

Western Australian
Reproductive Technology Council



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For further information please contact:

The Executive Officer
Western Australian Reproductive Technology Council
189 Royal Street
East Perth WA 6004

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# **Annual Report**

1 July 2022 to 30 June 2023

**Western Australian Reproductive Technology Council** 

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## **Executive summary**

This annual report was prepared by the Reproductive Technology Council (council) for the Chief Executive Officer (CEO), Department of Health (department), to comply with the requirements of Section 5(6) of the *Human Reproductive Technology Act 1991* (HRT Act). The CEO is required to submit the report to the Minister for Health, to be laid before Parliament. The annual report outlines the use of assisted reproductive technology (ART) in Western Australia, and the operation of council for the financial year from 1 July 2022 to 30 June 2023.

Council has an important role as an advisory body to the Minister for Health and to the CEO on issues related to ART, the administration of the HRT Act, and the Surrogacy Act 2008 (Surrogacy Act). Council is also responsible for providing advice on licensing matters for ART services and monitoring standards of practice. In the 2022-23 financial year, one new licence application (Monash IVF West), one licence revocation application (Yovich Pty Ltd.) and one licence renewal application (Adora) was received.

Council members reviewed a range of applications for approval under the HRT Act and the Surrogacy Act. Council approved 48 applications to extend embryo storage, and 88 applications for genetic testing of embryos.

The budget allocation to council for this year was \$103,579 and the expenditure was \$58,602. The financial statement, which outlines the distribution of expenses, is provided in this annual report.

Data collected from the annual reports submitted by WA licensees for 2022–2023 showed that 5,926 women underwent in vitro fertilisation (IVF) treatment, which is an increase of 2 per cent from the previous year. Fertility clinics undertook 8246 IVF treatment cycles this year, which is 3 per cent less than the previous year.

A total of 672 intrauterine inseminations were undertaken, which represents an increase of 2 per cent compared to the previous year.

A total of 1985 couples or individuals received counselling. Most counselling consisted of a single session and involved the provision of information.

The number of embryos reported in storage at 30 June 2023 was 27,875.

Council acknowledges the dedicated work of council members, and the ongoing financial and administrative support provided by the department.

## Introduction

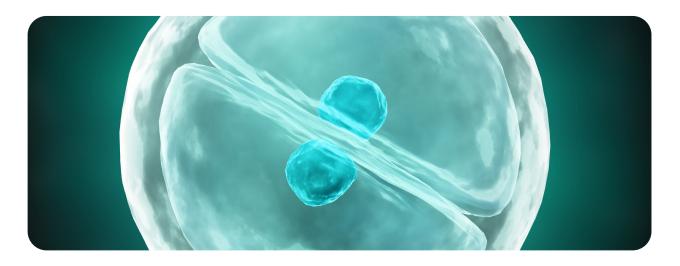
This annual report provides an account of the activities of council for the past financial year. Council regulates ART practices in WA as set out in the HRT Act and the Surrogacy Act. The report is structured around the legal requirements and major activities of council and outlines the operation of council, significant technical and social trends in relation to ART, and the activities of licence holders.

#### **Council functions**

The functions of council are outlined in Section 14 of the HRT Act and include:

- the provision of advice to the Minister for Health on issues relating to reproductive technology, and the administration and enforcement of the HRT Act and Surrogacy Act
- the provision of advice to the CEO on matters relating to licensing, administration and enforcement of the HRT Act and Surrogacy Act
- the review of the Directions and guidelines governing ART practices and storage procedures undertaken by licensees, and thereby regulate the proper conduct of any reproductive technology practice
- the promotion of research, in accordance with the HRT Act, into the causes and prevention of all types of human infertility and the social and public health implications of reproductive technology
- the promotion of informed public debate on issues arising from reproductive technology, and communication and collaboration with similar bodies in Australia and overseas.

The Minister for Health determines council membership and is required to ensure that council comprises individuals with special knowledge, skills and experience in ART. Council has members who are consumer representatives and members with expertise in public health, ethics and law.





# Membership of council and council committees

#### Council and committee chairs

#### **Professor Stephan Millett**

Professor Stephan Millett was appointed Chair of the council on 5 May 2020 and re-appointed in June 2022. He is a moral philosopher and ethics consultant, specialising in professional ethics, medical and health ethics and philosophy in schools. Prior to retirement he was Professor in ethics and applied philosophy at Curtin University and is an Adjunct Professor with the John Curtin Institute of Public Policy. Professor Millett was founding Director of the Centre for Applied Ethics and Philosophy, Chair of the Curtin University Human Research Ethics Committee, and taught ethics across the Faculty of Health Sciences. He holds a Bachelor of Economics, a Bachelor of Arts with Honours (First Class) and a PhD in Philosophy.

