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Reproductive rights where conditions apply: an analysis of discriminatory practice in funding criteria against would-be parents seeking funded fertility treatment in England

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ABSTRACT

Access to in vitro fertilisation (IVF) funding in England is limited by a range of local criteria set out historically by Clinical Commissioning Groups (CCGs) (now superseded by Integrated Care Boards (ICBs)). Many of these criteria discriminate on the grounds of sexual orientation, relationship status and existing family structure. Contrary to increasing rates of IVF treatment across the UK, NHS funding for IVF treatment has decreased, in some cases rapidly, across most areas of England. This article reviews the eligibility criteria previously developed by CCGs and critically examines three major discrepancies in entitlement to funding: (i) the postcode lottery; (ii) restrictions placed upon lesbians and single women; and (iii) existing family structures as less deserving of funding. Inconsistencies in IVF funding are framed within broader discussions of discrimination and inequality within fertility funding. Recommendations for social and political change are made, alongside areas for future research engagement.

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Introduction

The postcode lottery of funding for in vitro fertilisation (IVF) treatment has been a long-standing issue in reproductive rights across England. In contrast to England's more restrictive standards, Scotland and Wales have adopted more balanced approaches to fertility treatment in recent years, with Scotland now offering up to three funded cycles of IVF/ICSI (Fertility Network UK, 2021a) and Wales now offering up to two (Fertility Network UK, 2021b), irrelevant of postcode. Northern Ireland has a lower provision of funding which is more in-line with that offered in England, as they offer only one cycle of fertility treatment and one frozen embryo transfer. A Northern Ireland campaigning group, Fairness in Fertility, have been calling for equal access to fertility treatment, arguing that three funded IVF cycles should be the 'gold standard' (Connolly, 2018). Indeed, the National Institute for Health and Care Excellence (NICE) have stressed the importance of three full cycles of IVF, stating that this 'is both the most cost effective and clinically effective number for women under the age of 40' (NICE, 2014a).

Limited access to funding for would-be parents in England produces a range of economic, psychological, and sociological implications. Reproductive rights, which are considered human rights (Trinchant et al., 2020), come down to luck of location, age, sexual orientation, relationship status and existing family structure. This is an interesting predicament considering the rate at which infertility is rising. According to NICE (2014b), 'it is estimated that infertility affects 1 in 7 heterosexual couples in the UK'. Male factor infertility is the most prevalent type, closely followed by unexplained infertility and ovulatory disorders (NICE 2014b). Although such statistics indicate a pertinent issue, there are limited meaningful resources available which aim to educate the public about infertility. This is particularly noticeable when analysing school sex education programmes, with the term 'infertility' being completely absent from the Department of Education (2022) Statutory Guidance on Relationships and Sex Education for Secondary Schools.

With headlines such as '*The infertility crisis is beyond doubt. Now scientists must find the cause*' (McKie, 2017), '*Falling sperm counts 'threaten human survival', expert warns*' (Bryant, 2021), '*Air pollution significantly*

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raises risk of infertility, study finds' (Carrington, 2021) and 'Male infertility: why a sperm-count crisis is on the way' (Whitworth, 2021), the mediated message is that we are living through a reproductive health crisis. Environmental and reproductive epidemiologist Shanna Swan has warned that this infertility crisis poses a global threat, comparable to the threat of climate change (Swan, 2020), suggesting that 'most couples may have to use assisted reproduction by 2045' (Corbyn, 2021). Such headlines are, however, disputed within the fertility expert community, with ecological factors, pregnancy-postponement, and age-related infertility, being highlighted as major contributors to the rise in fertility treatment (Perret et al. 2022; Delbaere et al., 2020; Inhorn, 2022; Pedro et al., 2018; Wang et al., 2019). Live birth rates in England and Wales decreased for the fourth consecutive year in 2019 and are now the lowest they have been since 2004 (Office for National Statistics, 2020), highlighting the effects of pregnancy postponement.

The Human Fertilisation and Embryology Authority (HFEA) have stated that 'the growth in IVF cycles has stabilised since 2017, but frozen embryo transfers continue to increase year on year, increasing 86% from 2014–2019' (HFEA, 2021a). Such figures highlight the need for assisted reproductive intervention in the UK, with delayed parenthood presenting as a major contributing factor to this requirement. The mean age of entry into parenthood has increased in the UK, with more couples delaying childbearing contributing to the issue of declining reproductive capacity (Berrington, 2017). As noted by Merz and Liefbroer (2012, p. 597), 'a considerable proportion of young adults drift into childlessness as a result of continuously postponing parenthood because of educational commitments and career opportunities'. This is particularly problematic for women whose fertility quickly declines beyond the age of 35, in contrast with men whose fertility declines at the age of 45 (British Fertility Society, 2021). Research has highlighted a growing tendency for women to delay motherhood until their late 30s or into their 40s to pursue educational goals and build careers (see Hughes, 2021; Lemoine & Ravitsky, 2015; Meissner et al., 2016; Sauer, 2015). Furthermore, increasing financial pressure on couples, 'particularly the cost of housing, and the ever-growing list of activities that can be enjoyed by the relatively wealthy DINKYs (double income, no kids yet) form a strong deterrent to early childbearing' (Ledger, 2009, p. 11). There are also limited opportunities for productively combining parenthood and employment (Merz & Liefbroer, 2012); the lack of availability of high-quality funded childcare

means that couples (mostly women) are faced with the choice to either disrupt their careers or reduce their wage to fund childcare. Furthermore, British media portrayals of older mothers normalise, and celebrate, delayed parenthood. Research by Mills et al. (2015) found that delayed childbearing was portrayed positively in British media, with age not being acknowledged as an obstacle to parenthood, serving to thwart important public health messages. Infertility is consequently politicised by an array of wider social factors and the rising rates of childlessness should thus be viewed within social, as well as medical, contexts.

This article critically interrogates the inequalities in local funding criteria across England (established by Clinical Commissioning Groups (CCGs), but which have now been superseded by Integrated Care Boards (ICBs)) and questions the social, moral, and political incentives behind exemptions from IVF funding. Three key themes are examined which detail the reasons for exemption from funding and/or limitations of funding, these are: (i) location; (ii) lesbians and single women; and (iii) existing family structures. The discussions presented throughout this commentary situate infertility within a wider sociological landscape where issues of morality and discrimination are frequently occurring. Before engaging with these three themes specifically, this commentary firstly addresses the issue of discrimination in IVF funding more broadly.

