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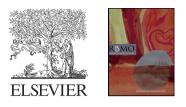
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RBMO

ARTICLE



First clinical report of 179 surrogacy cases in the UK: implications for policy and practice



BIOGRAPHY

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KEY MESSAGE

The UK Government is now committed to liberating guidance for surrogacy treatments at HFEA-licensed centres. The results presented here show for the first time that surrogacy is increasingly sought by lesbian and gay couples, who increasingly opt for frozen donor eggs for their treatment. These results provide strong support for liberalizing regulatory reforms when they are introduced later in 2022.

ABSTRACT

Research question: What implications for policy and practice can be derived from outcomes and trends observed across 8 years of a surrogacy programme in two UK-regulated IVF centres (London, Cardiff)?

Design: Retrospective cohort study analysing surrogacy treatments undertaken between 2014 and September 2021.

Results: Surrogacy continues to rise in popularity in the UK despite the inability of those supporting safe and professional practice to advertise to recruit surrogates. In two IVF centres regulated by the Human Fertilisation and Embryology Authority (HFEA), both the number of surrogacy treatments and the proportion of those undertaken on behalf of same-sex male intended parents increased year on year in the period studied. From a cohort of 108 surrogates, 71 babies were born to 61 surrogates (with five pregnancies ongoing) by February 2022. No statistically significant difference in live birth rates (LBR) was observed between the heterosexual couples and same-sex male couples. Sample sizes of single and transgender intended parents were too small (n < 5) to compare. The use of vitrified oocytes in surrogacy treatments has increased year on year, while fresh oocyte use has declined since peaking in 2019. There was no significant difference in LBR between fresh and vitrified oocyte usage across the cohort.

Conclusions: The number of surrogacy treatments steadily increased, with clear evidence that the proportion of same-sex male couples accessing surrogacy is a major contributor to this growth. Vitrified/warmed oocyte use now outstrips the use of fresh oocytes in the surrogacy treatment cycles studied here. The results represent a strong basis for supporting the liberalization of regulatory reform expected to be introduced in the UK later in 2022.

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rbmo.2022.05.027 1472-6483/© 2022 The Author(s). Published by Elsevier Ltd on behalf of Reproductive Healthcare Ltd This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/) Declaration: The authors report no financial or commercial conflicts of interest. KEYWORDS Intended parents IVF Live birth rate Surrogacy Vitrified oocytes

INTRODUCTION

dvances in laboratory vitrification techniques have 'transformed the therapeutic landscape in assisted reproductive technology', (*Ahuja and Macklon, 2020*) not only in respect of cryopreserved embryo use but increasingly in the use of cryopreserved oocytes, which in some centres now exceeds the use of fresh oocytes in IVF treatments.

Vitrification of oocytes has been known for some time to produce results consistent and comparable with fresh oocyte use and the proposal that it should become a more 'routine' approach (Cornet-Bartolomé et al., 2020; Linara et al., 2020; Rienzi et al.,

2012) is being increasingly implemented in many centres. This rise in the use of cryopreserved oocytes has had a positive effect on the practice and delivery of IVF surrogacy treatments for several reasons. It increases the availability of oocyte donors (where needed) and reduces the time it takes to find and match with a suitable donor, which also has a knock-on effect in reducing the need for patients to pursue cross-border donations (Pataia et al., 2021). In surrogacy treatments in particular, it allows both intended parents and surrogates a greater degree of flexibility and control in respect of planning their treatment, by removing the need to synchronize cycles.

Alongside clinical advances in oocyte vitrification, there have been many other noteworthy developments in the provision of surrogacy in the UK in the past 10-15 years. This includes legislative changes allowing non-married or civil partnered heterosexual and same-sex couples (Human Fertilisation and Embryology Act 2008) and, more recently, single intended parents, to apply for legal parenthood via post-birth parental orders (The Human Fertilisation and Embryology (Parental Orders) Regulations 2018). This sits against a background of ongoing social and cultural change, including the legalization of same-sex marriage in 2013 and greater social acceptance of non-traditional family formation.