He was the inaugural Director of Philosophical and Ethical Inquiry at Wesley College (Perth) and writer of the Western Australian Certificate of Education curriculum in philosophy and ethics, co-authoring four textbooks for that curriculum. He was a founding member of the Acute Clinical Ethics Service for the Child and Adolescent Health Service and is still actively involved. He holds the Australian National Medal for service as a bushfire volunteer and is a life member of the Mount Helena Voluntary Bush Fire Brigade. He is married, with two adult children.

#### **Dr Tamara Hunter**

Dr Tamara Hunter is a board-certified specialist in Reproductive Endocrinology and Infertility (CREI). Dr Tamara Hunter completed her Bachelor of Medicine and Bachelor of Surgery with Honours in 2003, after having completed a Bachelor of Science (Exercise Science) (Hons) in 1996. Dr Hunter became a Fellow of the Royal Australian and New Zealand College of Obstetricians and Gynaecologists (FRANZCOG) in 2012 and received her CREI in 2017. She received two academic prizes for her work in preterm birth and in-vitro maturation during her training.

In May of this year, Dr Tamara became Medical Director for Monash IVF following the acquisition of the fertility clinic PIVET Medical Centre. She is also the Medical Director of Woom Women's Health clinic and is a Paediatric and Adolescent Gynaecologist at Perth Children's Hospital. Dr Hunter runs very active social media channels on Instagram, Facebook, LinkedIn and YouTube.



### **Reproductive Technology Council members**

Professor Stephan Millett Chair (nominee of the Minister for Health).

**Dr Tamara Hunter** (nominee of the Royal Australian and New Zealand College of Obstetricians and Gynaecologists).

**Dr Andrew Harman** (nominee of the Law Society of Western Australia).

**Associate Professor Stella Tarrant** (nominee of the Department of Communities, Office of Women's Interests).

**Dr Sebastian Leathersich** (nominee of the Australian Medical Association).

**Mr Hamish Milne** (nominee of the Minister for Health).

Vacant (nominee of the Minister for Child Protection).

**Dr Robyn Leake** (nominee of The University of Western Australia, School of Women's and Infant Health).

Ms Michelle Arnold (nominee of the Health Consumers' Council WA).

**Dr Dale Pugh** (nominee of the Minister for Health).

**Dr Aideen Killeen** (Executive Officer Ex Officio, Manager, Reproductive Technology Unit, Department of Health).

### **Reproductive Technology Council deputy members**

Vacant (nominee of the Minister for Health).

**Dr Michael Allen** (nominee of the Royal Australian and New Zealand College of Obstetricians and Gynaecologists).

**Vacant** (nominee of the Law Society of Western Australia).

**Ms Felicite Black** (nominee of Department of Communities, Office of Women's Interests).

Dr Melissa O'Neill (nominee of the Australian Medical Association).

Vacant (nominee of the Minister for Health).

Ms Diane Scarle (nominee of the Minister for Child Protection).

**Vacant** (nominee of The University of Western Australia, School of Women's and Infants' Health.

Vacant (nominee of the Health Consumers' Council WA).

**Professor Alison Garton** (nominee of the Minister for Health).

Vacant (Deputy Ex Officio member).



#### **Preimplantation Genetic Diagnosis Committee**

#### **Terms of reference**

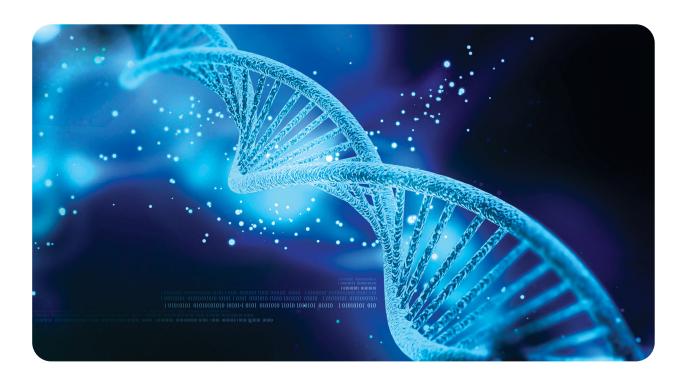
The committee's terms of reference are to:

- advise council on a suitable framework for the approval of Preimplantation Genetic Diagnosis (PGD) under the *Human Reproductive Technology Act 1991* (Act), both generally and for specific cases
- advise the council on factors that it should consider when deciding whether to approve PGD
- advise council on standards for facilities, staffing and technical procedures
- approve PGD applications for Beta-thalassemia, Cystic Fibrosis, D-Bifunctional Protein Deficiency, Duchenne Muscular Dystrophy, Fragile X, Huntington's Disease, Long QT Syndrome, Myotonic Dystrophy Type 1, Myotonic Dystrophy Type 2, Retinitis Pigmentosa, Spinal Muscular Atrophy and translocations
- advise as to how the ongoing process of approval of PGD should be managed effectively by the council
- advise the council on other relevant matters as requested by the council.

The committee may consult with relevant experts in the preparation of this advice for the council.

