

Life after death: regulating posthumous reproduction

Regulating posthumous reproduction raises a myriad of bioethical, social, legal and administrative issues, all of which are important in any drafting of regulation on the topic. Very few jurisdictions researched in this howtoregulate article had complete legislation that regulated well the issues that arise from the retrieval of reproductive tissue postmortem and subsequent posthumous use of such tissue. In some jurisdictions researched, the applicable legislation was somewhat dated in comparison to the advances made in artificial reproductive technology (ART) treatment that push the boundaries of the legal parent. This howtoregulate article explores how jurisdictions have regulated posthumous reproduction, citing examples of regulation where they existed and proposing areas requiring clarity.

A. Questions of substance for regulating posthumous reproduction

I. Requests for the postmortem retrieval and/or posthumous use of sperm, eggs or embryos

1. Irrespective of a jurisdiction's regulation concerning marriage, same-sex marriage and same-sex reproduction the following scenarios for posthumous reproduction are possible:

- Opposite-sex couple, use their own sperm and eggs (collectively referred to as gametes) to create an embryo, and the female of the couple is implanted with the embryo or another female (surrogate) is implanted with this embryo;
- Opposite-sex couple, use donated gametes or a mix of donated gametes with their own gametes, to create an embryo, and the female of the couple is implanted with the embryo or a surrogate;
- Same-sex female couple, use either of the women's eggs and donated sperm to create an embryo, and one of the women are implanted with the embryo or a surrogate;
- Same-sex female couple, use donated gametes to create an embryo, and either of the women are implanted with the embryo or a surrogate;
- Same-sex male couple, use either of the men's sperm and donated eggs to create an embryo, and a surrogate is implanted with this embryo;
- Same-sex male couple, use donated gametes to create an embryo, and a surrogate is implanted with this embryo; and
- Parents of a deceased daughter/son, use the daughter/son's gametes and the gametes of a donor to create an embryo, and a surrogate is implanted with this embryo.

In regulating posthumous use of gametes and embryos, the regulator should consider these scenarios that lead to requests for the use of gametes or embryos. Ultimately, answering who may request the retrieval and/or use of gametes posthumously is a policy issue that Parliament and society in general should debate. Spouses and partners (collectively partner) are a logical step but should there be legal recognition for parents or other relatives? In some societies grandparents occupy an important role in the family and many grandparents have been made the legal parents of grandchildren.¹

II. What kind of consent?

2. Consent can be expressed in writing, in front of witnesses orally where written consent is not possible or implied through evidence. Looking at legislation dealing with organ and tissue donation (collectively tissue donation), see the howtoregulate article Transplantation of organs and human tissues, two systems can be distinguished worldwide:

- The "opt-in" system, where the consent of a donor is explicitly obtained, usually via a national register system of donors; or
- The "opt-out" system, operates on presumed consent for organ donation unless there is evidence to the contrary, such as registering on a national non-donors register.

In "opt-in" jurisdictions, requests for posthumous gamete use can be frustrated where the deceased is not registered as a donor. In a situation of unexpected death of a partner, where evidence exists the couple were planning to have children together but the deceased was not on the tissue donor register is problematic, particularly so where individuals are permitted to use donated gametes to create a child alone. It is also problematic where a deceased partner was on

the non-donor registry, having not considered gamete retrieval postmortem, and evidence exists s/he intended to have children.

3. Jurisdictions that have case law from partners seeking to retrieve the gametes from their deceased partners, operate “opt-in” systems. It has been suggested “that since the majority of requests for postmortem gamete retrieval occur when there is a sudden and unexpected death, 'it is essential to consider whether the legal equation of lack of consent with refusal of consent is justified'.”² This reflects the importance of clear regulations for the postmortem retrieval and posthumous use of gametes or embryos, as being distinguished from general tissue donation. Gamete retrieval for the purposes of posthumous reproduction is a unique situation that requires specific regulation outside of tissue donation regulation.