While IVF was traditionally employed to treat heterosexual infertile couples, there has been increasing use by samesex male couples in light of marriage equality and such demand is likely to continue (Blake et al., 2016). Same-sex male couples (and indeed single men or women, who may or may not be gay), while still facing some sociocultural obstacles to becoming families, have been shown to have similar drivers to pursue (biological) parenthood as heterosexual couples who want families (Carone et al., 2017; Hemalal et al., 2021; Smietana, 2018) and there has been a significant increase in the numbers of same-sex male couples pursuing parenthood via assisted reproduction and surrogacy (Dar et al., 2015; Golombok et al., 2018; Perkins et al., 2016). Recent studies have also shown that many transgender men and women have strong desires to become parents, but also that uptake of fertility preservation is low, particularly in transgender men (Alpern et al., 2022; Amir et al., 2020).

Around 15 years ago, the first reported High Court cases involving UK-based couples using overseas commercial surrogacy markets began to emerge, bringing new and different issues to the fore. The overseas surrogacy landscape has continuously evolved since then: once high-demand markets such as India, Nepal, Thailand, Cambodia or Mexico have now closed their borders to foreigners seeking surrogacy, usually as the result of adverse publicity or concern about exploitation and/or the welfare of women acting as surrogates (Abrams, 2016; Handley, 2018; Ochert, 2015; Photopoulos, 2015, 2016; Taylor, 2017). Ukraine and Russia, two other popular destinations for surrogacy, are now also

largely unavailable due to hostilities between the two countries (Horsey and Mahmoud, 2022; Weis and Kirpichenko, 2022).

Nevertheless, new destinations for those seeking surrogacy continue to emerge (e.g. Greece, Georgia and various parts of Africa), although not without concern for the way these are regulated or operated (Boróka, 2017; Broughton, 2019; Grytsenko, 2020; Horsey and Neofytou, 2015; Neofytou, 2019; see also Moll et al., 2022). In between, some constants remain, such as the USA, where surrogacy is regulated state by state. Surrogacy is prohibited in some US states, but numerous states have well-established commercial surrogacy industries and the amount of travel to these by UK-based intended parents

is not insignificant (Jadva et al., 2021; Levine et al., 2017). However, access to the US surrogacy market comes at considerably higher financial cost than many others (Jacobson, 2020; Smietana, 2019).

In terms of numbers of UK intended parents seeking surrogacy overseas, data from Cafcass (Child and Family Court Advisory and Support Service) show that from 2014 to 2021, while 881 parental orders had been granted in relation to surrogacy undertaken in England, 537 had been granted in respect of the USA, 170 India, 140 'non-UK/other', 139 Ukraine, 47 Canada, 20 Thailand and 7 Nigeria. In the year 2020–21, the data show that 145 parental orders were granted in respect of surrogacies that took place in England, 76 USA, 44 Ukraine, 32 'non-UK/other' and 7 Canada. Thus, although the majority of parental orders granted are in respect of UK-based surrogacies, there are a considerable number of surrogacy arrangements being entered into elsewhere.

Domestic surrogacy is regulated by the Surrogacy Arrangements Act 1985 and the Human Fertilisation and Embryology Act 1990, as amended in 2008, along with various pieces of secondary legislation. Surrogacy is permitted, although it is a criminal offence to broker, arrange or facilitate a surrogacy arrangement for commercial gain. It is also illegal to advertise for or as a surrogate.

Surrogacy treatments in IVF clinics must be undertaken according to the current Human Fertilisation and Embryology Authority (HFEA) guidance from the Code of Practice (currently the 9th edition, 2021: https://portal.hfea.gov. uk/media/ihkjnfqq/2022-07-01-code-ofpractice-2021.pdf). Both intended parents and surrogates should receive all relevant information to enable them to provide informed consent and be given a suitable opportunity to receive implications counselling. It is also good practice for clinics to ensure that the parties are being supported by one of the non-profit surrogacy organizations recognized by the Department of Health and Social Care (DHSC) or have received independent legal advice (Department of Health and Social Care, 2018a, 2018b).