#### Membership

Dr Tamara Hunter (Chair), Professor Stephan Millett, Dr Kathy Sanders, Dr Sharron Townshend, and Dr Sebastian Leathersich.



## **Operations of council**

### **Meetings**

Council met on 12 occasions during the year, with attendances reaching a quorum at all meetings. The PGD Committee considered all requests for advice from council out-of-session.

#### **Memberships**

#### **Outgoing and in-coming members**

**Dr Megan Byrnes** (nominee of the Royal Australian and New Zealand College of Obstetricians and Gynaecologists) completed her term on 16 July 2022.

**Dr Lucy Williams** (nominee of the Royal Australian and New Zealand College of Obstetricians and Gynaecologists) completed her term on 10 August 2022.

**Ms Selina Metternick-Jones** (Executive Officer, Ex officio, Manager, Reproductive Technology Unit, Department of Health) resigned in September 2022.

**Dr Andrew Lu Am** (nominee of the Law Society of Western Australia) completed his term on 19 December 2022.

**Dr Michèle Hansen** (nominee of the Minister for Health) completed her term on 19 December 2022.

Dr John Beilby (nominee of the Minister for Health) resigned on 18 January 2023.

**Ms Renee Fox** (nominee of the Health Consumers' Council WA) completed her term on 25 February 2023.

**Ms Anjali Krautmann** (nominee of the Minister for Child Protection) resigned on 10 March 2023.

**Dr Tamara Hunter** (nominee of the Royal Australian and New Zealand College of Obstetricians and Gynaecologists) was appointed on 10 August 2022.

**Dr Robyn Leake** (nominee of The University of Western Australia, School of Women's and Infant Health) was appointed on 10 August 2022.

**Dr Aideen Killeen** (Executive Officer, Ex officio, Manager, Reproductive Technology Unit, Department of Health) was appointed on 10 October 2022.

**Dr Sebastian Leathersich** (nominee of the Australian Medical Association) was appointed on 22 November 2022.



#### **Reproductive Technology Unit**

The department's Reproductive Technology Unit provides the following administrative support to council:

#### **Executive Officer, Manager, Dr Aideen Killeen**

Doctor of Philosophy in Reproductive Science, Master of Science in Clinical Reproductive Science. Graduate Diploma of Statistics, Bachelor of Science (Hons).

#### Deputy Executive Officer, Senior Policy Officer, Ms Bridget Blackwell

Master of Medical Science in Assisted Reproductive Technology, Bachelor of Science, Graduate Diploma of Education.

#### **Program Officer, Ms Iolanda Shaker**

Master of Public Health. Bachelor of Science (Hons), Registered General Nurse, Registered Midwife, Diploma in Health Visiting.



#### **Practice and storage licences**

Practice or storage facilities must renew their licence every three years. Council provides advice to the CEO regarding the licensing of fertility clinics. In addition, facilities are required to demonstrate compliance with the current versions of the Fertility Society of Australia Reproductive Technology Accreditation Committee (RTAC) Code of Practice and Certification Scheme. Each year all critical criteria and a third of good practice criteria and quality management systems are audited. All standards are audited every three years. Fertility service providers must use a Joint Accreditation System – Australia and New Zealand (JAS-ANZ) accredited certification body for RTAC certification. Laboratories are also required to demonstrate compliance, if applicable, with the National Association of Testing Authority standards.

Accredited fertility clinics may be granted a licence by the CEO, on the advice of council. In the 2022-23 financial year, one new licence application (Monash IVF West), one licence revocation application (Yovich Pty Ltd.) and one licence renewal application (Adora) was received.

Details of practice and storage licence holders are listed in Appendix 1 and on the council website <a href="https://www.rtc.org.au">www.rtc.org.au</a>.

#### **Exempt practitioners**

A medical practitioner who is an exempt practitioner (under S.28 of the Act) must ensure that minimum standards for practice, equipment, staff and facilities comply with those required for good medical practice. In addition, they must comply with any requirements established under the HRT Act.

An application for exemption must be made in the prescribed format and include evidence of registration as a medical practitioner and a written undertaking by the medical practitioner to comply with the Directions. Medical practitioners, who meet the requirements of the HRT Act, may provide artificial insemination procedures if they have a licence exemption. Currently there are no exempt practitioners in WA.





#### **Applications to council**

Council is required to approve certain ART practices, including the storage of embryos beyond 10 years, diagnostic testing of embryos, surrogacy applications, innovative procedures and research projects.

Council reports in line with the National Health Information Standards and Statistics Committee Guidelines (2017) where values fewer than five are not reported. The following sections describe the activities for this year.

#### **Embryo storage applications**

Council approval is required for the storage of embryos beyond the authorised 10year time limit. An extension may be granted under section 24(1a) of the HRT Act if council considers there are special circumstances. Applications must be made by eligible participants (those for whom the embryos were created or donor recipients).

This year council approved 48 applications for extension of the authorised embryo storage period compared to 56 applications that were approved the previous year. Table 1 shows the number of applications and the duration of approved storage extension that were granted for this year.

