

Egg donation and surrogacy

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Third party reproduction

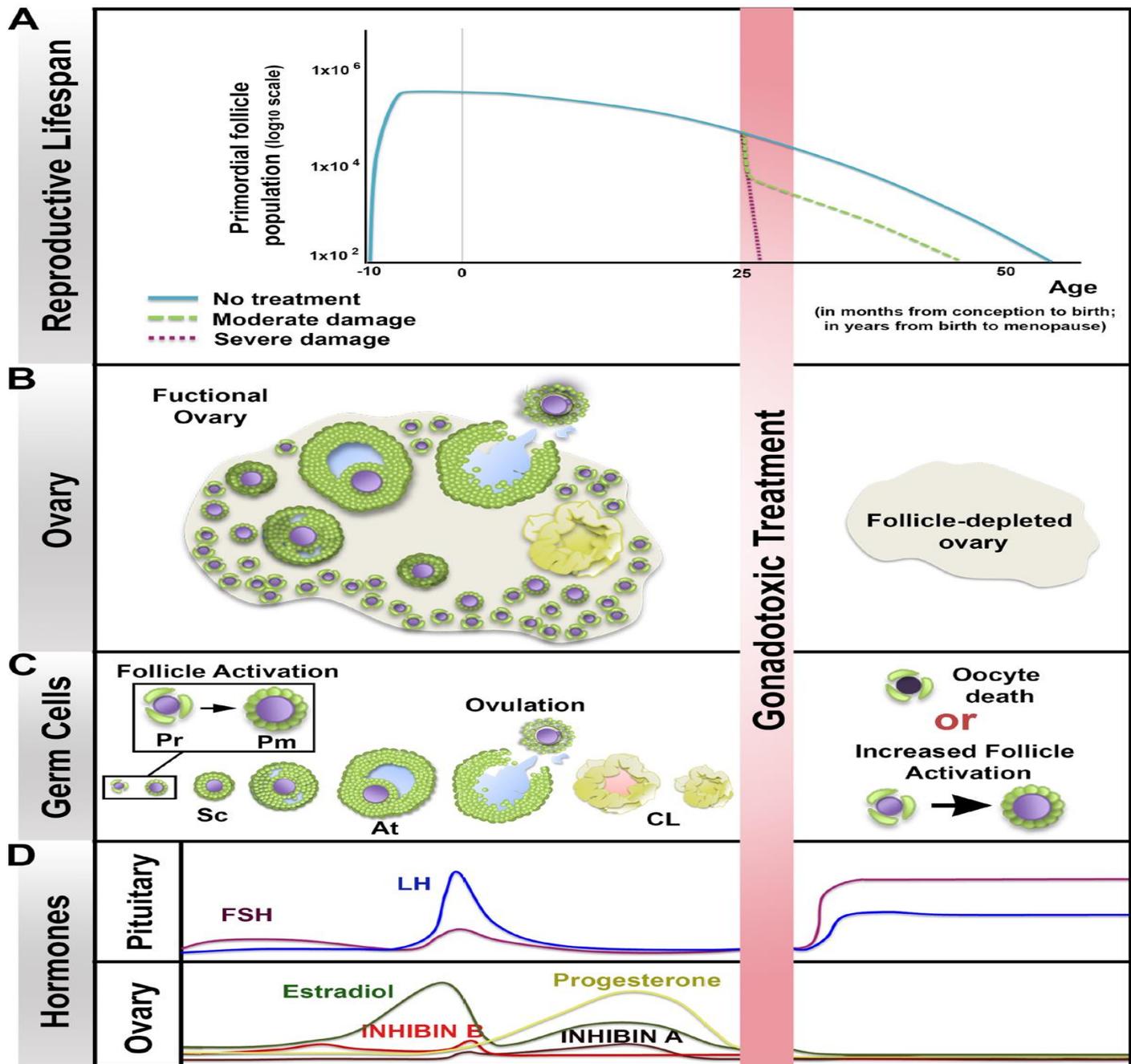
- Reproduction involving the use of DNA or gestation from an individual or individuals other than the one or two parents who intend to raise the resulting child. Typically, the third party's involvement is limited to the reproductive process and does not extend to the raising of the child