Direct discrimination within IVF?

Direct discrimination is when someone is treated less favourably than another person or people based on their protected characteristics (Equality and Human Rights Commission, 2019). The Equality Act 2010 states that 'A person (A) discriminates against another (B) if, because of a protected characteristic, A treats B less favourably than A treats or would treat others'. We can see from the IVF funding exclusion list that direct discrimination manifests itself in several ways. Although not all the themes discussed in this commentary relate to the protected characteristics of the Equality Act 2010, it is clear that where one lives; a person's sexual orientation; whether someone wishes to pursue parenthood as a single mother/father; whether someone has had a child or children from a previous relationship where infertility did not present as an issue; and those experiencing secondary infertility (where they have had a live birth in the past but have gone onto experience infertility when trying for another child), should not constitute unreasonable grounds for equal access to funding.

At present, the law does not protect those undergoing fertility treatment, with patients having no statutory entitlement to time off during their fertility journey. Instead, patients who are fortunate enough to be funded, or who can afford the costs of IVF treatment, are only protected by law when they are considered legally pregnant. The Equality and Human Rights Commission's Employment Statutory Code of Practice (Equality and Human Rights Commission, 2010) state that 'after a fertilised embryo has been implanted, a woman is legally pregnant and from that point is protected from unfavourable treatment because of her pregnancy'. If implantation fails or the woman experiences miscarriage, the protection period ends 'at the end of the period of 2 weeks beginning with the end of the pregnancy' (Equality Act 2010, s.18(6)). The fertility journey prior to embryo transfer (the end-stage which some patients do not even arrive at due to low fertilisation rates and no available embryos) thus leaves patients exposed to discrimination. The medical process of egg retrieval and fertilisation of eggs 'in the lab' is not covered by the protected characteristic of pregnancy and maternity due to the unique context of IVF where embryos exist for a period outside of the womb (developing in the lab or being frozen). Even in cases where an embryo is successfully transferred to a patient, it may not implant, thus meaning that the woman will not meet the legal criteria of pregnancy. Although this is also an area of contention for those able to conceive naturally, the absence of medical intervention and financial constraints in natural conception make for a markedly different lived experience, alongside the fact that those trying to conceive naturally do not know whether successful fertilisation has occurred.

Legal reform is therefore required in this grey area which overlooks the medical complexities of IVF, and subsequent physical and mental effects of it. The physical recovery of a stimulation cycle and egg retrieval alone warrants legal protection. Such protection could mirror the definition of direct discrimination outlined in the 2010 Equality Act when it comes to pregnancy and maternity, meaning that a person undergoing fertility treatment cannot be treated unfavourably at work during the period of a stimulation cycle, egg retrieval, surgical sperm retrieval and/or embryo transfer. Examples of unfavourable treatment during this time might include being turned down for promotion because of an anticipated pregnancy or being denied time off work for a follicle scan during a stimulation cycle. Such scenarios require proper legal protection so that, if an employee is open with their

employer about undergoing IVF treatment, they feel assured that they are legally protected at work during this time.

Change in this area is, fortunately, in motion, with social and political efforts beginning to make waves. MP Nickie Aiken proposed a parliamentary Bill in June 2022 'to give individuals and couples the statutory right to take the time off for fertility treatment, just like they would have for antenatal appointments' (Aiken, 2022). Allowing those undergoing fertility treatment to have paid time off work would indeed be a promising step forward and, in the words of Aiken, this change in law would enable employees to be 'happy and stress free because they will then be more productive' (Aiken 2022 in Arnold 2022). The second reading for this Bill is scheduled to take place in January 2023 and, if passed, may well provide the radical change campaigners have been waiting for.

As it stands, not only are those who seek funded fertility treatment discriminated against due to a variety of factors, often being left with no choice but to self-fund, they are also discriminated against throughout the course of their IVF journey due to an absence of legal protection. With such issues at play, it is clear that fertility treatment is 'an issue ripe for legal challenges' (Last, 2020) and must be interrogated from a socio-legal perspective in order to add credence to campaigns for change.

Luck of location: the postcode lottery

Although NICE's fertility guidelines put forward recommendations of who should have access to IVF treatment on the NHS in England and Wales, it has been down to individual CCGs (now ICBs) to make the final decisions about who should have access to NHS funding in their region. These criteria are often stricter than what is recommended by NICE (NHS, 2021a), with individual CCGs/ICBs adopting contrasting approaches to the range of eligibility criteria, which are outlined in Table 1.

These criteria comprise a range of controversial factors for whether IVF treatment should be funded, including:

- How 'stable' a relationship is (although this is not always listed as a requirement, whereas others require the couple to have been in a relationship for at least two years);
- Whether a surrogate is required (of which the vast majority of CCGs/ICBs either don't list as a criterion

Table 1. Funding criteria considered by CCGs in England.

Funding Criteria Considered by CCGs in England
Number of cycles funded
Definition of a cycle (fresh or frozen)
Eligibility age range (female)
Eligibility age range (male)
Time spent trying to conceive
Definition of childlessness
Stance on single embryo transfer
BMI (female)
BMI (male)
GP registration status
Stable relationship (length of time as a couple)
Previous sterilisation
Lifestyle factors (focus on smoker status and alcohol consumption)
Anti-Mullerian hormone (AMH) criterion
Antral follicle count (AFC) criterion
Follicle stimulating hormone (FHS) criterion
Same-sex couples and single women
Surrogacy
Egg donation
Sperm donation
Embryo/egg/sperm storage

Source: Fertility Network UK (2021c).

or specify that they will not fund in such circumstances);

- Egg and sperm donation (of which a range of specific conditions apply);
- Definition of childlessness (some state that no funding will be granted if either partner already has a child, whilst others will still fund if one partner has a child from a previous relationship);
- Time to conceive (some specify 1–2 years, whilst others specify a minimum of 3 years);
- Same-sex couples and single women (this is mostly not listed but a minority state that funding will be granted where subfertility – no live birth following artificial insemination – can be demonstrated, often through six unsuccessful intrauterine insemination (IUI) attempts); and
- Age (some will only fund treatment for women under 35, whilst others will fund up to the age of 42).

The rigidity of eligibility in the criteria alone thus highlights a variety of obstacles to those seeking funding. It should also be noted that NHS England funding is available centrally for armed forces personal, although some restrictions, such as the pre-existence of children from previous relationships and secondary infertility, still apply (NHS England, 2014).