III. Time period for use of stored gametes or embryos

4. Each jurisdiction operates a legally-prescribed period for stored gametes or embryos, which can be anything from five years to fifteen. For donated gametes the period of storage and eventual use is not problematic because the donor is not considered the legal parent of any resulting child and so checks on the mortality of donors is not regulated per se. However, in the case of posthumous gamete or embryo use, if the legally-prescribed period is fifteen years, it is conceivable that the deceased's gametes/embryos could be used to create a child fifteen years later. The period for using gametes/embryos posthumously is relevant for the purpose of concluding the estate of the deceased, deciding the legal parent and eligibility to social security. For example, most jurisdictions have time periods for when a deceased's estate should be concluded or when challenges to a will may be made. If the deceased was receiving a social security entitlement some of these may be transferred to a surviving partner or children. In regulating posthumous gamete/embryo use such issues should be clarified in the regulation.

IV. Best interests of the child

5. Regulations reviewed in the development of this howtoregulate article required the consideration of the best interests of the child, as too did case law. Usually an examination of the best interests of the child takes place when a child exists and its environment can be observed. However, in cases of posthumous reproduction the child does not yet exist and so any calculus about the harm a future child may have by being brought into the world without its biological mother or father is problematic. Any harm calculation would compare not existing with the presumed familial, social and economic harm from existing. Noting that some jurisdictions permit individuals to use ART, it appears unreasonable to prohibit a surviving partner from using the gametes of their deceased partner. Courts have struggled with deciding the best interests of the child in requests for either the postmortem retrieval of gametes or their subsequent use, but recent judgements seem to rely on evidence about the character of parent that will raise the child, family support and general financial and emotional support.³

V. Cross-border issues

6. It was reported in 2018 that a wealthy British couple bypassed UK laws in 2014 by posthumously removing, storing and transferring the sperm of their son who had died suddenly in a motorbike accident.⁴ The sperm was transferred to a clinic in California where the doctor was requested to use gender selection so that a grandson could be created, using donor eggs and a surrogate. The grandson was born in 2015 and brought back to the UK by his grandparents following the completion of the legal parent administration. Parliament and regulators will need to consider carefully its approach to cross-border ART and enforcement, particularly in a jurisdiction like the UK, which regulates for a strict approval process for the transfer of reproductive tissue outside its borders. Noting that couples can have multiple nationalities and are mobile, any regulatory framework for posthumous reproduction will need to provide for:

- the transfer across borders of reproductive tissue;
- legal parent administration for children born outside of the jurisdiction using posthumous reproductive tissue; and

- best interests of the child brought back into the jurisdiction.

B. International or supra-national framework

The howtoregulate article Transplantation of organs and human tissues provides an overview of the international guidelines and international or supra-national law concerning donation and transplantation of human organs, tissue and cells. However, there is no specific international framework that governs posthumous use of gametes/embryos or the ART required for such reproduction to occur posthumously.

I. World Health Organisation (WHO)

1. The WHO Guiding principles on human cell, tissue and organ transplantation contains eleven principles to govern the domain of transplantation, of which consent of the donor is central. The Guiding principles do not apply to the transplantation of gametes, ovarian or testicular tissues, or embryos for reproductive purposes. Although the WHO is involved in sexual and reproductive health, its focus has not been on ART necessary for posthumous reproduction. Nevertheless it has produced, along with a consortium of reproduction advocacy groups, a Glossary on ART Terminology.

II. International law: reproductive rights

2. General provisions in international law recognise reproductive rights as a human right, such as the right to privacy and family life in Article 17(1) of the International Covenant on Civil and Political Rights (ICCPR) and Article 8(1) of the European Convention for the Protection of Human Rights and Fundamental Freedoms (ECHR). Specific provisions that recognise reproductive rights include the right of individuals to found a family, expressed in:

Article 16 of the Universal Declaration of Human Rights;

Article 23(2) of the ICCPR;

Article 18 of the African Charter on Human and Peoples' Rights;

Article 12 of the ECHR; and

Article 16(1) of the Convention on the Elimination of All Forms of Discrimination Against Women.

