

Deferred conception – Egg freezing and IVF as potential employer-funded benefits

By Lois Rogers for WPA Protocol Plc

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Advice: Specialist legal advice should be sought if a company is contemplating evolving their healthcare benefits into this area.

- **Falling birth rate has implications for the continuing availability of a skilled labour force**
- **Across Europe, one in five women is now reaching menopause never having had a child**
- **Increasing numbers of high earning women are having a first child at 40 or older, when risk of miscarriage or chromosomal abnormality are higher because of declining quality of ageing eggs**
- **Employer-funded programmes to freeze higher quality eggs from women in early adulthood are taking off in America**
- **Latest techniques mean such eggs can be thawed and used by the woman decades later to produce a healthy baby**
- **These egg-freezing programmes are being used to attract the most ambitious and best-qualified female workers in a drive to help them reconcile career and family life**
- **UK employers are now being advised to understand the issues and prepare for a decision about offering such services here**
- **Eggs belong only to the woman who produced them, not to a couple**
- **They don't have the legal or moral status of 'life' which governs embryos, so are less problematic to freeze**
- **Egg-freezing is expected to take off in Britain once the arbitrary ten year time limit on frozen egg storage is lifted.**

The issues

Dr Gill Lockwood, medical director at Midland Fertility Services in Tamworth, was responsible for the birth of Emily Perry in 2002, the first baby produced in Britain from a frozen egg.

She described to the WPA audience, the rapidly changing work environment for women and changes to social attitudes on egg freezing.

Rachel Cutting, principal embryologist at Sheffield Teaching Hospitals NHS Trust and a member of the Human Fertilisation and Embryology Authority, (HFEA) discussed egg freezing success rates and the legal and ethical implications of the process.

The statistics on fertility rates in Britain are increasingly bleak. The majority of women now only have one child. 45% of women born in 1982 were childless by the age of 30 compared with 28% of those born 75 years earlier.

The biological truth Dr Lockwood said, is that men – such as Charlie Chaplin who produced a baby at 83, can go on fathering children into advanced old age. Women however, have a short reproductive lifespan. For most, fertility falls away rapidly from the mid-30s onwards. 40% of pregnancies in women aged 40 will end in miscarriage, rising to 80% among pregnancies in 45 year-olds.

Although people continue to believe they can have a child at any age and IVF treatment is a safety net against the risk of failing to conceive naturally, the chance of a woman in her mid 40s having a baby using her own eggs and fertility treatment is less than 2%.

This attrition is because eggs from older women, even if they are still menstruating normally, are simply poor quality and 'past their sell-by date'.

"In what other branch of medicine would we let patients insist that we perform an elective and expensive operation with a less than 5% chance of success?" Dr Lockwood asked.

Studies have shown over 90% of students say they want children with most women wanting to become mothers while still in their 20s. However, only a minority of male students aspire to being such young fathers and would prefer to wait until their 30s or even 40s.

ABOUT THE AUTHOR

Lois Rogers is an award-winning freelance communicator specialising in healthcare, life sciences and public policy. She was previously health and social affairs editor of The Sunday Times. She also serves on an NHS health research ethics committee.

Other research has shown a well-educated woman who gives birth at 24 will lose £500,000 in lifetime earnings compared with 'only' £200,000 if she delays motherhood until the age of 28 or older.

The chance of ending up childless is directly linked to education. A girl who has left school without GCSEs has a 10% risk of reaching the age of 45 without having had a baby, compared with an almost one in three risk for 45 year-old women educated to degree level.

These are the women society wants to have babies because they are the ones most likely to grow up to pay higher income tax.

Gill Lockwood told the audience that the first pregnancies using frozen human eggs were reported in the 1980s, but the procedure was abandoned for the next ten years because success rates were very poor. Ice crystals almost invariably destroyed the delicate structures of tiny egg cells and up to 100 eggs were needed to create one baby.

Now pregnancy rates for frozen eggs retrieved from a young woman using modern 'vitrification' methods pioneered in Japan in 2006, are exactly the same as the pregnancy rate achieved with fresh eggs. Eggs are dehydrated and flash frozen in seconds, removing any risk of ice crystal damage.

Rachel Cutting said that in normal circumstances a woman produces one egg a month, but hormonal drugs used to stimulate the ovaries can boost this so more 'ripe' eggs may be produced in one menstrual cycle.

A 2010 study of almost 100 female medical students and 100 other female undergraduates with an average age of 21, reported that 80% of future doctors said they would consider egg freezing compared with 40% of the non-medical undergraduate group.