Further to these restrictions, the discrepancies in funding vary greatly across the country, resulting in what has been termed a ‘postcode lottery’ (Blyth & Golding, 2008; Kennedy et al., 2006; Mladovsky & Sorenson, 2010; Wise, 2014). There is a particularly staggering difference when comparing CCGs/ICBs in the north to the midlands and the south. The national

lobbying group Fertility Fairness (2021) are campaigning for more equal access to NHS treatment, including the right to access up to three full cycles of IVF on the NHS, and have drawn attention to the North East commissioning collaborative as the ideal standard. They state that the thirteen CCGs that made up the North East commissioning collaborative constituted ‘the best collective group of CCGs in the country, offering the ‘full’ 3 cycles of IVF treatment as recommended by NICE’ (Fertility Fairness, 2021). In 2017, Fertility Fairness constructed an IVF League Table which highlights the discrepancies that exist in the IVF postcode lottery. The number one ranking went to the CCGs in NHS Bury, NHS Heywood, Middleton and Rochdale, NHS Oldham and NHS Thameside and Glossop. These offered 3 fully funded IVF cycles and defined an IVF cycle as ‘one fresh transfer and all viable frozen transfers’ (Fertility Fairness, 2017). This means that, if a woman has any number of embryos to freeze from a fresh cycle, all transfers of these embryos will also be fully funded. This is the gold standard in-line with NICE’s recommendations.

Inequality in access to funding is apparent as you get further down the IVF League Table; in fifteenth position were CCGs such as NHS Wokingham and NHS Walsall who offered one fresh IVF cycle only and fund no frozen transfers. Below this, and in the very final ranking of seventeenth on the table, are CCGs including NHS Croydon, NHS South Suffolk, and NHS Herts Valleys (alongside a further four), who offer no IVF funding at all. Within this landscape of inequality, if you live in Rochdale and meet the eligibility criteria, you can access a vast amount of funding (and could be funded, for example, for up to three fresh transfers and all frozen transfers), whereas, if you live in Croydon, you have to self-fund entirely, irrelevant of your circumstance. The luck of location in the IVF postcode lottery means that, if an individual or couple live in an area with limited or no funding, they will have to self-fund. For those with lower household incomes, self-funding may simply not be an option. If reproductive rights are human rights, the question that emerges from the IVF postcode lottery is a concerning one: why, in many instances, is IVF treatment only available to those who can afford it?

There are limited options available for individuals/couples seeking to lower the price of their IVF treatment. Egg sharing, where ‘some clinics offer free or discounted IVF treatment to patients who agree to share their eggs with another patient or couple having treatment’ (HFEA, 2021b), is the most accessible route to IVF for those struggling to self-fund. Egg sharing is

subject to a range of criteria, notably surrounding age, and requires several health tests to ensure a patient is eligible. Those who enter the egg sharing process are required to donate half of the eggs retrieved at their egg collection to a recipient, who pays the applicable egg collection cost (Ahuja et al., 1996). Because of this, there is a potential for greater incentive amongst those with lower incomes to opt-in to the scheme, ‘depicting the use of money as contaminating, creating undue inducement, exploitation and commodification of the human body’ (Haimes & Williams, 2018, p. 825). Indeed, research has explored whether egg sharing programmes symbolise ‘toxic money’ or ‘paid altruism’ (Gilman, 2018), with ethical concerns being raised over the choices available to those who are unable to access NHS funding.

Studies have, however, produced findings contrary to such concerns of exploitation, with data from egg sharers suggesting that there was ‘little demographic difference between donors and recipients... [which] militates against concerns about middle-class recipients exploiting working class ‘poorer’ donors (Gurtin et al., 2012a, p. 706). Further research has supported this notion, with interviewees in one study regarding their decision to donate their eggs as ‘freely made’ (Haimes et al., 2012). However, this study also revealed that ‘clinic staff noted that the local increase in NHS-funded IVF caused a decline in the number of volunteers for the Newcastle egg sharing for research scheme’ (Haimes et al., 2012, p. 1209), thus implying that funding does play a role in the decision to donate eggs, whether this be to recipients or to research. As one interviewee from the study stated: ‘I suppose it could be [exploitation] ... I still think you’re paying a heavy price by giving half your chances [away]’ (Haimes et al., 2012, p. 1204).

The HFEA touch upon such ethical considerations in their guidance on egg sharing, stating that donors should ‘consider the very real risk that the person [they] share [their] eggs with gets pregnant and [they] don’t’ (HFEA, 2021b). Although altruism is a frequently cited component of egg sharing, access to funding also plays a role in such decision-making. In a study based on data collected from 48 egg donors, ‘the desire to have a child (87.2%)’ was the key motivator for entering into the egg sharing programme, followed, in equal proportion, by wanting to ‘obtain a cheaper treatment (87.2%) as well as the wish to help someone else have a child (66%)’ (Gurtin et al., 2012b, p. 186). The postcode lottery can thus be seen to influence levels of egg-sharing. This is an area which future research should seek to interrogate in terms of

identifying whether levels of egg-sharing are higher in areas where local criteria are more restrictive.

The IVF postcode lottery presents patients with a range of challenges, with local criteria discriminating against several protected characteristics: notably age, sexual orientation, and pregnancy and maternity. Considering the rate at which infertility is increasing, it is essential that there is a uniform approach to fertility funding in England, with less restrictive criteria ensuring that all those undergoing fertility treatment have a fair shot at starting or extending their family before they have to resort to self-funding. To raise awareness of this issue, the realities of IVF treatment must be familiarised in the media and popular culture. It is essential that stories of unsuccessful IVF treatment align with the success stories, which tend to dominate media headlines, films, and television shows. As outlined by St Louis (2013) in her article *‘Desperate couples are misled by only positive reports of IVF’*, unsuccessful IVF is rarely a figment of public consciousness:

‘Hardly anyone bears witness to the spiralling cost of IVF treatment and the enormous sacrifices that couples are prepared to make. When did you last see a TV medical documentary that showed the gruelling failed treatments that cost thousands, and coupled with debt from having to remortgage? Or a final haunting shot of a beautifully decorated but uninhabited child’s nursery?’ (St Louis, 2013).