HFEA consent forms must be completed in respect of both the treatment with

gametes or embryos and the resulting legal parenthood. When a woman is to undergo embryo transfer, those treating her should: (i) obtain her consent to the proposed number of embryos to be transferred, and (ii) record her consent in her medical records (HFEA Code of Practice, Guidance note 5). Consent to legal parenthood is subject to specific legal requirements. According to UK law, the surrogate is always to be regarded as the legal mother of the child she gives birth to (wherever in the world this takes place). However, it may be possible for one of the intended parents to be recognized as a legal parent alongside the surrogate. What needs to be ensured by the clinic in terms of consents may vary according to the surrogate's marital status. The Code of Practice contains both guidance and mandatory requirements relevant to legal parenthood (HFEA Code of Practice, Guidance note 6).

To transfer legal parenthood to any intended parents not named on the birth certificate, a bespoke court order (a 'parental order') can be obtained. This transfers legal parenthood from the surrogate (and her spouse or civil partner if she has one and they are also a legal parent) to the intended parent(s) post-birth when certain criteria are met. A revised birth certificate is then issued, with the intended parents listed as the parents from birth and both the child's and the family's identity are resolved. However, this can be a stressful, expensive and time-consuming process.

The laws are complex and it is well known that UK-based intended parents often perceive surrogacy to be risky and uncertain. It is seen as risky because of the fact the surrogate obtains legal motherhood at birth and could therefore legitimately decide to keep the child as her own (Horsey, 2015, 2018; Law Commission, 2019). It is thought uncertain in particular because of the opagueness of the 'rules' around the reimbursement of expenses to surrogates (Brazier et al., 1998; Horsey and Sheldon, 2012; Law Commission, 2019) and the potential effect this is perceived to have on the parental order application process. Much of this (mis)understanding is bred from longstanding and pervasive surrogacy myths (Horsey, 2015), which have undoubtedly been a motivating factor in driving intended parents to seek surrogacy overseas (Jadva et al., 2021).

Campaigners for law reform and the Law Commissions are united in a desire to make domestic surrogacy more attractive for potential intended parents (All Party Parliamentary Group on Surrogacy, 2020; Law Commission, 2019). The DHSC has already committed to this in respect of both funding the Law Commission's review of the law and in publishing official guidance for those considering surrogacy and those involved in the provision of surrogacy services (Department of Health and Social Care, 2018a, 2018b).

The aim of this study was to assess whether societal and legal changes in the last decade have led to any changes in the demographics of those seeking surrogacy treatment, and whether clinical developments, particularly in oocyte cryopreservation, have influenced the choices patients have made. A second aim was to ascertain which findings from this study might usefully feed into the ongoing debates on the potential reform of surrogacy laws. To do this, clinical outcomes were compared and an analysis carried out of trends between four categories of patients accessing surrogacy in the study clinics (heterosexual, same-sex male, single and transgender patients), and between the use of fresh and vitrified oocytes in surrogacy embryo transfers taking place from 2014 to September 2021.

METHODS

A retrospective cohort study was carried out of all intended parents whose surrogate had undergone embryo transfer at either of two London Women's Clinics (London, Cardiff) between 2014 and the end of September 2021. The inclusion criteria were limited to intended parents whose surrogate had already undergone an embryo transfer; intended parents who had initiated the surrogacy process, or who had created and cryopreserved embryos for the purpose of future surrogacy treatment, were excluded from this study.

The retrospective analysis focused on a total of 119 surrogacy agreements (defined as the agreement between an intended parent and a surrogate, irrespective of the number of embryo transfers undertaken in that agreement). Within these agreements, 179 fresh and vitrified embryo transfers were made to 108 surrogates on behalf of 112 intended parents (coupled or solo) over the 8-year timeframe. These 179 embryo transfers resulted from 127 oocyte collection or oocyte warming cycles (TABLE 1). Preimplantation genetic testing for aneuploidies (PGT-A) is not routinely offered in this programme but was requested by some intended parents. Eight of the 179 embryo transfers involved transfer of a single known euploid embryo to eight different intended parents. Seven resulted in pregnancy and five of these resulted in live births. There were also three embryo transfers of single balanced and euploid embryos following preimplantation genetic testing for chromosomal structural rearrangements (PGT-SR) (for a translocation) on behalf of one intended parent. No ongoing pregnancy resulted.

