________________________________________________________________

________________________________________________________________________

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**POSTHUMOUS ASSISTED REPRODUCTION**

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________________________________________________________________________

**IVF EMBRYO DESTRUCTION**

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________________________________________________________________________

**‘FAMILY BALANCING’ SEX SELECTION**

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
Complete the following multiple choice questionnaire by circling or matching your preferred responses. The answers are at the end of this page.

1. Approximately what temperature is liquid nitrogen when used for storing frozen eggs and sperm?
   a. 0 degrees Celsius  
   b. minus 16.9 degrees Celsius  
   c. minus 19.6 degrees Celsius  
   d. minus 69 degrees Celsius  
   e. minus 96 degrees Celsius  
   f. minus 169 degrees Celsius  
   g. minus 196 degrees Celsius

2. Approximately how many eggs is a woman generally born with?
   a. 100  
   b. 1,000  
   c. 10,000  
   d. 100,000  
   e. 110,000  
   f. 1 million  
   g. 100 million

3. Assisted reproductive technology covers a wide spectrum of technologies. Which of the following techniques are **not** ART procedures:
   a. ovulation induction  
   b. intrauterine insemination  
   c. cesarean section  
   d. donor insemination  
   e. in vitro fertilisation  
   f. embryo transfer  
   g. intracytoplasmic sperm injection  
   h. endometriosis  
   i. gamete intrafallopian transfer  
   j. preimplantation genetic diagnosis

4. In what year was anonymous donation prohibited throughout Australia?
   a. 1965  
   b. 1975  
   c. 1985  
   d. 1995  
   e. 2005  
   f. 2015

5. Most IVF clinics in Australia do not offer treatment to women over what age?
   a. 28 years  
   b. 33 years  
   c. 38 years  
   d. 43 years  
   e. 48 years  
   f. 53 years

**MULTIPLE CHOICE ANSWERS**

MULTIPLE CHOICE ANSWERS

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Reproductive Ethics

Issues in Society | Volume 442
In Australia, laws are now in place to ensure that when eggs and sperm are frozen, they need to be kept in liquid nitrogen, which is about minus 196 degrees Celsius. (p.12)

More than 120,000 human embryos are now in storage across Australia (Millbank, J, Frozen in time: clarifying laws on IVF embryo use and destruction). (p.18)

Mandatory time limits in some states compel destruction of stored embryos after 10 years (ibid). (p.18)

“Snow babies” is the nickname given to the leftover frozen embryos after a woman goes through IVF (Right to Life NSW, IVF/ART). (p.19)

At present, government support for infertility treatment is approximately A$240 million a year (Savulescu, J, and Tremellen, K, Ideas for Australia: Rethinking funding and priorities in IVF – should the state pay for people to have babies?). (p.21)

Annual figures state that more than 13,000 babies are born through IVF treatment, at an average cost to government of A$19,000 per child (ibid). (p.21)

In Australia, laws are now in place to ensure that when children born via donor conception turn 18, they have a right to access information about the identity of their donor. However, research suggests that most heterosexual parents who conceive via donor conception never tell their children (Power, J, Secrets and lies: why donor-conceived children need to know their origins). (p.26)

Donor insemination became widely available in the 1980s with the emergence of sperm freezing technology (ibid). (p.26).

Women are generally born with about a million eggs. Yet, women with reproductive problems or “older” women (over the age of 40) often cannot conceive with their own eggs (Nash, M, Women who donate their eggs deserve compensation – here’s why). (p.28)

A study found if a woman were to freeze her eggs at age 25 and return to them at 40, it would be less cost-effective than undertaking ART at the age of 40 if difficulties conceiving were encountered (Scott, K, Egg freezing: more women are putting motherhood on ice, but is it making us complacent about fertility?). (p.33)

In Australia, the median age of mothers has increased from 25.4 years in 1971 to 30.8 in 2013 (Houlahan, L, Egg freezing won’t insure women against infertility or help break the glass ceiling). (p.36)

As at 2017, only four Australian states have legislation regulating the clinical practice of ART, with sex selection for non-medical purposes prohibited in two Australian states (NHMRC, Ethical guidelines on the use of assisted reproductive technology in clinical practice and research). (p.39)

Gender selection for family balancing is already widely allowed overseas and accessed by Australians in the US and Asia (Aubusson, K, National guidelines oppose push to allow parents to choose sex of IVF babies). (p.39)

In most parts of Australia, including Victoria, a surrogate cannot be the genetic mother of the child she carries. (p.46)

Individuals and couples involved in an altruistic surrogacy arrangement must undergo counselling before, during and after ART treatment because of the complex nature of the issues involved (NHMRC, Ethical guidelines on the use of assisted reproductive technology in clinical practice and research). (p.49)

There have been no prosecutions under Australian surrogacy laws in the last 10 years (Cohen, H, Surrogacy booming in Australia despite legal issues). (p.50)

Women who become pregnant with eggs from another woman are at higher risk for pre-eclampsia and high blood pressure (Klein, R, Can Surrogacy be Ethical?). (p.52)

In 2011 there were 23 babies born from surrogacy in Australia. This represented a mere success rate of 16% (ibid). (p.52)
Artificial insemination
Placing sperm into the reproductive tract of a woman.