The European Court of Human Rights has considered cases concerning reproductive rights, and found that the notion of private life within the meaning of Article 8 also applied both to decisions to become and not to become a parent.⁵ Although reproductive rights have been recognised at the international level, no jurisdiction has recognised that such a right flows to enable posthumous reproduction.

III. International law: legal parentage

3. Regulating posthumous reproduction raises legal questions around legal parentage because once gametes have been extracted and preserved, fertilisation and implantation may not occur for some time. This raises issues in several jurisdictions because a genetic parent may not be recognised as a child's legal parent following a period of time after death. The purpose of a legal cut-off for parentage concerns legal certainty around inheritance and eligibility to social security. Legal parentage is further complicated by the use of cross-border surrogacy arrangements. Such uncertainty resulting from changing family patterns and advances in ART has prompted the Permanent Bureau of the Hague Conference on Private International Law to study the private international law issues being encountered in relation to the legal parentage of children, as well as the international surrogacy arrangements. The absence of uniform private international law rules on legal parentage increasingly leads to limping parentage across borders and can create significant problems for children and families. The Hague Conference has met each year since 2014 and agreed at its meeting in March 2018 that it should hold two further meetings to:

(a) deepen the discussion regarding uniform applicable law rules for parentage;

(b) further analyse the possibility of recognising or accepting foreign public documents which record legal parentage;

- (c) refining possible provisions on the recognition of foreign judicial decisions; and
- (d) focus on international surrogacy arrangements to determine need for additional rules and safeguards.

IV. European Union (EU)

4. The European Union Tissue and Cells Directives (EUTCD) set out to establish a harmonised approach to the regulation of tissues and cells across Europe. The Directives set a benchmark for the standards that must be met when carrying out any activity involving tissues and cells for human application (patient treatment), including in ART. The Directives also require that systems are put in place to ensure that all tissues and cells used in human application are traceable from donor to recipient. The EUTCD is made up of three Directives, the parent Directive (2004/23/EC) which provides the framework legislation and two technical directives (2006/17/EC and 2006/86/EC), which provide the detailed requirements of the EUTCD.

5. Although these directives are silent on posthumous reproduction specifically, it is clear that consent must be proven for all tissues and cells, and all adverse reactions and events must be reported.

V. European Society of Human Reproduction and Embryology (ESHRE)

6. The ESHRE is a scientific society that promotes interest in, and understanding of, reproductive biology and medicine. It collaborates globally and advocates universal improvement in scientific research and harmonisation in clinical practice. The ESHRE has a Task Force Ethics & Law that produces ethical statements on a specific moral issue in the practice of ART. The Task Force has specifically considered posthumous assisted reproduction (Taskforce 11), which concludes:

“Posthumous reproduction is a highly controversial issue. This is partly due to the absence of empirical data on the psychosocial development of children born after this procedure and due to differences in appreciation of the parental project. After careful considerations of the ethical issues, all members of the Task Force accept posthumous reproduction in the context of the initial parental project. If posthumous reproduction is applied in that context, they recommend the following points:

- (i) Written consent should have been given by the deceased person before the use of the gametes or embryos. Consent should be obtained at the time of storage or before the start of the in vitro fertilisation (IVF) cycle.
- (ii) Thorough counselling of the surviving partner during the decision-making period is necessary.
- (iii) A minimum waiting period of 1 year after the death should be imposed before treatment can be started.”

The ESHRE have a small summary on the status of posthumous reproduction in the Member States of the EU in its Comparative Analysis of Medically Assisted Reproduction in the EU: Regulation and Technologies.