Length of storage extension (years)

Table 1: Approved applications for extension of embryo storage

Extension (years)	≤4	≥5	Total
Applications (n)	6	42	48

#### **Preimplantation genetic testing**

Council approves applications for preimplantation genetic testing (PGT) of embryos. PGT for monogenic/single gene disorders and for structural rearrangements in chromosomes can be used where there is a known risk for serious genetic conditions. PGT for aneuploidy (PGT-A) tests the developing embryo for either extra or missing chromosomes. This can be a common cause of pregnancy loss.

PGT-A does not require specific council approval when there are known risk factors for aneuploidy. However, PGT-A may also be indicated when there are other factors, and these are considered by council on a case-by-case basis.

Each application for PGT is supported by a letter from a clinical geneticist or genetic counsellor. Council approval may be subject to the advice of the PGD Committee.

In addition, a laboratory test (a feasibility study) may be required to determine if it is possible to test embryos for the specific genetic condition.

This year, a total of 88 applications for PGT were approved. The approvals provided for PGT are listed in Table 2.

## Table 2: Applications approved for PGT

#### Condition

Alpha thalassemia

Becker Muscular dystrophy

BRCA2 gene mutation

Cerebral autosomal dominant arteriopathy with subcortical infarcts and lukoencephalopathy

GJB2 related nonsydromic hearing loss

Chromosome inversions and duplications

Congenital hyperinsulinaemia

Cystic fibrosis

Dihydropyridine dehydrogenase deficiency

**Duchenne Muscular Dystrophy** 

Familial adenomatous polyposis syndrome

Fragile X syndrome

Hereditary multiple osteochondromas

Huntington disease

Incontinentia Pigmenti

Leber congenital amaurosis

Long QT syndrome

Malignant Hyperthermia

Marfan's disease

MYH9-related disorder

Microcephalic osteodysplastic primordial dwarfism type I

Myofibrillar myopathy

Myotonic dystrophy

Neurofibromatosis type 1

Non-immune hydrops fetalis

NONO associated X-linked syndrome

Osteogenesis imperfecta

Palmoplantar keratoderma

Restrictive cardiomyopathy

Smith-Lemli-Opitz syndrome

Spastic paraplegia type 7

Spinal Muscular Atrophy

Polycystic kidney disease

TBCK syndrome

**Translocations** 

Usher syndrome

Waardenburg disorder

X-linked microdeletion

X-linked hypohidrotic ectodermal

dysplasia



All diagnostic procedures for a fertilising egg or an embryo must have prior council approval. PGT applications for conditions that may be approved by the PGD Committee are listed in the PGD Committee Terms of Reference. General approval may be provided in the Directions or specific approval may be given in a particular case (Sections 7(1)(b), 14(2b), 53(W)(2)(d) and 53(W)(4) of the HRT Act).

#### **Surrogacy**

The total number of surrogacy applications approved under the *Surrogacy Act 2008* (WA) to 30 June 2023 is 65. Aggregated data of five or more will be included in future cumulative totals.

Aggregated national data for surrogacy cycles and births are reported in the Australian New Zealand Assisted Reproduction Database (ANZARD) report (Newman et al. 2020).

#### Innovative procedures

Innovative procedures must be approved by council under Direction 9.4. New and innovative procedures are monitored through the approval process and annual reporting by clinics. Council received no applications for innovative procedures this year.

#### **Research applications**

Research projects undertaken by licensees, other than research on excess ART embryos requiring a National Health and Medical Research Council (NHMRC) licence, must receive council approval. General approval by council has been granted for research such as surveys of participants and research involving additional testing of samples collected at the time of a procedure. Specific approval is required for all other research projects. Licensee's must submit progress reports of approved research projects with their annual data. Council received one research application this year.

#### National Health and Medical Research Council Licences

Differences between State and Commonwealth legislation have led to uncertainty regarding the authority of the National Health and Medical Research Council (NHMRC) to license and monitor research on excess embryos from ART. Research that requires a NHMRC licence is not being undertaken in WA. The legal uncertainty will need to be resolved by amendment of the HRT Act.

#### **Complaints to council**

Council received no formal complaints this year.

#### **Finances**

The budget allocation to council was \$103,579 and expenditure totalled \$58,602. The financial statement in Appendix 2 outlines the distribution of expenses.

#### **Publications and presentations**

Council members are active in the field of ART. This section lists the publications and presentations of council members. It demonstrates their level of activity, expertise and commitment to scientific endeavour, and social and ethical debates related to reproductive technology.

#### **Publications**

**Beilby K** et.al. Validation of ICD-10-AM Coding for Myocardial Infarction Subtype in Hospitalisation Data. Heart, Lung and Circulation. 2022 31(6), pp.849-858.