Outline

- Egg donation and Surrogacy
 - Indications
 - Contra-indications
 - Donor and Surrogate selection and matching
 - Identity disclosure
 - Legal Parenthood
 - Clinical processes
 - Outcomes of treatment

Egg donation

- Ovarian reserve declines with increasing age, and also following certain types of cancer treatment, ovarian surgery or for no apparent reason
- Mechanisms of reduced ovarian reserve due to chemotherapy include accelerated recruitment of follicles, vascular damage and direct toxic effect on oocytes/granulosa cells
- Women with a low ovarian reserve have a reasonable chance of conceiving, but a reduced reproductive life-span
- If they do not conceive, or have ovarian failure, IVF using their own eggs is very unlikely to result in a baby
- In this situation, donor egg IVF becomes an option



Gonadotoxic treatment, such as chemotherapy or radiation therapy (red bar across all panels), induces a rapid decrease in the highly sensitive primordial follicles of the ovarian reserve (A, C), resulting in a follicle-depleted ovary (B) and premature ovarian failure (POF).

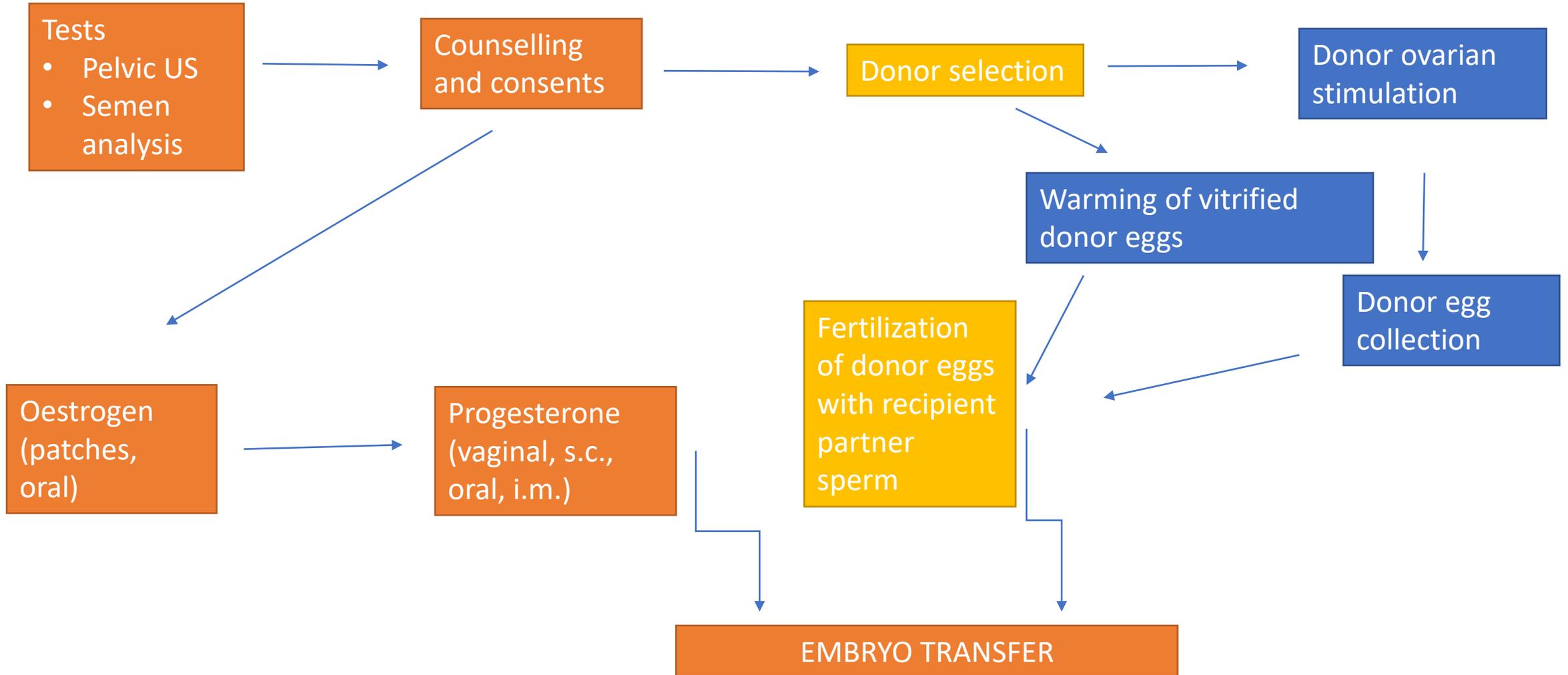