C. National regulations

The national regulations researched for this howtoregulate article are broadly organised in the following ways:

- Tissue donation regulation, as a basis for retrieval of gametes;
- Assisted reproduction regulation generally or specifically, such as IVF regulation;
- Legal parentage, such as birth certificates, social security entitlements or inheritance regulation; or
- Specific pieces of regulation such as embryo protection (eg. Germany) or bioethics (eg. France).

I. Posthumous reproduction prohibited by regulation

1. Quite a number of jurisdictions have considered the issue of posthumous reproduction and have prohibited the use of gametes/embryos from the deceased. For example the **German** Embryo Protection Law (Embryonenschutzgesetz–EschG) explicitly forbids the use of gametes of a dead person for artificial insemination, by punishing by up to 3 years or a fine to the medical practitioner that performs the procedure.⁶ However, where the sperm has already been introduced into the egg (a zygote, the stage before embryo), this zygote could be returned to the wife for her use because the sperm had already been used before he died and were now inseparable.⁷

2. The **French** Bioethics Law (Loi n° 2011-814) only permits assisted reproduction to couples (thus excluding individuals, such is often the case of posthumous reproduction concerning a surviving partner) in cases of medical infertility (thus excluding same-sex couples) or to avoid the transmission to the child or to one member of the couple of a particularly grave illness.⁸ The French Bioethics Law is currently under review and it is likely to broaden who may access ART because the French National Consultative Committee on Ethics believes that same-sex female couples and individual women should have the right to ART.⁹

3. **Pakistan** prohibits the fertilisation of an egg from cryopreserved sperm after the death of the husband because death breaks the marital bond. According to Islamic law, all forms of ART are allowed but any union of gametes must be for a married couple.¹⁰

II. Consent-centred regulatory approach to posthumous reproduction

Of the jurisdictions researched that either permitted posthumous reproduction explicitly by regulation or implicitly, consent of the deceased was central.

a. Written consent.

4. Jurisdictions that permit (a) the retrieval of gametes, and (b) the use of those gametes for posthumous reproduction based on written consent typically cover the following scenarios:

- A couple advanced in the ART treatment process (eg. gametes already removed or existence of embryos) and one of them suddenly dies;
- A couple decide to remove gametes because:
 - (a) a current medical treatment may render one of them infertile, or
 - (b) one is engaged in an activity where s/he may die suddenly (eg. military deploying to war) and wish to preserve the viable gametes for future ART treatment.
- The couple have written consent (eg. advanced health directive) that provides that when either one dies the other may remove and use their gametes to produce a biological child.

The requirement for written consent for posthumous use of gametes prevents couples unaware of this requirement, from producing biological children even though they may have wanted children together. This also applies in situations where the couple had started the ART treatment process but not yet signed the consent forms.

5. In **Uruguay**, Article 9 of the Regulation on Techniques for Human Assisted Reproduction n° 19.167 provides that consent to retrieve gametes must be in writing and will only be valid 365 days after the partner's death. It was not clear what the obligations were once the 365 days expired.

6. In the Australian state of **Victoria** the Human Tissue Act 1982 regulates the retrieval of gametes as the definition of tissue “includes an organ, or part, of a human body or a substance extracted from, or form a part of, the human body”. Victoria's Assisted Reproductive Treatment Act 2008 has specific provisions concerning the use of posthumous gametes and embryos. These two pieces of legislation require that:

- (a) the deceased provided consent in writing or consented, during his last illness, orally in the presence of two witnesses¹¹;
- (b) the procedure is requested by the deceased's partner or, if the deceased is a woman, her male partner uses a surrogacy arrangement¹²;
- (c) the Patient Review Panel has approved it¹³;
- (d) the woman must complete counselling before starting ART treatment.

The Patient Review Panel is required to consider the “possible impact on the child to be born as a result of the treatment procedure”, as well as “any research on outcomes for children conceived after the death of the child's parents”. Victoria's Assisted Reproductive Treatment Bill 2008 that amended the Assisted Reproductive Treatment Act provides useful background to Parliament's deliberation in permitting posthumous reproduction.