Cadby G, Giles C, Melton P, Huynh K, Mellett N, Duong T, Nguyen A, Cinel M, Smith A, Olshansky G, Wang T, Brozynska M, Inouye M, McCarthy N, Ariff A, Hung J, Hui J, **Beilby J** et. al. Comprehensive genetic analysis of the human lipidome identifies loci associated with lipid homeostasis with links to coronary artery disease. Nature Communications. 2022 13(1).

Calvert K, **Leathersich S**, Howat P, Van Der Wal S. Time to make some noise about a quiet revolution. ANZJOG. 2022 62(2):336-338.

Garrett K, **Killeen A**, Casey T, Ito J et.al. Biomarkers of Endometriosis. Fertility & Reproduction. 2022 4;3(4):185.

Guizzo-Dri G, Spencer P, **Sanders K**, Judge D. The seasonal relationships of household dietary diversity to child growth in a rural Timor-Leste community. Maternal & Child Nutrition. 2022 18(3) DOI: 10.1111/mcn.13363.

Hunter M, Knuiman M, Musk B, Hui J, Murray K, **Beilby J** et.al. Prevalence and patterns of multimorbidity in Australian baby boomers: the Busselton healthy ageing study. 2021 BMC Public Health, 21(1).

**Leathersich S**. Roche C, Walls M, Nathan E, Hart R. Season at the time of oocyte collection and frozen embryo transfer outcomes. 2023 Human Reproduction. In Press.

Leathersich S. Hart R. Immune infertility in males. Fert Stert. 2022 117(6):1121-1131.

**Leathersich S.** Embracing Gender Diversity. Medicus. 2021 61(11):34.

**Leathersich S**. McAuliffe L, Issah A et.al. Embracing Gender Diversity. Medicus. 2021 61(11):34.

**Leathersich S**, et.al. McDonald versus Shirodkar cerclage techniques in the prevention of preterm birth: A systematic review and meta-analysis. BJOG. 2023 00:1-11.

Leung PY, Elliott P, An J, Shih YC, **Killeen AP**, Post-Thaw Sperm Recovery Rates: A Retrospective Study. Fertility & Reproduction. 2022 4;3(4):190.

McAuliffe L, Issah A, Diacci R, Williams KP, Aubin A, Phung J, Wang C, Maouris A.

Nedkoff L, Lopez D, Hung J, Knuiman M, Briffa T, Murray K, Davis E, Aria S, Robinson.



Rodino IS, **Sanders K.A**. The influence of avoidant attachment and perceived support on disclosure about involvement in donor-assisted conception to family and friends. Human Reproduction dead 2023 019, <a href="https://doi.org/10.1093/humrep/dead019">https://doi.org/10.1093/humrep/dead019</a> (advanced access).

Thompson P, Hui J, **Beilby J**, Palmer L et.al. Common genetic variants do not predict recurrent events in coronary heart disease patients. BMC Cardiovascular Disorders. 2022 22(1).

Shih YC, Elliott P, An J, Leung PY, **Killeen AP**, Validation of sORP, a Measure of Oxidative Stress, in Australian Population. Fertility & Reproduction. 2022 4;3(4):189.

Wang T, Huynh K, Giles C, Mellett N, Duong T, Nguyen, A, Lim W, Smith A, Olshansky G, Cadby G, Hung J, Hui J, **Beilby J** et al. APOE  $\epsilon$ 2 resilience for Alzheimer's disease is mediated by plasma lipid species: Analysis of three independent cohort studies. 2022 Alzheimer's & amp; Dementia.

Yeap B, Hui J, Knuiman M, Flicker L, Divitini M, Arscott G, Twigg S, Almeida O, Hankey G, Golledge J, Norman P, **Beilby J**. U-Shaped Relationship of Leukocyte Telomere Length With All-Cause and Cancer-Related Mortality in Older Men. The Journals of Gerontology: 2020 Series A, 76(1), pp.164-171.



#### **Presentations**

**Beilby, J.** Invited lecturer to the final year Medical Laboratory Science Students from Curtin University.

**Beilby, J.** Lecturer, Master of Clinical Pathology in Genetics, The University of Western Australia.

**Leathersich S**, Roche C, Walls M, Nathan E, Hart R. Seasonal effects at the time of oocyte collection on the success of frozen embryo transfers. *Poster presentation, ESHRE 2023, Copenhagen*.

**Leathersich S**, Ledger W. Progestin primed ovarian stimulation. *Oral presentation, FSANZ 2023, Gold Coast.* 

Goldsmith H, **Leathersich S**. Secondary PPH and uterine tamponade: A Bakrimonious relationship. *Poster presentation, PSANZ 2023, Melbourne*.

**Leathersich S**. Respectful maternity care: a qualitative systematic review. *Oral presentation, RANZCOG RSM 2022, Darwin. Awarded Best Oral Presentation.* 

**Leathersich S**, Arshad A, Merry V, Watson-Jones R. Patient perceptions of informed consent and agency during intrapartum consent for emergency procedures. *Poster presentation, RANZCOG ASM 2021*.