Donor egg IVF

- Few absolute contra-indications
 - If pregnancy is contra-indicated
 - Severe heart disease, esp Pulmonary Arterial Hypertension
- Donor selection
 - Women less than 36 years of age with a good ovarian reserve
 - Ideally non-smokers and normal BMI
 - No history of inherited disorders in family
 - Screened for Cystic Fibrosis or other disorders relevant to their ethnicity
 - Negative for blood-borne viruses (HIV, Hep B, Hep C, HTLV)
 - Matched to physical appearance of recipient

Donor egg IVF clinical aspects

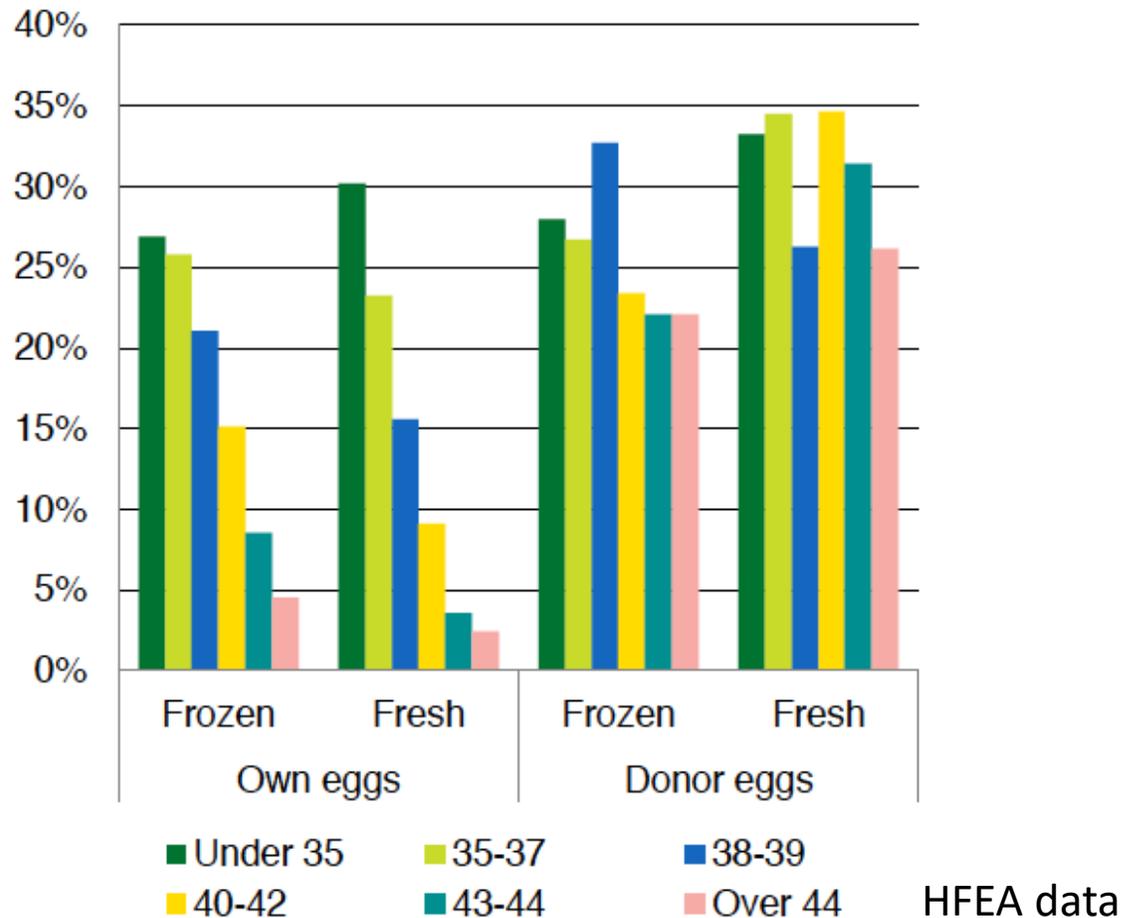
- Donor
 - Ovarian stimulation with FSH in a GnRH antagonist regime
 - Monitoring with serum oestradiol and transvaginal scans
 - Trigger with GnRH agonist
 - Egg collection under sedation; eggs can be used fresh or vitrified
- Recipient
 - Fertilization of eggs with partner (or donor) sperm
 - Preparation of uterus to receive embryo
 - Natural cycle: only if patient has regular ovulatory cycles
 - Hormone replacement therapy cycle: exogenous oestrogen followed by progesterone
 - Embryo transfer: one or two embryos
 - Luteal support: till 12 completed weeks of gestation