While the study timeframe included all surrogacy embryo transfers undertaken between 2014 and September 2021, the year of embryo creation did not necessarily correspond to the year the embryo was transferred.

The treatment protocols used were in accordance with UK regulation (Human Fertilisation and Embryology Act 1990, 2008) and were carried out in a facility inspected and licensed by the HFEA. This retrospective analysis did not require ethical or institutional review board approval, as it assessed clinical outcomes and used observational data from previously validated and approved procedures, practised under HFEA licence.

Before starting treatment, counselling sessions were provided to the intended parents and the surrogates. Prospective intended parents and surrogate patients were treated in line with the current HFEA regulations from the Codes of Practice in force at the relevant times. Intended parents underwent the necessary baseline screening for infectious diseases including HIV and hepatitis B and C, as stipulated by the HFEA Code of Practice. Variations in the range of tests required from intended parents were applied depending on the source of the gametes being used (HFEA Code of Practice, Guidance note 11). All gamete donors had been subject to the screening and counselling protocols required by the regulator and in line with the guidelines of national professional societies. Potential surrogates underwent clinical assessment for suitability to act

Number	Heterosexual	Same-sex male	Single male	Single female	Transgender	Total
Total cycles	71	50	2	2	2	127
Patients	64	43 ^b	2	2	1	112
Couples	64	38	N/A	N/A	1	
Surrogacy agreements	67	47	2	2	1	119
Surrogates ^a	66	40	2	2	1	108ª
Cycles with fresh own eggs	43	0	0	1	2	
Cycles with frozen own eggs	0	0	0	0	0	
Cycles with fresh donor eggs	11	19	1	1	0	
Cycles with frozen donor eggs	17	31	1	0	0	
Cycles with genetic screening (PGT-A/PGT-M)	6	5	0	0	0	11
Embryo transfers (fresh/frozen)	98	73	3	2	3	179
Embryo transfers with live birth data available	95	72	3	2	2	174
Embryos transferred	113	84	3	2	3	205
Fetal hearts seen	47	34	1	2	2	86
Live births	38	25	1	2	1	67
Babies born [°]	40	27	1	2	1	71
Implantation rate, %	42	40	33	100	67	
 LBR, %	40	35	33	100	50	

TABLE 1 SUMMARY OF CLINICAL OUTCOMES FROM 179 SURROGACY EMBRYO TRANSFERS

LBR = live birth rate; N/A = not available; PGT-A = preimplantation genetic testing for an euploidies; PGT-M = preimplantation testing for monogenic/single gene defects. ^a Two surrogates acted for >1 intended parent (three couples each).

Iwo surrogates acted for >1 intended parent (three couples each).

 $^{\rm b}$ In five same-sex male couples both intended parents within the couple had treatment.

° Includes all babies born on or before 10 February 2022.

as a surrogate, based on past medical, obstetric, gynaecological and psychiatric history, as well as the required screening for infectious diseases.

Ovarian stimulation in intended parents or donors was carried out using the standard approaches used for IVF in the study clinic, as were the criteria for applying intracytoplasmic sperm injection and for freezing and selecting embryos for transfer. In those cases involving PGT-A, the standard clinical and biopsy protocols were again applied. Endometrial preparation in the surrogate was achieved using either her natural cycle or hormone replacement therapy, as clinically indicated. More details of the clinical and laboratory procedures used are provided in previous publications (Bodri et al., 2017; Pataia et al., 2021).

The main clinical outcome considered was live birth rate (LBR). Chi-squared tests were used to analyse the statistical significance in LBR between heterosexual and same-sex male patients accessing surrogacy treatment. As the sample sizes of single male, single female and transgender patient categories were small (n < 5), it was not possible to analyse them for statistical significance.