**Leathersich S**. Antenatal cervical screening - patient understanding and perceptions. *Poster presentation, RANZCOG ASM 2021.* 

**Sanders, K**. Human Reproductive Ageing - lecture in ANHB3316 Human Reproduction (August 2022), The University of Western Australia.

**Sanders, K**. Human Reproductive Ageing - lecture in ANHB3316 Human Reproduction (August 2022), The University of Western Australia.

**Sanders, K.** Preimplantation Genetic Testing – lecture in SCIE2100 Social Responsibility in Action (April 2023), The University of Western Australia.

**Sanders, K**. Third Party Reproduction – lecture in SCIE2100 Social Responsibility in Action (April 2023), The University of Western Australia.

**Sanders, K**. Cross Border Reproductive Care – lecture in SCIE2100 Social Responsibility in Action (April 2023), The University of Western Australia.

**Sanders, K**. Posthumous Conception – lecture in SCIE2100 Social Responsibility in Action (April 2023), The University of Western Australia.



# **Developments in reproductive technology**

#### New assisted reproductive technology legislation for WA

In August 2021, the government tabled its response in Parliament to Associate Professor Sonia Allan's Review of the Western Australian Human Reproductive Technology Act 1991 and the Surrogacy Act 2008 (Allan Review). This was accompanied by a stated commitment from the government to develop new contemporary legislation for assisted reproductive technology (ART) and surrogacy in our state, enabling more Western Australians to begin or expand their family.

In May 2022, the Minister for Health, Hon Amber Jade Sanderson, announced the appointment of the Ministerial Expert Panel (MEP) on ART and surrogacy. The Reproductive Technology Council made a submission to the expert panel and the chair addressed a meeting of the MEP.

The Final Report and recommendations from the MEP along with Response to the recommendation was published on 18 May 2023.

#### **Endometriosis**

Endometriosis is a disease affecting approximately 10 per cent of girls and women globally and reportedly costs the Australian Government \$9.7 billion annually. It can often be a debilitating condition, severely impacting reproductive function and fertility. Several international and national groups are working towards developing non-invasive diagnostics and treatments for this disease. The Turnbull Government announced the development of the National Action Plan for Endometriosis in December 2017, with the vision of providing a platform for improving awareness, understanding, treatment of, and research into, endometriosis and associated chronic pelvic pain in Australia.

Professor Jason Abbott and researchers at the Sydney Royal Hospital for Women have recently successfully grown tissue in vitro from all known types of endometrioses. Furthermore, they have exposed the tissue to various treatments. Results from this study are ground-breaking and will inform precision treatment of this complex disease and associated infertility.

### Cell sorting devices

There is substantial research underway, and a global push, to develop state of the art technology for sorting the highest quality and least damaged spermatozoa for medically assisted reproductive treatments. DNA damage in spermatozoa is associated with underlying medical conditions, increased time to pregnancy, recurrent implantation failure and recurrent pregnancy loss.

Australia's Distinguished Emeritus Professor John Aiken is leading the way in developing a system which sorts the healthiest spermatozoa by electrophoresis (charge). Professor Aiken is globally known for his work investigating oxidative stress as a significant contributor to infertility.

# Reproductive technology activity

# Access to donor information and establishment of the Donor Conception Information Service

A new Donor Conception Information Service (DCIS) was established on 1 January 2023 on the site of the Women and Newborn Health Service, under a contract with the King Edward Memorial Hospital Social Work Department.

The service is for people who are registered if they are: donor conceived and have turned 16 years, a donor who donated gametes or an embryo, parents who conceived through a donation prior to their child becoming 16 years (when the young person can join DCIS independent of their parent/s), and other donor conceived offspring where the same donor was used in a treatment resulting in their birth. It offers a 'one stop shop' that:

- facilitates eligible individuals' access to their legally available information held at the department
- provides support and counselling to help people to come to terms with what this information means to them, their lives and the lives of their family
- facilitates contact between genetically related people where there is written consent to share the information.

## References

Abbott JA. The Good, the Bad and the Ugly of Endometriosis Guidelines. J Minim Invasive Gynecol. 2023 May;30(5):342-343.

Hungerford, A, Bakos, H., Aitken, RJ. Analysis of sperm separation protocols for isolating cryopreserved human spermatozoa. Reproduction & Fertility. 2023, Vol 4, lss 2.

Newman J, Paul RC, Chambers GM. 2020. Assisted Reproductive Technology in Australia and New Zealand. 2020. Sydney, NSW, National Perinatal Epidemiology and Statistics Unit.