To end the postcode lottery, the realities of IVF treatment need to be more openly discussed. The success rates of IVF vary with age but, even for those under 35, there is only a 32% chance of IVF treatment resulting in a live birth, with the chance decreasing to 25% for those aged 35–37 and dropping further again to those over 37 – notably to 11% for those aged 40–42 (NHS, 2022). For those outside of the IVF-world, funding can often be an area of blissful ignorance, with those able to conceive naturally if all those who need fertility funding simply have access to it.

Lesbians and single women

Support for alternative family structures has increased in recent years in-line with the advancement of human rights during the beginning of the 21st century. Notably, the Human Fertilisation and Embryology Act (2008) which ensured equality in assisted reproduction, alongside the legalisation of same-sex marriage in the UK in 2013, have served to normalise and equalise the concept of same/single-sex parenting. Ethical debates surrounding same/single-sex parenting have focussed on whether a child can flourish equally

well without a father (McCandless & Sheldon, 2010) and have largely been concerned with the welfare of the child (Asplund, 2020). However, several studies have rebutted such concerns, finding that children's wellbeing is *not* negatively affected by living in same/single-sex households (see Biblarz & Stacey, 2010; Moore & Stambolis-Ruhstorfer, 2013; Rabindrakumar, 2018; Tasker, 2010). One study revealed no differences in parenting quality between solo-mother family types and two-parent families, apart from lower mother-child conflict in solo mother families – a favourable difference (Golombok et al., 2016), with another identifying 'more positive family relationships and greater psychological wellbeing among young adults raised in female-headed homes' (Golombok & Badger, 2010, p. 150).

Although such research findings give credence to female-only parenting, discrimination continues to play a role in the exclusion of same-sex couples and single women from fertility funding. This is considering public attitudes towards same/single-sex parenting shifting significantly in recent years. A survey by Fauser et al. (2019) explored public attitudes across Europe (including the UK) towards the funding of assisted reproductive technology (ART) and revealed that most of the survey population supported IVF access for single women (61% in support) and same-sex female couples (64% in support). However, a 'gay tax' (Hutton, 2020) continues to prevail which serves to disadvantage both lesbian couples and single women. It has been a requirement of most CCGs for women to have spent a period of time trying to conceive (usually between 2–3 years) which, for lesbians and single women, comes at great cost:

'For patients who cannot conceive through vaginal sexual intercourse, artificial insemination (AI), often in the form of intrauterine insemination (IUI), is used to determine infertility. This sometimes applies to heterosexual couples for whom vaginal intercourse is difficult or impossible, but mostly it is a requirement of same-sex female couples and single women. CCG policy requires single women or same-sex female couples to undergo 6–12 cycles of AI (of which 6 are often required to be IUI) before their infertility can be determined. This aligns with NICE guidance' (British Pregnancy Advisory Service, 2021, p. 6).

Unless subfertility is already known, it is an expectation that lesbians and single women go through at least 6 IUI procedures, which most CCGs/ICBs do not fund. There have been a minority of CCGs, such as Yorkshire and Humber, who have funded up to six cycles of IUI treatment followed by further assisted conception if required for those in a same-sex

relationship (Thompson, 2020), but it must be stressed that access to such funding is extremely rare across the rest of England.

Most CCGs/ICBs do not list same-sex couples and single women as part of their funding criteria, with others stating that subfertility must be demonstrated to be eligible for IVF funding, usually through self-funding at least six IUI treatments. The reality of this means that same-sex couples and single women have to self-fund six cycles of IUI treatment which, on average (taking costs from the London Sperm Bank and the London Women's Clinic), amounts to around £2,000 per IUI cycle; so a minimum of £12,000 if all six IUIs are exhausted to demonstrate subfertility. For many, the costs will likely be higher if medication is added to cycles and if donor sperm is sought from abroad, which tends to incur a higher price and transportation cost. With a shortage of donor sperm persisting in the UK (Healey, 2020; Press Association, 2014), sperm donors are increasingly being sought from abroad, notably from Denmark and America, where choice is greater, but prices are higher.

The price of sperm, alongside the sperm shortage in the UK, has also fuelled a black market of sperm donation on social media (Das, 2021), enabling greater access to donors for those who are unable to meet the costs of regulated sperm banks. The use of donor sperm outside of regulated clinics invite a plethora of legal issues (alongside ethical and medical issues), where donors could, if they so choose, legally assume fatherhood of any children born and mothers could, if they so choose, seek financial assistance from donors (who, outside of licensed clinics, could be legally classified as fathers) until any child conceived reaches eighteen. As noted by Taylor et al. (2022), there is a need for 'reproductive justice' in this area. Their research found that 'poor, single, LGBT+ and Black and minority ethnic women are at a significant disadvantage when attempting to access regulated donor insemination' (Taylor et al., 2022, p. 7).

Sexual orientation and/or the choice to pursue parenthood individually come at a great price across most of England. The requirement from many CCGs/ICBs for same-sex couples and single women to self-fund six rounds of IUI treatment puts them at an immediate financial disadvantage when compared to heterosexual couples. Although the criteria for same/single-sex women to undergo IUI before being eligible for funded IVF treatment is comprehensible, and medically logical, funding for six rounds of IUI treatment should be available to women in such circumstances across the country, not just in a minority of areas.

Fertility treatment must be democratised (Mahdawi, 2021), perhaps even means-tested, so that those with lower incomes are not excluded from the possibility of parenthood based on postcode, sexual orientation, or relationship status; of which the latter two strike a particularly personal chord.

Existing family structures: definitions of childlessness and the invisibility of secondary infertility

Most CCGs have defined childlessness as neither partner having any living biological or adoptive children from that or any previous relationship. However, a small number have offered funding to couples where one of the partners has a child from a previous relationship, although this is certainly the exception. These definitions of childlessness also bear some correlation to the issue of secondary infertility, where a woman has had one or more pregnancies in the past but is unable to conceive again later in life (NHS, 2021b). The existence of children, whether these are biological, adoptive or stepchildren, serve to diminish opportunities for IVF funding, even if all other criteria for fertility funding are met.

There is limited research on the psychological effects of IVF non-funding due to having biological, adoptive or stepchildren, or due to experiencing secondary infertility. If, for example, a thirty year old woman married a man of a similar age who had a child from a previous relationship, yet she went on to experience primary infertility (being unable to achieve a pregnancy after a period of trying), her biological desire for a child is deemed inferior to that of a woman with no stepchildren under the rules of most CCGs/ICBs. The pre-existence of children in a relationship thus constitutes a barrier to funding, which, again, raises ethical concerns. Secondary infertility is said to affect 5% of couples (Diaz-Garcia, 2021) and figures from the Office for National Statistics (2011) have revealed that stepfamilies represented 11% of couple families with dependent children in 2011. It is therefore likely that exemption from IVF funding for those experiencing infertility in such contexts leads to the same outcome; where only those who can afford to pursue fertility treatment are able to do so.