Any trends in the patient categories accessing surrogacy treatment over time were also looked at, by examining the proportion of patients in each category who initiated cycles (whereby a cycle is defined as the initial oocyte warming or oocyte collection and any resulting embryo transfer) or underwent surrogacy embryo transfer each year between 2014 and September 2021. Lastly, the proportion of embryo transfers that resulted from the use of either fresh or vitrified oocytes was observed, together with an assessment of trends in their use between 2014 and September 2021. Chi-squared tests were also used to analyse whether there was any statistically significant difference in LBR between fresh or vitrified oocyte use.

RESULTS

The cohort of 108 surrogates underwent a total of 179 embryo transfers on behalf of 112 intended parents (as shown in TABLE 1, two surrogates had treatment with more than one couple at LWC). Records show that several of the surrogates in this study were either related to or previously friends with the intended parents, although it is not possible to be sure exactly how many. Similarly, several came through a number of the non-profit surrogacy organizations that exist in the UK to support surrogacy. It would be useful to record such details in future surrogacy cases. By February 2022, 71 babies had been born to 61 surrogates (with five pregnancies ongoing).

There was no significant difference in LBR between heterosexual and same-sex male patients (TABLE 1): 64 heterosexual patients, 98 embryo transfers, LBR 40%; same-sex male couples, 43 patients, 73 embryo transfers, LBR 35%. For the other categories of patient, the sample size was too small (n < 5) to determine any statistical significance. As far as we are aware, there has been no issue with disagreements between the surrogates and intended parents in the arrangements that led to the 71 live births and the parental orders appear to have proceeded without difficulty. Many of the intended parents (80) have embryos remaining in storage, amounting to 163 embryos. Given the increase to 55

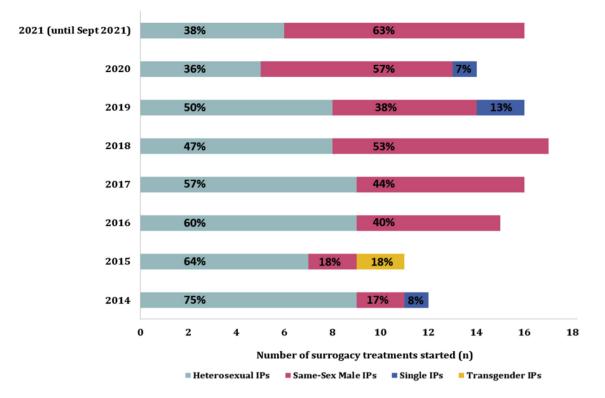


FIGURE 1 Changes in social demographic groups undertaking embryo transfer to a surrogate over time. IP = intended parent.

years now applied to the amount of time embryos can be kept in storage (*Human Fertilisation and Embryology Authority* (*HFEA*) 2022), this may allow a significant number to pursue a sibling surrogacy arrangement should they later desire.

No significant difference was observed in LBR between fresh and vitrified oocvte usage. Fresh oocytes were used in 110 embryo transfers, resulting in 41 live births (with three pregnancies ongoing); vitrified oocytes were used in 69 embryo transfers, resulting in 26 live births (with two pregnancies ongoing) (TABLE 1). The use of vitrified oocytes has increased year on year, while fresh oocyte use has declined since its peak in 2019 (FIGURE 1). The number of surrogacy cycles initiated using vitrified oocytes surpassed the use of fresh oocytes in 2019 for the first time, and this trend has continued. No heterosexual intended parents used their own vitrified oocvtes in the entire study timeframe. When vitrified oocytes were used, all were donor oocytes.

A steady increase in the number of surrogacy embryo transfers over time is evident. Heterosexual couples constituted the majority category of intended parents accessing surrogacy in the study centres in most years from 2014 to 2020. However, the proportion of same-sex male couples undertaking surrogacy embryo transfers has increased steadily, with their number surpassing that of heterosexual couples for the first time in 2017 and again in 2018 and 2021 (up to September).