# **Appendix 1: Practice and storage licence holders**

#### **Adora Fertility**

Craigie Day Surgery 9 Perilya Road Craigie WA 6025

#### **Concept Fertility Centre**

Concept Day Hospital 218 Nicholson Road Subiaco WA 6008

#### **Fertility North**

Suite 30 Level 2 Joondalup Private Hospital 60 Shenton Avenue Joondalup WA 6027

#### Fertility Specialists of Western Australia - Claremont

Bethesda Hospital 25 Queenslea Drive Claremont WA 6010

#### Fertility Specialists of Western Australia - Applecross

First Floor, 764 Canning Highway Applecross WA 6153

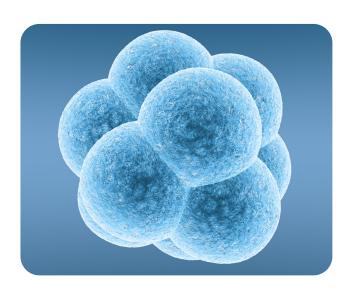
#### **Genea Hollywood Fertility**

Level 2, 190 Cambridge Street Wembley WA 6014

#### **PIVET Medical Centre / ZEST IVF**

Perth Day Surgery Centre 166-168 Cambridge Street Leederville WA 6007

13/11 Wentworth Parade Success WA 6164

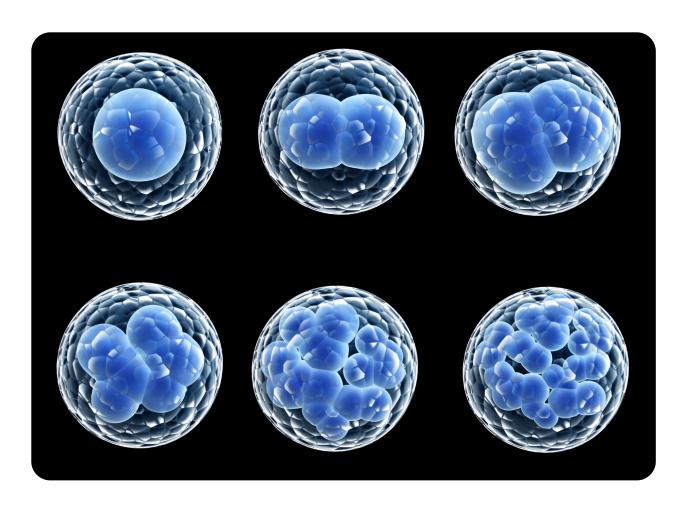


# **Appendix 2: Financial statement**

The department funds the administration of the HRT Act, including the operations of council. The 2022–20232 council budget allocation was \$103,579 with expenditure totalling \$58,602 for the financial year. Table 3 shows the financial statement for the 2022–2023 annual report.

Table 3: Financial statement for the 2022–2023 annual report

Expenditure by category 2022–2023	Expenditure (\$)	Income (\$)
Food supplies and catering	434	
Reproductive Technology Council sitting fees	57,964	
Other expenses:		
Stationery and printing, including annual report	204	
Total	\$58,602	\$103,579





# **Appendix 3: Operations of licence holders**

The aggregated data, tables, graphs, analysis and interpretation of data presented in this appendix have been provided by the Reproductive Technology Unit of the department. Data are presented on the activities of licence holders for this year and assisted reproductive technology trends for the past 10 years in WA. In some instances, percentages may not add up to 100 per cent due to rounding to whole numbers.

#### Assisted reproductive technologies in Western Australia

The procedure of IVF involves the fertilisation of oocytes (eggs) in a laboratory and placing the embryo (fertilised egg) in the uterus. This procedure can be either a fresh cycle, where the embryo is not cryopreserved, or a thaw cycle where a frozen embryo is thawed and transferred to the women's uterus.

A total of 5,926 women underwent assisted reproduction treatment in WA this year. There were 93 more women when compared to the previous year representing an increase of 2 per cent. The number of treatment cycles in this financial year was 8246 representing a decrease of 3 per cent compared to the previous year (n=8462). Table 4 provides an overview of the initiated cycles.

**Table 4: IVF treatments** 

	IVF fresh	IVF thaw	Total
Women treated	3,600	2,326	5,926
Treatment cycle	4,995	3,251	8,246
Cycle with oocyte retrieval	4,517	-	4,517
Cycle with embryo transfer	2,146	2,923	5,069
Cycle with embryo storage	2,435	-	2,435

Fresh IVF transfer techniques included 2337 intracytoplasmic sperm injection (ICSI) procedures, where a single sperm is directly injected into an egg, and the fertilised egg is transferred to the woman's uterus.

A total of 672 intrauterine insemination (IUI) treatment cycles were reported which represents a 2 per cent increase compared to the previous year (n=656). The reported ongoing pregnancy rate for IUI was 13 per cent (n=88). The partner's sperm was used in 67 per cent of procedures and donor sperm was used in 33 per cent of procedures.

The number of IVF recipient cycles, where a woman received donor sperm, donor oocytes, or donor embryos is shown in Table 5.