The financial pressures of IVF have been identified as a cause of conflict within relationships and have also been found to contribute towards decisions to end IVF treatment (Peddie et al., 2005). Indeed, 'physical, emotional and financial exhaustion have been found to be why couples discontinue treatment'

(Copp et al., 2020, p. 7). The restrictions imposed by most CCGs/ICBs demonstrate hostility towards alternative family structures, alongside a lack of care for those who experience infertility later in life. Several human rights, notably the right to private and family life (Zegers-Hochschild et al., 2013), are compromised by the exclusion of such groups from IVF funding.

Concluding thoughts and recommendations

The restrictions placed on the funding of IVF treatment in England directly discriminate against many who seek such funding, predominantly on the grounds of identity-related, and not medically related factors, such as sexual orientation, relationship status and the pre-existence of any biological, adoptive or stepchildren. As the infertility crisis worsens, so too does access to funding in England. Figures from the HFEA reveal that the number of NHS funded IVF cycles between 2013–2018 decreased everywhere in England other than the North East and the North West. Between 2013–2018, London saw the number of NHS funded IVF cycles fall from 29 to 27%; South East England saw figures fall from 42 to 32%; Yorkshire and Humber's NHS funded cycles decreased from 45 to 26%; and the East of England saw figures for funded cycles fall from 55 to 26% (HFEA, 2021c). In contrast to this, the number of NHS funded cycles *increased* by 9% in Scotland and by 18% in Wales during the same period. The figure remained the same for Northern Ireland at 45% between 2013–2018 (HFEA, 2021c).

The discrepancies in funding between different regions of the United Kingdom largely come down to the broader issue of regional populations. The population of England in 2020 was estimated to be 56,287,000 which bears great contrast to population estimates for Scotland (5,463,000), Wales (3,152,900) and Northern Ireland (1,893,700) (Office for National Statistics, 2021). According to the HFEA (2018), in the year 2017/18, there were 97 specialist treatment clinics offering IVF and embryology services (across the UK and not England alone). If we apply the '1 in 7' (14%) infertility statistic to the population of England, this means that these 97 IVF clinics need to cater to around 7,880,180 cases of infertility in England.

With England facing much larger demand than other regions of the UK, it is unlikely that the gold standard of three funded IVF cycles will be a reality any time soon. However, there is scope to establish a more egalitarian IVF funding system in England, with the cessation of the postcode lottery providing a promising starting point. The system would offer

greater inclusivity if it were to empower all those seeking IVF treatment, irrelevant of location, relationship status, existing family structure or sexual orientation, to gain access to at least one fully funded cycle of IVF. For lesbians and single women who need to 'demonstrate' subfertility, the six-rule requirement of IUI should also be NHS funded up until the age of 35 (where, for most women, fertility rates begin their decline). For women in such contexts over the age of 35, access to one funded cycle of IVF should be standard practise.

Beyond this, there needs to be greater equality within private fertility treatment, too. With clinics across England offering different prices for the same treatment, alongside pricey 'add-ons', many of which are poorly rated by the HFEA, the cost of IVF only serves to enhance the emotional toll fertility treatment has on those who enter into it. Infertility is classed as a 'serious psychological issue', with consistent evidence showing that 'IVF is a very stressful experience that affects the functioning of individuals, and as a couple, and even the relationship with the child conceived through IVF' (Malina & Pooley, 2017, p. 556). More must therefore be done to reduce the financial burdens placed on those struggling with infertility.

This paper has highlighted the discriminatory practice that currently exists in IVF funding in England. Beyond the recommendations for change already cited, there is also a need for more research to be conducted into the effects non-funding can have on individuals and couples seeking IVF treatment. The financial requirements of IVF must be better understood to minimise discriminatory practice and avoid areas of possible exploitation, particularly in the practice of egg sharing. There is also scope to analyse access to fertility treatment from same-sex partnered males, single men and transgender women and men; all of whom are heavily under-researched in the field of infertility and are completely omitted from guidelines on IVF funding. Lastly, future academic debate should consider an alternative model for funding that could be utilised nationally. With neighbouring countries such as France and Spain having extended IVF rights to lesbians and single women in 2021, making funded fertility treatment available to all women regardless of their relationship status or sexual orientation, England now lags behind in the equality and inclusivity stakes.

There is a need for greater transparency when it comes to the availability of funding so that those seeking treatment can quickly ascertain whether they are eligible for funding or not. Conversations about

IVF funding with those outside the 'IVF bubble' often reveal that many people simply aren't aware that funding, in many circumstances, is unavailable for those who desperately need it but don't fulfil the funding requirements. We also need to see improved educative measures surrounding discussing infertility in secondary schools. Indeed, interviews conducted by Lee (2019, p.1185) with women experiencing infertility revealed that 'older participants expressed regret that they were not educated about age-related fertility decline'. Lemoine and Ravitsky (2015) have described this phenomenon as 'sleepwalking into infertility' and argue that education could be an effective tool to encourage empowerment and reshape public policy in this field (Lemoine & Ravitsky, 2015). It is clear that infertility awareness, particularly concerning the prevalence of age, should constitute a mandatory part of the sex and/or inclusivity education programmes in British schools. With infertility levels rising, namely due to a lack of education and awareness, and fertility funding falling, the childhood assumption of 'having your own family' when you grow up has never been more compromised; yet so many children will enter adulthood completely unprepared for this reality and the costly criteria that comes with it. Those excluded from IVF funding should use their voices to contribute to wider activism in this area. Social infertility is not a medical anomaly which can only be addressed through scientific predictions and treatment; it can be completely eradicated through meaningful education and improved social policy.