7. **Canada** operates a stricter regulatory regime around written consent for posthumous use of human reproductive material. The Assisted Human Reproduction Act 2004 provides that:

“Use of reproductive material without consent

8 (1) No person shall make use of human reproductive material for the purpose of creating an embryo unless the donor of the material has given written consent, in accordance with the regulations, to its use for that purpose.

Posthumous use without consent

(2) No person shall remove human reproductive material from a donor's body after the donor's death for the purpose of creating an embryo unless the donor of the material has given written consent, in accordance with the regulations, to its removal for that purpose.

Use of in vitro embryo without consent

(3) No person shall make use of an in vitro embryo for any purpose unless the donor has given written consent, in accordance with the regulations, to its use for that purpose.”

Part 1 of Canada's Assisted Human Reproduction (Section 8 Consent) Regulations prescribes what constitutes written consent. The donor (the person whose body the gametes will come from) must have signed a written document during their life to show:

- they were informed in writing that their gametes would be used in accordance with their consent;
- for a specific purpose; and
- consent to that specific purpose, that is, use after the donor's death by the person who was at the time of death the donor's partner.

b. Implied consent.

8. **Israel's** approach to regulating posthumous reproduction is an example of a light regulation, that was the most permissive jurisdiction for a range of religious and cultural reasons.¹⁴ Israel's Attorney General Guidelines on sperm after death and its use (2003), assist courts in making determinations of requests for extraction of sperm from deceased men. The regulations require:

(1) a request from the female partner (married or unmarried) of a dying or deceased man for the extraction of his sperm; and

(2) court authorisation to use the sperm, determined on a case-by-case basis, taking into consideration the deceased man's dignity and presumed wishes.¹⁵

In 2012 a Public Committee on Legislation Governing Fertility and Birth in Israel (in Hebrew) made recommendations for unified legislation on assisted reproduction and that posthumous reproduction be permitted for deceased women but this has yet to be enacted.¹⁶ Israel's courts have also permitted parents to remove the sperm from their deceased sons, using a surrogate to create biological grandchildren. Court authorised sperm retrieval requested by parents is unique in Israel's regulatory landscape because in the 2003 Guidelines, parents have no legal standing regarding the gametes of their deceased children. The recognition of a parents right to extract semen from a deceased son has not been recognised in any other jurisdiction reviewed.

III. National legal parentage regulation

9. The **US** Uniform Parentage Act (UPA) provides that an individual is a parent of a child conceived by assisted reproduction (AR) where:

- the individual who intends to be a parent of a child conceived by AR dies during the period between the transfer of a gamete or embryo and the birth of the child; or
- the individual consented in a record to AR by a woman who agreed to give birth to a child dies before a transfer of gametes or embryos; and
- the individual consented in a record that if AR were to occur after the death of the individual, the individual would be a parent of the child or clear-and-convincing evidence shows the individual's intent to be a parent of the child.¹⁷

The UPA puts a time limit for the legal parentage of posthumous reproduction, which is the child is born not later than 45 months after the individual's death [s 708(b)(2)]. At the expiration of 45 months, the deceased individual will not be the legal parent of any child born using the individual's gametes. As a Uniform Act there is no obligation on US states to adopt the provisions, although as of 2019, three US states have adopted the UPA and four have introduced the bill into parliament.¹⁸

10. In the Australian state of **Victoria** the Status of Children Act 1974 Part V concerns the posthumous use of gametes. Section 40 of the Act confirms that a deceased person whose gametes are posthumously used in a treatment procedure will be treated in law as a parent of any child born as a result of that procedure but only for the purpose of being registered on the child's birth certificate. This presumption does not, however, preclude a person from making specific provision in a will for any child conceived posthumously.