Typical donor egg recipient cycle



Outcomes of donor egg IVF

Figure 17: IVF birth rates PET by age, 2017



- Recipient age is not relevant
- Fresh and frozen no difference
- Donor egg pregnancies are at increased risk of hypertensive disorders, fetal growth restriction and prematurity

Jeve YB et al (2016) BJOG;123:1471-1480

Donor eggs - logistics

- Relative shortage of altruistic donors, specially in ethnic minorities
- Usually clinics promise a certain 'minimum' number of donor eggs
- 'Fresh' vs vitrified donor eggs
 - Similar success rates
 - Less likely to get embryos to freeze if using vitrified eggs
 - More 'choice' with vitrified egg bank
 - No need to synchronise donor and recipient cycles if using vitrified eggs
 - Ensures observance of quarantine period for blood-borne viruses

Donor eggs

- Information about donors is restricted to physical appearance, ethnicity, marital and parental status, optional pen portrait and goodwill message
- A child conceived from donor gametes has the right to find out the above information at age 16
- They can find out the identity and last known address of the donor when they reach the age of 18
- Recipients are encouraged to tell children from an appropriate age
- Donors have no legal or financial obligations or rights over the child

Surrogacy

- The practice of a woman (the 'surrogate') becoming pregnant with a child that may or may not be genetically related to her, carrying the child and giving birth to the child for another family (the 'Intended Parents') who will raise the child
- Traditional ('straight' or 'partial') surrogacy: The surrogate is genetically related to the child, conception occurs by insemination (not intercourse).
- Gestational surrogacy: The surrogate is not genetically related to the child, conception occurs with IVF.

Surrogacy in myth

Now Sarai Abram's wife bare him no children: and she had an handmaid, an Egyptian, whose name was Hagar. And Sarai said unto Abram, Behold now, the LORD hath restrained me from bearing: I pray thee, go in unto my maid; it may be that I may obtain children by her. And Abram hearkened to the voice of Sarai.

And Sarai Abram's wife took Hagar her maid the Egyptian, after Abram had dwelt ten years in the land of Canaan, and gave her to her husband Abram to be his wife.

And he went in unto Hagar, and she conceived: and when she saw that she had conceived, her mistress was despised in her eyes.

And Sarai said unto Abram, My wrong be upon thee: I have given my maid into thy bosom; and when she saw that she had conceived, I was despised in her eyes: the LORD judge between me and thee.

But Abram said unto Sarai, Behold, thy maid is in thine hand; do to her as it pleaseth thee. And when Sarai dealt hardly with her, she fled from her face

Genesis 16:1-10 King James Version

Balaram, the seventh child of Krishna's parents Devaki and Vasudev, where the embryo was transferred to the womb of Rohini (Vasudev's first wife), to prevent the baby being killed by Devaki's brother Kamsa.