Assisted reproductive technology
ART is the application of laboratory or clinical technology to sperm, eggs and/or embryos (fertilised eggs) to assist the conception of a baby. Methods include in vitro fertilisation (IVF), embryo transfer (ET) and gamete intrafallopian transfer (GIFT).

Bioethics
The study of ethical issues emerging from advances in biology and medicine.

Conception
When a sperm fertilises an egg to form an embryo.

Donor insemination
Artificial insemination with donor sperm.

Donor conception
A conception that takes place through the use of donated gametes (egg, sperm or embryo). People born through the use of donor treatment are referred to as donor-conceived or donor offspring.

Embryo
An egg that has been fertilised by a sperm and has started to divide.

Embryo transfer
Procedure by which the embryo (usually aged 1 to 2 days but may be developed to the blastocyst stage) is placed into the uterus or the fallopian tube after IVF.

Fertilisation
When a sperm enters the egg to form an embryo.

Foetus
An unborn individual in the later stages of development – in humans, from 7-8 weeks after fertilisation until birth.

Gametes
An oocyte (egg) or sperm.

Gamete intrafallopian tube transfer
A medical procedure of transferring oocyte/s (egg/s) and sperm to the body of a woman.

Infertile
Inability to conceive after a year of unprotected intercourse in women under 35 or after 6 months in women over 35, or the inability to carry a pregnancy to term.

Insemination
Bringing together of sperm and egg.

In vitro fertilisation
IVF is an infertility treatment in which eggs and sperm are placed in vitro (meaning ‘in glass’) for fertilisation to occur outside the body.

Intracytoplasmic sperm injection
ICSI is a procedure used for severe forms of male infertility, during which a single sperm is injected into the egg.

Oocyte
The female reproductive cell (egg).

Oocyte retrieval
Procedure undertaken in an attempt to collect eggs from a woman.

Ovary
One of two reproductive organs in a female that produces eggs and secretes estrogen and progesterone.

Ovulation
Process where the follicle opens to release the egg from the ovary. Occurs in response to luteinising hormone.

Pregnant
State of carrying a developing foetus within the body.

Preimplantation genetic diagnosis
PGD is an embryo screening technique used to identify embryos with chromosome abnormalities. A single cell is removed from an early-stage embryo and checked for genetic disorders using molecular techniques. Only the healthy embryos are transferred to the woman’s body.

Reproductive ethics
Ethics concerning human reproduction and beginning-of-life issues such as contraception, assisted reproductive technologies (e.g. in vitro fertilization, zygote intrafallopian transfer, intracytoplasmic sperm injection), surrogacy and preimplantation genetic diagnosis.

Sex selection
The selection and transfer of an embryo on the basis of genetic sex.

Sperm
The male sex cells, produced in the testes.

Sperm donor
When a man donates sperm through a fertility/IVF clinic for the purpose of reproduction.

Surrogacy
Arrangement whereby a woman carries the child for a couple with the intention that the child is handed over to the couple after birth.

Surrogate
A surrogate mother is someone who conceives, carries and gives birth to a child for another person or couple (intended parents or commissioning parents). The surrogate mother agrees to give the child to that person or couple after the birth.

Zygote
A fertilised egg up to the time it first divides.

Zygote intrafallopian transfer
ZIFT occurs when the egg is fertilised by the man’s sperm in a laboratory, resulting in a zygote (or fertilised egg) which is then placed into a woman’s fallopian tube.
Websites with further information on the topic

Access Australia – Australia’s National Infertility Network  www.access.org.au
Australian Medical Association  ama.com.au
Better Health Channel  www.betterhealth.vic.gov.au
Bub Hub  www.bubhub.com.au
Fertility Society of Australia  www.fertilitysociety.com.au
National Health and Medical Research Council  www.nhmrc.gov.au
Pregnancy Birth and Baby (healthdirect Australia)  www.pregnancybirthbaby.org.au
The Conversation  www.theconversation.com/au
Victorian Assisted Reproductive Treatment Authority  www.varta.org.au
Your Fertility (Fertility Coalition)  www.yourfertility.org.au

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THANK YOU
• The Conversation
• National Health and Medical Research Council
• Victorian Assisted Reproductive Treatment Authority.

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