11. The **UK's** Human Fertilisation and Embryology Act 2008 (HFEA) follows similar lines as the Victorian legislation, that the deceased would be treated as a parent for the purposes of birth registration. However, the deceased is not regarded as the legal parent of the child who is thus excluded from claims in intestacy and under the UK's Inheritance (Provision for Family and Dependents) Act 1975.¹⁹ The policy decision to limit the rights of children born of a posthumous parent was discussed in the UK Parliament:

Because sperm can be stored for up to 39 years—although the statutory period is only ten years—there is no doubt that if rights of inheritance or succession were to arise, this could be a substantial problem.²⁰

The provisions about legal parent also apply to children born outside of the UK who have a a posthumous parent [ss 30(3) and 40(3) of HFEA].

D. Requirements of a complete regulation of posthumous reproduction

As was stated previously, very few jurisdictions reviewed in this howtoregulate article had complete legislation that regulated well the issues that arise when permitting, or not permitting, posthumous use of reproductive tissue. Even jurisdictions that had specifically legislated for posthumous reproduction, still had legal ambiguity in the application of the law because requests for gamete removal postmortem were permitted by the courts in the absence of written consent despite legislation requiring written consent.

The following list of requirements of a complete regulation of posthumous reproduction is based on addressing the weaknesses of existing regulation.

I. Reproductive tissue (gametes, mitochondria, uterus, embryos etc.)

a. Definitions

1. Clear definitions are important in the regulation of posthumous reproduction so that it is distinguishable from the regulation of tissue donation and AR, specifically that tissues required for reproduction are to be treated separately. In defining death some consideration should be made about whether to include, incapacity with imminent death or permanent incapacity. In choosing to include permanent incapacity in the regulation this should be distinguishable from any regulation concerning non-therapeutic treatment of the incapacitated.

2. Advances in ART are likely to outpace regulations on posthumous reproduction and so there may be value in including a definitive approach to all types of tissue required in reproduction. Currently, most regulation on posthumous AR defines egg, sperm and embryo but few regulations define reproductive tissue, in scenarios of three person reproduction. For example for the purposes of mitochondrial replacement therapy, involving 3 people (this excludes the scenario of anonymous donations), where the mitochondrial donor suddenly dies, some thought would need to be given about this type of reproductive tissue.

3. The first baby born via uterus transplant from a deceased donor occurred in 2018, with transplant occurring in 2017.²¹ The tissue donation regulation applied to this uterus transplantation,

with embryos implanted after seven months. Like mitochondria, a uterus is required for reproduction and so reproductive definitions ought to be specific about what is intended to be regulated within posthumous reproduction as distinct from tissue donation generally.

4. Depending on the definitions regulators choose to include in any posthumous reproduction, requirements arise for medical practitioners and AR clinics with regard to the retrieval, storage and use of gametes and reproductive tissue.

b. Consent

5. Regulation around consent for posthumous removal and use of reproductive tissue should expressly cover the following relevant scenarios (taken from New Zealand's current public consultations on posthumous reproduction²²):

Posthumous use (including storage, disposal or donation) of stored: a) eggs b) sperm c) reproductive tissue taken from somebody while they were alive and had capacity to consent, or d) embryos created while the gamete providers were alive and had capacity to consent	i) With the consent of the person	ii) Without the consent of the person
Retrieval of a) eggs b) sperm c) reproductive tissue from someone who is dead or permanently incapacitated	i) With the prior consent of the person	ii) Without the prior consent of the person
Posthumous use of a) eggs b) sperm c) reproductive tissue retrieved from somebody when they were dead or had become permanently incapacitated	i) With the prior consent of the person	ii) Without the prior consent of the person

6. Regulation should prescribe the form of consent that AR clinics are required to obtain from its clients and written consent gained for the above relevant posthumous reproduction scenarios. Some jurisdictions may choose to limit posthumous reproduction to those that had already started ART treatment and so consent in this situation is most likely not controversial and certainly most court cases looked favourably on the use of gametes or embryos where the process for ART treatment, irrespective of immaturity, had started.