Within the study cohort there were five same-sex male couples where both intended parents within the couple had treatment. All five of these couples had treatment with the same surrogate each time. In two cases, both partners had live births with the same oocyte donor/ surrogate (one embryo transfer each). In one case only one partner had a live birth following embryo transfer (two embryo transfers each). In another case neither partner was successful in achieving a live birth following treatment (one embryo transfer each). Finally, one couple was unsuccessful in achieving a live birth following treatment (one embryo transfer for partner 1, two embryo transfers for partner 2), however partner 2 went on to create embryos with a different oocyte donor and was able to achieve a live birth (one embryo transfer).

Trends in cycle initiation were also observed. While the study timeframe included all surrogacy embryo transfers undertaken between 2014 and September 2021, the year of embryo creation did not necessarily correspond to the year the embryo was transferred. A small fraction of surrogacy treatment cycles (n = 10) initiated prior to 2014 (FIGURE 1) were excluded as the number of these was very low, thus the data are too small to draw significant conclusions from. In 2014, of the 12 cycles initiated, while the majority were for heterosexual couples, two were initiated by same-sex male couples and one by a single male intended parent; in 2015, of 11 cycles initiated, there were again two cycles initiated by same-sex male couples, and also two by a transgender (FtM) patient. However, from 2016 the proportion of same-sex male couples initiating surrogacy cycles increased, surpassing the number of heterosexual couples for the first time in 2018 and then again in 2020 and 2021 (FIGURE 1).

The number of surrogacy cycles and embryo transfers for single and transgender intended parents remains a small proportion of all surrogacy treatments undertaken across all years.

DISCUSSION

As previously noted, the use of vitrified oocytes in IVF treatments now produces comparable results to those achieved with fresh oocytes, supporting their increased (and in many cases routine) use in fertility treatment centres. Vitrified oocyte usage allows for more freedom and flexibility over when surrogates undergo embryo transfer compared with synchronized fresh embryo transfer from a fresh oocyte cycle, which has benefits for both surrogates and intended parents.

The key benefit is that surrogates and intended parents can undergo treatment at a time that is convenient for them and minimizes disruption to their lives. It also minimizes the risk of cancelling fresh embryo transfer in cases where synchronization cannot be achieved. The results showing no significant difference in LBR between the use of fresh versus vitrified oocytes in surrogacy embryo transfers emphasize that this is a viable and beneficial treatment option, building on previous studies in the context of oocyte donation (*Pataia et al., 2021*).

Vitrified oocyte use in surrogacy treatments across the study centres has now overtaken the use of fresh oocytes and the proportion continues to rise. It can be speculated that some of the movement towards increased use of vitrified oocytes is driven by the increase in same-sex male couples accessing surrogacy treatments.

The increase in same-sex male couples accessing (domestic) surrogacy can be linked to changing social attitudes about same-sex marriage and same-sex male couples starting families (*Golombok et al.*, 2018; *Hemalal et al.*, 2021; *Lindheim et al.*, 2019; *Norton et al.*, 2013). There may also be an increased awareness of the ability to undertake a surrogacy arrangement in the UK rather than having to go overseas, driven by campaigns for law reform and an increased visibility of both surrogacy and same-sex parenting in more recent years.

Data from this study are consistent with that collated by Cafcass on the number and proportion of parental orders being applied for by same-sex couples, which 'near doubled from 69 in 2014–15 to 115 in 2020–21' (*My Surrogacy Journey, 2021*). Out of all the same-sex male couples who used vitrified donor oocytes in this study, all but one couple obtained these from London Egg Bank, our affiliated centre, perhaps indicating that the ability to source vitrified donor oocytes and access surrogacy treatments within one centre is particularly helpful for this category of patients. It is also interesting to consider the five same-sex male couples in the study cohort, where both partners had treatment using the same donor oocytes, as this suggests a desire to create a form of family continuity and patterns of genetic relatedness between parents and potentially between siblings.