Kavita Kane, <https://www.shethepeople.tv/news/surrogacy-in-mythology>

Surrogacy

- Typically indicated to overcome a uterine factor preventing pregnancy or gestation, e.g. hysterectomy, pelvic radiotherapy (particularly if pre-pubertal)
- UK surrogacy regulation is complex, and in the process of being revised
- Intended Parents (IPs) are not allowed to advertise for a surrogate
 - Some may have relatives willing to be their surrogate
- Non-profit organisations can put IPs and surrogates in touch – Brilliant Beginnings, Surrogacy UK, COTS
- The process requires commitment and clarity about expectations, but surrogacy contracts are not legally enforceable in the UK
- Commercial surrogacy is not allowed in the UK, but reasonable expenses are allowed. On average, these are around £15,000 per pregnancy.

Surrogacy – Legal Parenthood

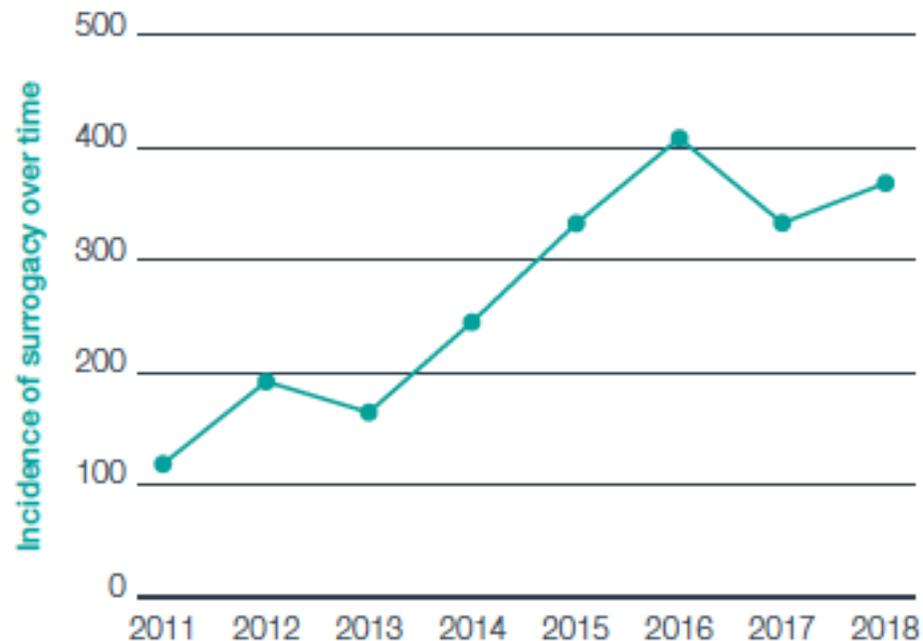
- Under UK law (HFE Act 2008) the woman who gives birth is the legal mother of the child. Her husband or civil partner (if she has one) is the legal father, but the Intended Father can apply for a Parental Order before birth if his sperm was used to create the embryo.
- Hence, quite often, only one, or neither, of the IPs is a legal parent of the newborn child
- The IPs can only apply for a parental order after the birth of the child
- Court can only make a parental order more than six weeks after the birth. (Because the order requires the consent of the surrogate, and the law says that her consent can only validly be given once 6 wks have passed)
- In practice, IPs are likely to have to wait at least six months before a parental order is made because of the time it takes for legal proceedings
- There are further complexities in case of overseas surrogacy
- The law now allows a single IP to obtain a parental order

Surrogacy

- Fertility Clinics get involved in the creation of embryos, assessing the surrogate, preparing the surrogate to receiving the embryos and transfer of embryos to the surrogate to achieve conception.
- IPs are screened as gamete donors (blood-borne viruses, Karyotype, CF)
- The surrogate's medical and obstetric history must be considered. What are the risks of pregnancy? Should there be an upper age limit for surrogates, and should it be different from that for women seeking treatment to carry a baby for themselves?
- We have an ethical responsibility to the surrogate, and this may conflict with the needs of the IPs who are infertile and wish a family

Surrogacy - extent

Number of children involved in parental order proceedings in England and Wales



- Relatively small, but growing, number - 0.4% IVF cycles
- NHS funding is very limited
- Legal complexity and lack of legal parenthood from birth may be putting some patients off
- Law Commission is consulting on changes which will streamline the process and make it simpler
 - Parental orders from birth