7. Where a jurisdiction seeks to regulate posthumous reproduction outside of ART treatment underway, the following requirements to satisfy consent could be useful:

- a will expressly providing for retrieval and use of gametes;
- advanced health directive;
- requiring marriage certificates or civil-union certificates to include a form requiring couples to express their consent/non-consent;
- witness statements from relevant persons;
- absence of evidence that the deceased would have objected to such retrieval or use.

c. Requests to retrieve and use gametes for posthumous reproduction

8. Legal ambiguity in the area of posthumous reproduction appears to be more problematic in common law jurisdictions where legislation requires written consent for gamete retrieval and the courts make orders for gamete retrieval in the absence of written consent. Evidently, courts have made such orders that prima facie contradicts legislation because it found a basis to do so outside of the legislation. To reduce this problem regulation could, following the relevant policy decision of Parliament or government, permit medical practitioners to retrieve gametes upon requests from the relevant next of kin. Creating a permissive regulatory requirement for retrieval of gametes postmortem by controlling who has the right to request, would reduce time in court for interlocutory orders and recognises the time pressures for retrieval of viable gametes. Some jurisdictions limit requests for retrieval to the partner, more permissive jurisdictions have included parents, irrespective of whether the deceased had a partner or not.

9. However, the use of the gametes should be subject to a decision of an administrative body to decide on other requirements such as best interests of the child, completion of counselling or evidence of the wishes of the deceased. The Australian state of Victoria has a Patient Review Panel (Part 9 of the Assisted Reproduction Treatment Act 2008) that reviews requests for posthumous use of gametes and embryos. This could be a good model for ensuring consistent application of the regulation.

d. Cross-border uses of reproductive tissue

10. Regulations could create requirements for the transfer of any type of reproductive tissue, or specific tissues, into and out of the jurisdiction, such as:

- a total ban on transfers;
- transfers as approved by an administrative body;
- the considerations an administrative body must have with regard to decisions to grant approval to transfer, including:
 - whether the purpose for which the gametes or embryo will be used outside the jurisdiction is consistent with a purpose for which it could be used in the jurisdiction; or
 - whether the way in which the gametes or embryo will be used outside the jurisdiction is consistent with the way in which it could be used in the jurisdiction.

e. Obligation to destroy after death

11. Requiring AR clinics to destroy stored reproductive tissue following the death of one or both of the donors, following written advice to the next of kin, could be a useful in controlling posthumous reproduction in jurisdictions that prohibit such reproduction or limit the practice. Creating an obligation to destroy, would also require an obligation to collect information from donors. It is understandable that a donor may die suddenly and the grieving family may overlook reporting this fact to the AR clinic and so an obligation to collect information annually may also be required. The fact that donors may move and overlook advising the AR clinic of their change of contact details may necessitate a requirement for destruction of stored reproductive tissue after a period of non-response. In the UK, registered AR clinics may discard gametes and embryos where donors do not pay the storage fees.²³

II. Legal parent and connected rights

12. In Part C, many jurisdictions limited the inheritance rights of children conceived or created after the parent's death based on legal policy grounds, that estates should have reasonable time limits for conclusion. Notwithstanding this prudent policy approach, there is scope, at least in some common law jurisdictions, where legislation permits claims to be filed if the deceased's partner and children have not been afforded reasonable financial provision by the will. With this in mind regulators may consider the following requirements useful:

- Social security claims from children of posthumous parents within set period, setting a period may be relevant where there are older siblings already in receipt of the benefit;

- Revision of inheritance at least at level of financial compensation, if restitution is not possible;
- Preemption period for restitution;
- Preemption period for financial compensation; and
- Non-inheritance where consent of the deceased parent was not expressed.