Ms Cutting said increasing numbers of ambitious young women are inquiring about egg freezing at her clinic.

Data from Dr Lockwood's Midland Fertility Clinic shows the proportion of women freezing eggs for social reasons more than doubled from 24% to 55% between 2003 and 2015. The average age of those seeking egg freezing is 36.6 years which is older than ideal.

A survey of 107 women inquiring about egg freezing at the clinic, found almost two thirds said they had no partner or had recently ended a relationship.

The HFEA's data show that about 500 babies have been born using frozen eggs between 2010 and 2016, and latest statistics show the number of women having their eggs frozen doubled between 2013 and 2016 to 1,310 a year.

Dr Lockwood jokingly suggested egg freezing could be a graduation present for young women. The average 21 year old produces 20 eggs with minimum exposure to hormone stimulating drugs in an egg freeze cycle. Two thirds of such women will probably achieve natural pregnancies and never need to use those in store.

Those that do need to use the service are likely to be among the best educated and highest achieving and egg freezing will give them continuing access to their own optimum quality fertile eggs and not require them to resort to donor eggs.

90% of frozen egg cells survive the thawing process undamaged and can be fertilised using Intracytoplasmic Sperm Injection (ICSI) treatment where an individual healthy sperm is selected under a microscope and injected directly into the egg. 70% of the thawed eggs will fertilise when injected with a sperm.

Rachel Cutting said the decision to embark on egg freezing is no small commitment. There are two weeks of daily injections to stimulate egg production, regular blood tests and a need for time off work, plus a surgical procedure using a fine probe to actually retrieve the ripened eggs. After the procedure the eggs are vitrified and stored in liquid nitrogen until the woman chooses to use them. It is important that women embarking on egg freezing have counselling to understand the process and to ensure they understand that egg freezing doesn't guarantee a baby at the end of treatment.

At this time the eggs are thawed and a sperm is injected into each egg. The newly fertilised eggs are then left in an incubator to begin to divide into a ball of cells for 5 days when it forms a blastocyst. This is usually the stage the embryo is placed into the woman's uterus.

In the past these newly created embryos had to be removed from the incubator for assessment and grading purposes.

This disturbance can now be avoided by time lapse imagery using a device called an Embryoscope, which automatically uses a range of criteria to identify the best embryos without the need for handling them.

Unlike food, these newly created embryos can be re-frozen.

The initial egg collection process costs around £5,000 and can involve up to 20 eggs being removed and stored at an annual cost of around £100

At the moment, women undergoing cancer treatment that could damage their eggs, are allowed to have them removed and frozen for an arbitrary period of up to 55 years, while a woman who undertakes 'social' egg freezing (currently not available on the NHS) is allowed a maximum storage time of 10 years. Unfortunately this encourages women to delay having their eggs frozen until after the optimum age (under 35 years).

If she still does not have a partner, the only way to keep the eggs is by having them fertilised with donor sperm and re-frozen as embryos.

Baroness Deech a former chair of the HFEA is leading the campaign to lift this arbitrary 10-year limit on storing eggs and is making representations to the government.

Gill Lockwood and Rachel Cutting are hoping the HFEA will review this storage limit allowing British women – and their employers, to follow practices now becoming commonplace in America.

'As an employee perk I would say egg freezing is much better than free membership of a nice gym,' Dr Lockwood said.

In his summing up, Brian Goodman, WPA Protocol's Managing Director, concluded that 'As companies wrestle with gender issues, deferred conception benefits, currently on the horizon, are going to feature increasingly within corporate healthcare strategies'.

Interesting Links

Guardian (26 April 2017)

Discussing whether egg-freezing as an employee benefit is either a perk or a bribe:

<https://www.theguardian.com/society/commentisfree/2017/apr/26/its-not-a-perk-when-big-employers-offer-egg-freezing-its-a-bogus-bribe>

The Times (30 December 2018)

Highlighting challenges for Bank of America Merrill Lynch offering staff gender reassignment surgery but not Fertility treatment despite having a fertility assistance programme in America:

<https://www.thetimes.co.uk/article/city-branch-of-merrill-lynch-offers-its-staff-gender-change-but-noivf-0k623pd2w>

Cosmopolitan (10 January 2019)

Revealing that the number of women who gave birth over the age of 40 was higher in the UK than the number of women who gave birth under the age of 20:

<https://www.cosmopolitan.com/uk/reports/a12784974/average-age-women-have-first-baby-become-mum/>