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References

- Ahuja, K. K., Simons, E. G., Fiamanya, W., Dalton, M., Armar, N. A., Kirkpatrick, P., Sharp, S., Arian-Schad, M., Seaton, A., & Watters, W. J. (1996). Egg-sharing in assisted conception: ethical and practical considerations. *Human Reproduction*, 11(5), 1126–1131. <https://doi.org/10.1093/oxfordjournals.humrep.a019310>
- Aiken, N. (2022). Women going through IVF need protection in the workplace. *Grazia*. <https://graziadaily.co.uk/life/parenting/ivf-workplace-fertility-treatment/>
- Arnold, E. (2022). Allow employees paid leave to attend fertility treatment appointments, MP says. *Evening Standard*. <https://www.standard.co.uk/news/uk/conservative-nickie-aiken-ivf-westminster-malta-b1007846.html>
- Asplund, K. (2020). Use of in vitro fertilization – ethical issues. *Upsala Journal of Medical Sciences*, 125(2), 192–199. <https://doi.org/10.1080/03009734.2019.1684405>

- Berrington, A. (2017). Childlessness in the UK. In Kreyenfeld, M., Konietzka, D. (eds.), *Childlessness in Europe: Contexts, Causes, and Consequences. Demographic Research Monographs* (pp. 57–76). Cham: Springer. https://doi.org/10.1007/978-3-319-44667-7_3
- Biblarz, T. J., & Stacey, J. (2010). How does the gender of parents matter? *Journal of Marriage and Family*, 72(1), 3–22. <https://doi.org/10.1111/j.1741-3737.2009.00678.x>
- Blyth, E., & Golding, B. (2008). Egg sharing: A practical and ethical option in IVF? *Expert Review of Obstetrics & Gynecology*, 3(4), 465–473. <https://doi.org/10.1586/17474108.3.4.465>
- British Fertility Society (2021). At what age does fertility begin to decrease? <https://www.britishfertilitysociety.org.uk/fei/at-what-age-does-fertility-begin-to-decrease/>
- British Pregnancy Advisory Service (2021). *BPAS investigation into the IVF postcode lottery: an examination of CCG policy for the provision of fertility services*. <https://www.bpas.org/media/3369/bpas-fertility-ivf-postcode-lottery-report.pdf>
- Bryant, M. (2021). Falling sperm counts ‘threaten human survival’, expert warns. *The Guardian*. <https://www.theguardian.com/us-news/2021/feb/26/falling-sperm-counts-human-survival>
- Carrington, D. (2021). Air pollution significantly raises risk of infertility, study finds. *The Guardian*. <https://www.theguardian.com/environment/2021/feb/17/air-pollution-significantly-raises-risk-of-infertility-study-finds>
- Connolly, M. (2018). NI women ‘should have three free IVF cycles’. *BBC News*. <https://www.bbc.co.uk/news/uk-north-ireland-46038061> (Accessed 31st March 2021)
- Copp, T., Kvesic, D., Lieberman, D., Bateson, D., & McCaffery, K. J. (2020). Your hopes can run away with your realistic expectations’: a qualitative study of women and men’s decision-making when undergoing multiple cycles of IVF. *Human Reproduction Open*, 2020(4), hoaa059. <https://doi.org/10.1093/hropen/hoaa059>
- Corbyn, Z. (2021). Interview: Shanna Swan: Most couples may have to use assisted reproduction by 2045. *The Observer*. <https://www.theguardian.com/society/2021/mar/28/shanna-swann-fertility-reproduction-count-down>
- Das, S. (2021). Sperm donors on Facebook as fertility clinics run short. *The Times*. <https://www.thetimes.co.uk/article/sperm-donors-on-facebook-as-ivf-clinics-run-short-sqj78ks8b>
- Delbaere, I., Verbiest, S., & Tydén, T. (2020). Knowledge about the impact of age on fertility: a brief review. *Upsala Journal of Medical Sciences*, 125(2), 167–174. <https://doi.org/10.1080/03009734.2019.1707913>
- Department for Education (2022). *Statutory Guidance on Relationships and Sex Education for Secondary Schools*. <https://www.gov.uk/government/publications/relationships-education-relationships-and-sex-education-rse-and-health-education/relationships-and-sex-education-rse-secondary>
- Diaz-Garcia, C. (2021). Secondary infertility: what should you do when the second baby doesn’t arrive?. *IVI*. <https://www.ivi.uk/blog/secondary-infertility-when-second-baby-doesnt-arrive/#>
- Equality and Human Rights Commission (2010). *Employment statutory code of practice*. <https://www.equalityhumanrights.com/sites/default/files/employercode.pdf>
- Equality and Human Rights Commission (2019). *What is direct and indirect discrimination?* <https://www.equalityhumanrights.com/en/advice-and-guidance/what-direct-and-indirect-discrimination#direct>
- Fausser, B. C. J. M., Boivin, J., Barri, P. N., Tarlatzis, B. C., Schmidt, L., & Levy-Toledano, R. (2019). Beliefs, attitudes and funding of assisted reproductive technology: Public perception of over 6,000 respondents from 6 European countries. *PLoS One*, 14(1), e0211150. <https://doi.org/10.1371/journal.pone.0211150>
- Fertility Fairness (2017). *IVF League Table*. <http://www.fertilityfairness.co.uk/nhs-fertility-services/ivf-provision-in-england/>
- Fertility Fairness (2021). *About Us*. <https://www.fertilityfairness.co.uk/about-us/>
- Fertility Network UK (2021a). *NHS funding in Scotland*. <https://fertilitynetworkuk.org/trying-to-conceive/nhs-funding/scotland/>
- Fertility Network UK (2021b). *NHS Funding in Wales*. <https://fertilitynetworkuk.org/trying-to-conceive/nhs-funding/wales/>
- Fertility Network UK (2021c). *NHS Funding FAQs*. <https://fertilitynetworkuk.org/trying-to-conceive/nhs-funding/funding-faqs/>
- Gilman, L. (2018). Toxic money or paid altruism: the meaning of payments for identity-release gamete donors. *Sociology of Health & Illness*, 40(4), 702–717. <https://doi.org/10.1111/1467-9566.12718>
- Golombok, S., & Badger, S. (2010). Children raised in mother-headed families from infancy: a follow-up of children of lesbian and single heterosexual mothers, at early adulthood. *Human Reproduction*, 25(1), 150–157. <https://doi.org/10.1093/humrep/dep345>
- Golombok, S., Zadeh, S., Imrie, S., Smith, V., & Freeman, T. (2016). Single mothers by choice: Mother–child relationships and children’s psychological adjustment. *Journal of Family Psychology: JFP: journal of the Division of Family Psychology of the American Psychological Association (Division 43)*, 30(4), 409–418. <https://doi.org/10.1037/fam0000188>
- Gurtin, Z. B., Ahuja, K. K., & Golombok, S. (2012a). Egg-sharing, consent and exploitation: examining donors’ and recipients’ circumstances and retrospective reflections. *Reproductive Biomedicine Online*, 24(7), 698–708. <https://doi.org/10.1016/j.rbmo.2012.02.008>
- Gurtin, Z. B., Ahuja, K. K., & Golombok, S. (2012b). Egg-share donors’ and recipients’ knowledge, motivations and concerns: clinical and policy implications. *Clinical Ethics*, 7(4), 183–192. <https://doi.org/10.1258/ce.2012.012024>
- Haimes, E., Taylor, K., & Turkmendag, I. (2012). Eggs, ethics and exploitation? Investigating women’s experiences of an egg sharing scheme. *Sociology of Health & Illness*, 34(8), 1199–1214. <https://doi.org/10.1111/j.1467-9566.2012.01467.x>
- Haimes, E., & Williams, R. (2018). The making of a moral economy: women’s views of monetary transactions in an ‘egg sharing for research’ scheme. *The British Journal of Sociology*, 69(3), 825–844. <https://doi.org/10.1111/1468-4446.12297>
- Healey, N. (2020). *How to solve Britain’s sperm donor crisis*. *Raconteur*. <https://www.raconteur.net/healthcare/fertility/donating-sperm/>
- HFEA (2018). *The state of the fertility sector*. <https://www.hfea.gov.uk/media/2716/the-state-of-the-fertility-sector-2017-2018-final-accessibility-checked.pdf>