13. Cross-border issues may also arise in circumstances where a child born outside of a jurisdiction, may have been conceived contrary to posthumous reproduction regulations, which may require a different treatment to the above list requirements. Nationality issues of the child may also arise in those jurisdictions that provide citizenship by descent.

III. Information rights

14. Regulation of AR clinics contain clear provisions about the information rights of children born from anonymously donated gametes and the recipient of the donated gametes, such as:

- Medical information, disclosed in circumstances where it is necessary to save a person's life or warn the person of a genetic or hereditary condition that may be harmful to that person or the descendants;
- Physical characteristics of the donor, eye and hair colour for example is the usual type of information given to the recipient of the donation;
- Education background of the donor, including musicality, sports; and
- More information could be gained depending on what donors put on the voluntary registry, for example if the donor/recipient permits contact.

In situations where the deceased parent is the partner of the surviving parent it may be prudent for AR clinics to collect the same information for “known” donors noting that it might not always be the case that the surviving parent discloses such information. In the situation of the legal parents being the grandparents, collecting the same information as anonymous donors may be justified as well.

Links

New Zealand is currently revising its regulation of posthumous reproduction and its consultation paper Posthumous Reproduction: A review of the current Guidelines for the Storage, Use, and Disposal of Sperm from a Deceased Man to take into account gametes and embryos, provides a useful summary of policy options for updated regulations.

These links to articles on posthumous reproduction were also useful:

General

<https://chicagounbound.uchicago.edu/cgi/viewcontent.cgi?article=1395&context=uclf>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6121062/>

<https://www.medicaldaily.com/sperm-retrieval-after-death-what-are-ethical-concerns-246798>

[https://www.fertstert.org/article/S0015-0282\(03\)00384-4/fulltext](https://www.fertstert.org/article/S0015-0282(03)00384-4/fulltext)

Australia

Law Report Australia programme on posthumous reproduction (aired 15 Jan 2019)
<https://www.abc.net.au/radionational/programs/lawreport/should-dead-men-become-fathers/10419660>

Canada

<https://www.fertilitylawbc.com/2016/11/23/can-a-spouse-use-stored-sperm-eggs-or-embryos-after-their-partner-dies/>

India

https://www.researchgate.net/publication/303835631_Postmortem_sperm_retrieval_in_context_of_developing_countries_of_Indian_subcontinent

Israel

<https://www.cbsnews.com/news/dead-girls-family-harvests-her-eggs-was-it-unethical/>

South Africa

http://www.scielo.org.za/scielo.php?script=sci_arttext&pid=S1727-37812017000100023

The Netherlands

<http://www.jaypeejournals.com/eJournals/ShowText.aspx?ID=992&Type=FREE&TYP=TOP&IID=86&Value=16&isPDF=YES>

This article was written by Valerie Thomas, on behalf of the Regulatory Institute, Brussels and Lisbon. Simone Marins assisted with research of Portuguese and Spanish speaking jurisdictions.

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- ¹ Simana, S., "Creating life after death: should posthumous reproduction be legally permissible without the deceased's prior consent?" *Journal of law and the biosciences* vol. 5(2), pp. 329-354, 7 Aug. 2018. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6121062/#fn35>.
 - ² Katz, K. D., "Parenthood from the Grave: Protocols for Retrieving and Utilizing Gametes from the Dead or Dying," *University of Chicago Legal Forum*: Vol. 2006: Iss. 1, Article 11, p. 303, <https://chicagounbound.uchicago.edu/cgi/viewcontent.cgi?article=1395&context=uclf>.
 - ³ *Re Cresswell* [2018] QSC 142 (a mid-2018 judgment from the Supreme Court of the Australian state of Queensland), <https://www.queenslandjudgments.com.au/case/id/308427>.
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 - ¹⁴ The Israel approach is based around the 'presumed wish' that "that a man who lived in a loving relationship with a woman would wish her to carry his child after his death". See note 1.
 - ¹⁵ See note 1.
 - ¹⁶ See note 1.

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