It is worth noting the dip that was observed in the overall number of surrogacy treatments undertaken in the study centres in 2020, out of step with the overall steady growth trend. This may have been a result of the global Covid-19 pandemic, which meant licensed fertility centres in the UK had to close for several months, as well as more general delays, changes in protocols, ease of access and travel, etc. caused by restrictions. Such observations have been made about fertility treatment provision globally (Cutting et al., 2021). Even when reopened, clinics were advised to be cautious and much treatment was delayed or postponed, especially in the early part of the pandemic (Blumenfeld, 2020; Boivin et al., 2020).

While the proportion of same-sex male couples initiating cycles remained high, those proceeding to surrogacy embryo transfer during 2020 decreased and was lower than the proportions seen in all other years from 2017 to 2021. While this is not immediately obvious as an effect of the pandemic, it may be the case that same-sex couples, who are not accessing surrogacy for medical reasons in the same way that many heterosexual couples are, chose to postpone embryo transfers, or even engagement with surrogacy support organizations, while the strictest restrictions were in place. The data for 2021 show that the proportion of same-sex male intended parents proceeding to embryo transfer once again exceeded that of heterosexual couples.

Three of the five surrogacy treatment cycles initiated by single intended parents in the study clinics have taken place since 2019, with the corresponding embryo transfers all taking place during 2020. The law was changed in 2019 to enable solo parents through surrogacy who have a genetic link to the child to apply for a parental order. Anecdotally, surrogacy support organizations report

more enquiries and membership of solo intended parents since the law change, and Cafcass data show that there have been healthy numbers of solo intended parents applying for parental orders since 2019 (although it should be noted some of those reported so far would have been retrospective applications) (My Surrogacy Journey, 2021). In any case, although more solo intended parents (especially men) may be encouraged by the change in law to use surrogacy to have a family, their number is likely to always be far smaller than couples seeking surrogacy. The number of transgender intended parents accessing surrogacy is also likely to remain small, however their needs should also not be forgotten in any future law reform. The transgender patient in this study was female-to-male. and had frozen oocytes. It is likely that trans women (MtF) in particular may seek to become mothers via surrogacy but, as the UK law stands, if they do this without a partner then unless they freeze spermatozoa before transitioning, they will be unable to become a legal parent. It is unclear whether the Law Commission's proposals to allow people to become legal parents following 'double donation' where there is a 'medical necessity' (Law Commission, 2019, 12.57) would include transgender intended parents.

This is the first clinical report of a large series of surrogacy treatments in a UK-licensed IVF centre. The data illustrate how societal, legal and clinical developments have led to a steady rise in surrogacy treatments undertaken in the study clinics and an increase in the proportion of same-sex male couples undergoing treatment. These changes may reflect the higher visibility of surrogacy in the last decade, as well as campaigns highlighting the positives of UK-based surrogacy. Undoubtedly it also reflects changes in legislation allowing more categories of people to apply for legal parenthood following surrogacy.

The relative increase in use of vitrified oocytes has the benefit of offering both intended parents and surrogates flexibility when planning treatment; this allows them to undergo treatment at a time that is convenient for them and leads to less disruption to their lives.

While the comparable clinical outcomes between the categories are reassuring, as is the ability to offer a surrogacy programme that supports a wide range of diverse family situations, there is widespread recognition that the current legal position on surrogacy needs reform, especially in respect of legal parenthood and advertising.

These findings and analysis highlight the urgency of such a review and the importance of the pending recommendations for law reform by the Law Commissions, especially in relation to diverse family forms, as well as the need for additional follow-up studies. In particular, it would be beneficial to record the views of intended parents and surrogates on their treatment and their experience navigating the surrogacy process (an area that has up to now received scant attention) so their lived experiences can help to inform the debates leading to a new law.

ACKNOWLEDGEMENTS

We thank our large team of nurses, counsellors and administrators from both London Women's Clinic and London Egg Bank for their diligence in creating a successful surrogacy programme at LWC. Zaina Mahmoud provided helpful comments on the manuscript. A poster showing data discussed in this paper was presented at the Fertility 2022 meeting in Liverpool in January 2022. Sadie O'Dwyer is thanked profusely for helping with the preparation of the manuscript.

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Received 15 February 2022; received in revised form 30 May 2022; accepted 31 May 2022.