- HFEA (2021a). *Fertility treatment 2019: trends and figures*. <https://www.hfea.gov.uk/about-us/publications/research-and-data/fertility-treatment-2019-trends-and-figures/>
- HFEA (2021b). *Egg Sharing*. <https://www.hfea.gov.uk/donation/donors/egg-sharing/>
- HFEA (2021c). *Fertility treatment 2018: trends and figures*. <https://www.hfea.gov.uk/about-us/publications/research-and-data/fertility-treatment-2018-trends-and-figures/>
- Hughes, S. (2021). "Wait for a permanent contract": The temporal politics of (in)fertility as an early career researcher. *Environment and Planning C: Politics and Space*, 39(8), 1725–1736. <https://doi.org/10.1177/2399654421994852>
- Hutton, A. (2020). Wegan, the lesbian YouTube stars, demand end to 'gay tax' on IVF treatment. *The Times*. <https://www.thetimes.co.uk/article/wegan-the-lesbian-youtube-stars-demand-end-to-gay-tax-on-ivf-treatment-tcnh-kknbh>
- Inhorn, M. C. (2022). Infertility, in vitro fertilisation, and fertility preservation: Global perspectives. In Han, S. & Tomori, C. (eds.), *The Routledge Handbook of Anthropology and Reproduction* (pp. 217–232). Routledge.
- Kennedy, R., Kingsland, C., Rutherford, A., Hamilton, M., & Ledger, W, British Fertility Society. (2006). Implementation of the NICE guideline – recommendations from the British Fertility Society for national criteria for NHS funding of assisted conception. *Human Fertility*, 9(3), 181–189. <https://doi.org/10.1080/14647270600908411>
- Last, M. (2020). Fertility treatment: an issue ripe for legal challenges. *Keystone Law*. <https://www.keystonelaw.com/keynotes/fertility-treatment-an-issue-ripe-for-legal-challenges>
- Lee, M. (2019). I wish I had known sooner: stratified reproduction as a consequence of disparities in infertility awareness, diagnosis, and management. *Women & Health*, 59(10), 1185–1198. <https://doi.org/10.1080/03630242.2019.1593283>
- Ledger, W. (2009). Demographics of infertility. *Reproductive BioMedicine Online*, 18(Suppl 2), S11–S14. [https://doi.org/10.1016/S1472-6483\(10\)60442-7](https://doi.org/10.1016/S1472-6483(10)60442-7)
- Lemoine, M., & Ravitsky, V. (2015). Sleepwalking into infertility: The need for a public health approach toward advanced maternal age. *The American Journal of Bioethics : AJOB*, 15(11), 37–48. <https://doi.org/10.1080/15265161.2015.1088973>
- Mahdawi, A. (2021). Have you seen the price of sperm? It's time to democratise fertility treatment. *The Guardian*. <https://www.theguardian.com/commentisfree/2021/jan/05/have-you-seen-the-price-of-sperm-its-time-to-democratise-fertility-treatment>
- Malina, A., & Pooley, J. A. (2017). Psychological consequences of IVF fertilization – Review of research. *Annals of Agricultural and Environmental Medicine : AAEM*, 24(4), 554–558. <https://doi.org/10.5604/12321966.1232085>
- McCandless, J., & Sheldon, S. (2010). The Human Fertilisation and Embryology Act (2008) and the tenacity of the sexual family form. *Modern Law Review*, 73(2), 175–207. <https://doi.org/10.1111/j.1468-2230.2010.00790.x>
- McKie, R. (2017). The infertility crisis is beyond doubt. Now scientists must find the cause. *The Guardian*. <https://www.theguardian.com/science/2017/jul/29/infertility-crisis-sperm-counts-halved>
- Meissner, C., Schippert, C., & von Versen-Höyneck, F. (2016). Awareness, knowledge, and perceptions of infertility, fertility assessment, and assisted reproductive technologies in the era of oocyte freezing among female and male university students. *Journal of Assisted Reproduction and Genetics*, 33(6), 719–729. <https://doi.org/10.1007/s10815-016-0717-1>
- Merz, E., & Liefbroer, A. C. (2012). The attitude toward voluntary childlessness in Europe: cultural and institutional explanations. *Journal of Marriage and Family*, 74(3), 587–600. <https://doi.org/10.1111/j.1741-3737.2012.00972.x>
- Mills, T. A., Lavender, R., & Lavender, T. (2015). "Forty is the new twenty": An analysis of British media portrayals of older mothers. *Sexual & Reproductive Healthcare: official Journal of the Swedish Association of Midwives*, 6(2), 88–94. <https://doi.org/10.1016/j.srhc.2014.10.005>
- Mladovsky, P., & Sorenson, C. (2010). Public financing of IVF: A review of policy rationales. *Health Care Analysis: HCA : journal of Health Philosophy and Policy*, 18(2), 113–128. <https://doi.org/10.1007/s10728-009-0114-3>
- Moore, M. R., & Stambolis-Ruhstorfer, M. (2013). LGBT Sexuality and Families at the Start of the Twenty-First Century. *Annual Review of Sociology*, 39(1), 491–507. <https://doi.org/10.1146/annurev-soc-071312-145643>
- NHS (2021a). *Overview: infertility*. <https://www.nhs.uk/conditions/infertility/>
- NHS (2021b). *Availability*. <https://www.nhs.uk/conditions/ivf/availability/>
- NHS (2022). *Overview: IVF*. <https://www.nhs.uk/conditions/ivf/#:~:text=Chances%20of%20success&text=In%202021%209%2C%20the%20percentage%20of,women%20aged%2038%20to%2039>
- NHS England (2014). *Clinical Commissioning Policy: Assisted Conception*. <https://www.england.nhs.uk/commissioning/wp-content/uploads/sites/12/2014/11/n-sc037.pdf>
- NICE (2014a). *The importance of 3 full cycles of IVF*. <https://www.nice.org.uk/news/blog/the-importance-of-3-full-cycles-of-ivf#:~:text=Most%20women%20typically%20see%20success,pregnancy%20to%2045%2D53%25>
- NICE (2014b). *Fertility problems briefing paper*. <https://www.nice.org.uk/guidance/qs73/documents/fertility-problems-briefing-paper2#:~:text=Incidence%20and%20prevalence,heterosexual%20couples%20in%20the%20UK>
- Office for National Statistics (2011). *Stepfamilies in 2011*. <https://webarchive.nationalarchives.gov.uk/20151014015956/http://www.ons.gov.uk/ons/rel/family-demography/stepfamilies/2011/index.html>
- Office for National Statistics (2020). *Births in England and Wales: 2019*. <https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/livebirths/bulletins/birthsummarytablesenglandandwales/2019#:~:text=The%20number%20of%20live%20births,except%202000%2C%202001%20and%202002>
- Office for National Statistics (2021). *Population estimates*. <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates>
- Peddie, V. L., Teijlingen, E., & Bhattacharya, S. (2005). A qualitative study of women's decision-making at the end of IVF treatment. *Human Reproduction*, 20(7), 1944–1951. <https://doi.org/10.1093/humrep/deh857>
- Pedro, J., Brandão, T., Schmidt, L., Costa, M. E., & Martins, M. V. (2018). 'What do people know about fertility? A

