Supplement to the 'Egg freezing in fertility treatment' report

Background to this supplement

Our main report 'Egg freezing in fertility treatment' provides an overview of the number and type of fertility treatments using frozen eggs that have been carried out across the country, freezing techniques and outcomes, and a review of available evidence on this type of fertility treatment.

However, we know that some people will be interested in taking a closer look at the data. In this supplement to the egg freezing report, we have tried to strike the right balance between providing detail and recognising the limitations and uncertainty which come from data which are still small in number, and where quality has varied over the years in which these clinical techniques have developed.

As in the main report, we differentiate between success rates using donor eggs, and success rates using a women's own eggs.

This supplement is intended to be read alongside the main 'Egg freezing in fertility treatment' report.

Age at freeze

There are two ways to look at how age affects birth rates. The first is by the age of the patient when the eggs were frozen, referred to as patient *age at freeze*. The second way is by the age patients were when they used the frozen eggs, also known as patient *age at thaw*. Our main report provides an analysis of birth rates by the age at thaw. The data on patient age at freeze is more limited, because only those thaw cycles that have been linked to freeze cycles are included, so the data set is smaller.[1]

Patients who froze their own eggs under 35 had a 15% chance of having a successful thaw cycle in 2016; this falls to around 12.5% for patients who froze eggs aged 40-42.

Patients who used donor eggs which were frozen under age 35, had a 32% chance of having a successful thaw cycle; this falls to 27% for patients using donor eggs frozen between ages 35-37.

[1] See "Background Information" for further information.

When aggregating success rates (PTC) from 2014-2016 there is an overall significant difference in the success rates of eggs by the age they were frozen. For eggs frozen under 35, there is a 27% chance of a birth; compared to 13% for eggs frozen over age 35.

Figure 1: Birth rates PTC by age at freeze 2016

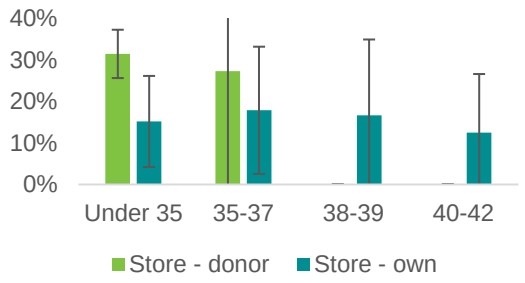
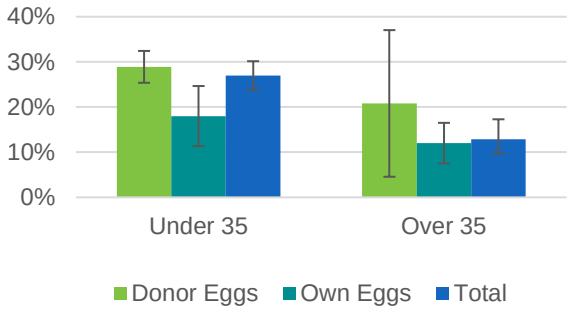


Figure 2: Aggregate birth rates PTC by age at freeze 2014-2016



Donor eggs

In 2016, donor eggs overall have a significantly higher success rate (30% PTC) than own eggs (18% PTC).

Donor eggs have a younger age profile: 95% were stored aged below age 35 (and 99% below age 38).

Figure 3: Age at freeze breakdown: donor egg thaw cycles

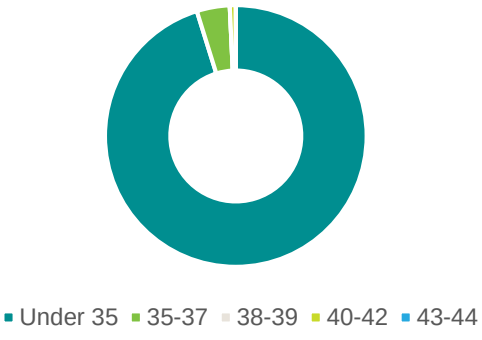
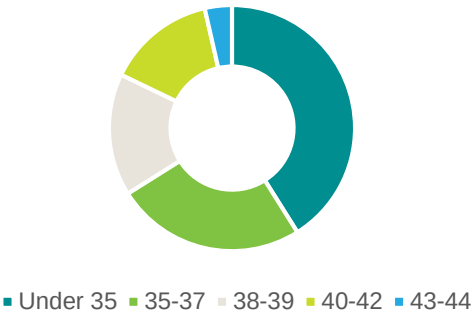
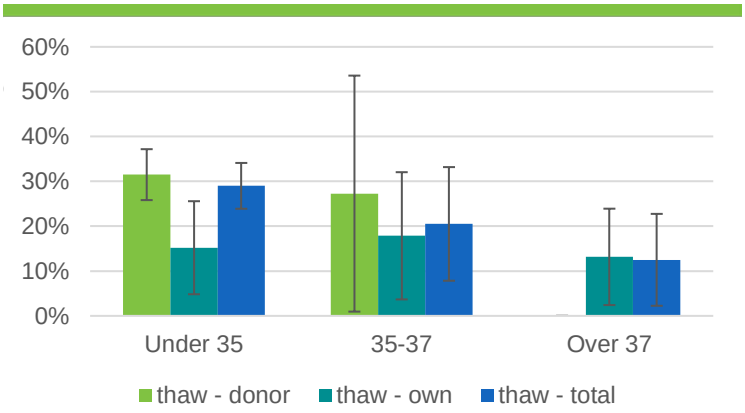