Table 5: Number of recipient cycles using donations

	Fresh IVF cycle	Thawed embryo cycle
Sperm	380	240
Oocyte	53	62
Embryo	0	67

#### Public fertility clinic referrals

This year, 33 patients from King Edward Memorial Hospital Fertility Clinic were referred to five fertility clinics for treatment. A total of 40 treatment cycles were provided, with 11 women having IVF with fresh embryo transfers, and 9 having IVF with thawed embryo transfers.

#### Serious morbidity and mortality

Clinics are required to provide information regarding complications of ART treatment. There were 21 reported cases of severe ovarian hyperstimulation syndrome (OHSS). There were no reports of mortality in association with fertility treatment.

#### Counselling

Clinics reported a total of 2,074 individuals/couples received counselling. Most participants (68 per cent) received a single counselling session and the majority of these sessions (55 per cent) involved information counselling. Counselling for donors and donor recipients accounted for 50 per cent of all sessions. There were 1,044 donor and recipient counselling sessions representing a decrease of 24 per cent from the previous year.

### **Embryo storage**

The number of embryos in storage was reported as of 30 June 2023. The dispersal of embryos for this year is shown in Table 6.



Table 6: Dispersal of stored embryos

Embryo dispersal	n
Embryos in storage 30/6/2022	26,884*
Embryos created from IVF	6,899
Used in frozen embryo transfer treatments	3,534
Transferred within clinics in WA	344
Transferred to clinics outside WA	73
Transferred from interstate	92
Embryo disposition	2,393
Embryos in storage 30/06/23	27,875

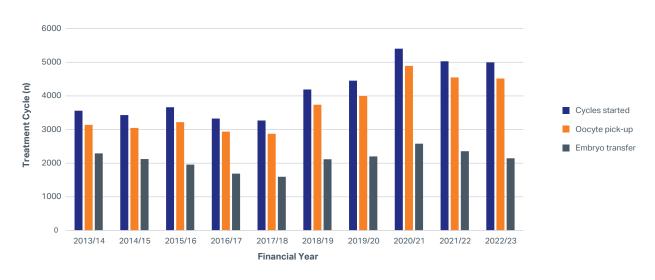
<sup>\*</sup>Figure revised from 2021-2022 Annual Report following correspondence from one clinic that revised the in-storge embryos numbers after moving to a new database system. The previous database was found to have duplicate records causing an overstatement of in-storage embryos.

#### Assisted reproductive technology trends in WA

Overall, the number of IVF treatment cycles in WA decreased by 3 per cent, compared to the previous year (n=8246 vs n=8462). Data for Australia and New Zealand show a 7.6 per cent increase in ART treatment cycles between 2019 and 2020 (Newman et al. 2020). In WA this year 61 per cent of all IVF cycles were fresh cycles, and 39 per cent were thawed cycles. This proportion has remained relatively stable over the years (range 54 per cent - 61 per cent).

Australian and New Zealand data for 2020 show that 63 per cent of ART cycles were fresh IVF cycles where patients used their own eggs or embryos (Newman et al. 2020). Figure 1 shows the progression of fresh IVF cycles by year in WA.

Figure 1: Progression of fresh IVF cycles by year, 2013–2023



There was no decrease in cycles started, a 1 per cent decrease in oocyte pick-ups and a 9 per cent decrease in embryo transfer in comparison to the previous year. This follows a national trend towards more initiated fresh cycles resulting in all embryos being frozen (freeze all cycles) (Newman et al. 2020). Figure 2 shows the progression of thawed embryo cycles. The number of cycles started decreased by 2 per cent and embryo transfers remained the same from the previous year.

3500 3000 2500 Treatment cycle (n) 2000 Cycles started Embryo transfer 1500 1000 500 0 2013/14 2014/15 2015/16 2016/17 2017/18 2018/19 2019/20 2020/21 2021/22 2022/23 **Financial Year** 

Figure 2: Progression of thawed embryo cycles by year, 2013-2023

#### Intracytoplasmic sperm injection procedures

The number of IVF procedures where ICSI was used is shown in Figure 3. This procedure was used in 52 per cent of fresh cycles where fertilisation was attempted in WA this year. Australia and New Zealand data for procedures in 2020, reported ICSI was used in 62 per cent of autologous fresh cycles where fertilisation was attempted (Newman et al. 2020).

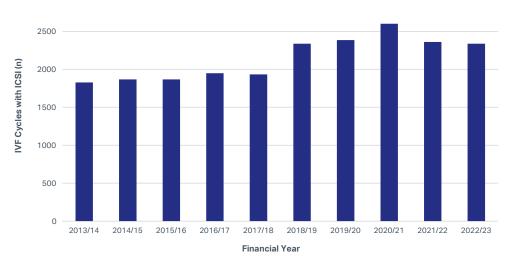


Figure 3: Number of IVF cycles with ICSI by year, 2013–2023

#### **Number of sperm donors**

The number of new sperm donors, defined as donors whose samples became available for treatment in this financial year, was reported as 67 compared to 47 last year.







Reproductive Technology Council

Reproductive Technology Council 189 Royal Street East Perth WA 6004

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