- systematic review on fertility awareness and its associated factors. *Upsala Journal of Medical Sciences*, 123(2), 71–81. <https://doi.org/10.1080/03009734.2018.1480186>
- Perret, M., Galka, J., Borsa, A., Gompers, A., Reiches, M., & Richardson, S. (2022). The future of sperm: a biovariability framework for understanding global sperm count trends. *Human Fertility*, 25(5), 888–902. <https://doi.org/10.1080/14647273.2021.1917778>
- Press Association (2014). National sperm bank to be launched amid donor shortage. *The Guardian*. <https://www.theguardian.com/uk-news/2014/aug/03/national-sperm-bank-launched-donor-shortage>
- Rabindrakumar, S. (2018). Family Portrait: Single parent families and transitions over time. *The University of Sheffield*. https://www.sheffield.ac.uk/news/polopoly_fs/1.812161!/file/Sheffield_Solutions_Modern_Families.pdf
- Sauer, M. V. (2015). Reproduction at an advanced maternal age and maternal health. *Fertility and Sterility*, 103(5), 1136–1143. <https://doi.org/10.1016/j.fertnstert.2015.03.004>
- St Louis, C. (2013). Desperate couples are misled by only positive reports of IVF. *The Conversation*. <https://theconversation.com/desperate-couples-are-misled-by-only-positive-reports-of-ivf-20163>
- Swan, S. (2020). *Count Down: How Our Modern World Is Threatening Sperm Counts, Altering Male and Female Reproductive Development, and Imperilling the Future of the Human Race*. Scribner.
- Tasker, F. (2010). Same-sex parenting and child development: reviewing the contribution of parental gender. *Journal of Marriage and Family*, 72(1), 35–40. <https://doi.org/10.1111/j.1741-3737.2009.00681.x>
- Taylor, F., Turner-Moore, T., Pacey, A., & Jones, G. J. (2022). Are UK policies and practices for regulated donor insemination forcing women to find unregulated sperm donors online? a perspective on the available evidence. *Frontiers in Global Women's Health*, 3, 644591. <https://doi.org/10.3389/fgwh.2022.644591>
- Thompson, M. (2020). *Access to infertility treatment commissioning policy document yorkshire and humber: adopted by NHS Bradford district and Craven CCG April 2020-March 2023*. http://www.bradfordcravenccg.nhs.uk/wp-content/uploads/2020/03/2020-04-01_Policy_Fertility_BDC_CCG.pdf
- Trinchant, R. M., Cruz, M., Marqueta, J., & Requena, A. (2020). Infertility and reproductive rights after the COVID-19 pandemic. *Reproductive Biomedicine Online*, 41(2), 151–153. <https://doi.org/10.1016/j.rbmo.2020.05.007>
- Wang, E. T., Ramos, L., Vyas, N., Bhasin, G., Simmons, C. F., & Pisarska, M. D. (2019). Maternal and neonatal outcomes associated with infertility. *The Journal of Maternal-Fetal & Neonatal Medicine: The Official Journal of the European Association of Perinatal Medicine, the Federation of Asia and Oceania Perinatal Societies, the International Society of Perinatal Obstetricians*, 32(17), 2820–2823. <https://doi.org/10.1080/14767058.2018.1449826>
- Whitworth, D. (2021). Male infertility: why a sperm-count crisis is on the way. *The Times*. <https://www.thetimes.co.uk/article/male-infertility-why-a-sperm-count-crisis-is-on-the-way-rzsvhv67>
- Wise, J. (2014). NICE calls for end to "postcode lottery" of fertility treatment. *BMJ*, 349, g6383. <https://doi.org/10.1136/bmj.g6383>
- Zegers-Hochschild, F., Dickens, B. M., & Dughman-Manzur, S. (2013). Human rights to in vitro fertilization. *International Journal of Gynaecology and Obstetrics: The Official Organ of the International Federation of Gynaecology and Obstetrics*, 123(1), 86–89. <https://doi.org/10.1016/j.ijgo.2013.07.001>