Figure 4: Age at freeze breakdown: own egg thaw cycles



When looking only at the birth rates for under 35s, there is a significant difference between the success rates of donor and own eggs.



Number of eggs collected and frozen

Between 2010 and 2016, 36,706 eggs were stored for patients own use, with a year on year rise as the numbers of patients undergoing egg freezing grew.

In 2016, 9,590 eggs were frozen for patient's own use, an increase of 370% compared with 2010.

Since 2010, the average number of eggs frozen per patient was eight and has remained broadly stable.

Between 2012 and 2016 the average number of eggs collected per patient was 10.

Figure 6: Number of eggs frozen

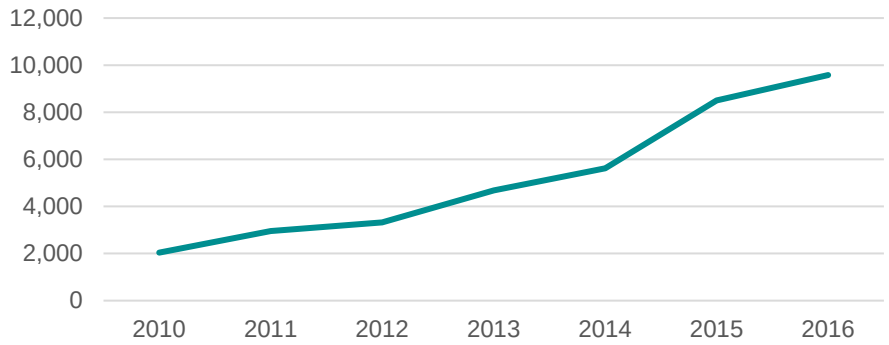


Figure 7: Average number of eggs collected and frozen per egg freezing patient

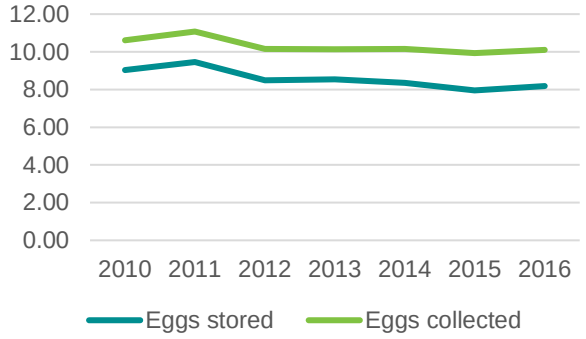
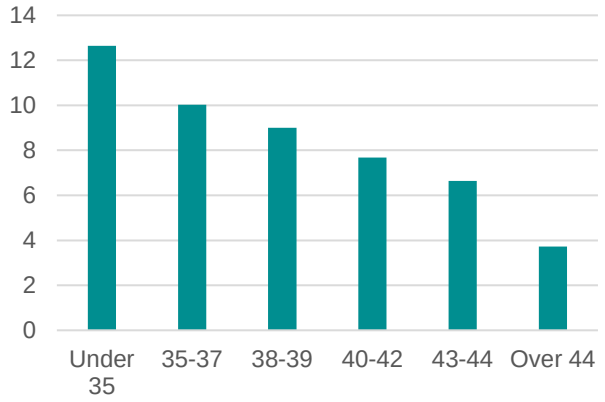


Figure 8: Average number of eggs collected



Background Information

A note on our data

We are currently upgrading our Register, which holds details of the cycles where women freeze their eggs and, separately, the treatment cycles where these frozen eggs are thawed for use in treatment. The current structure does not enable us to fully link the treatment cycles to the eggs that were used. Our coverage in matching the cycles is currently:

Thaw cycle year	Donor eggs	Own eggs
2010	81%	89%
2011	97%	96%
2012	96%	92%
2013	96%	87%
2014	94%	89%
2015	85%	77%
2016	81%	65%

A note on confidence intervals

Confidence intervals use a binomial proportion confidence interval with a symmetrical 95% confidence level.