

Blurring the divide: Navigating the public/private landscape of fertility treatment in the UK

Abstract: It is widely assumed that fertility patients in the UK are either privately funded or publicly funded through the National Health Service. This article challenges this distinction and demonstrates how the boundaries between public and private fertility treatment provision are increasingly blurred. It draws on interviews with 42 fertility patients and partners who had accessed in vitro fertilisation (IVF) through both the National Health Service and private providers, to demonstrate how participants were compelled to engage with a consumerist model of healthcare, even when they had access to publicly funded IVF cycles. Patients' experiences of navigating fertility treatment reveal a hybrid public/private consumption landscape, which reflects the uneven process of privatisation across the fertility sector. This article demonstrates how healthcare privatisation has had profound consequences for all IVF patients.

Keywords: Assisted reproduction; private and public healthcare services; patient choice; consumption; UK

The year 1978 marked a new era in human reproduction with the birth of the first ever baby from in vitro fertilisation (IVF). The uptake of assisted reproductive technologies has grown rapidly since then. Between 1991 and 2019 about 595.000 people completed 1.3 million IVF cycles at licenced clinics in the UK (Human Fertilisation and Embryology Authority, 2021) and it is estimated that about one in seven couples ~~will~~ have difficulty conceiving (National Health Service, 2020). Infertility is, therefore, of ~~significant and~~ growing concern to the local and national health services, as well as global biotechnology and pharmaceutical industries. The geographies embedded in the transnational fertility market, which involves the movement of reproductive technologies, science, bodies, body parts and gametes, has received ~~a great deal of close~~ attention (Collard, 2020; Fannin, 2011; Parry et al. 2015; Schurr, 2017). In this article, we focus on how fertility patients in England navigate ~~and understand~~ the market and provision of fertility treatment at the local scale. Finding pathways through treatment is a profoundly geographical problem of determining what to do and *where* to go next.

Drawing on interviews with patients and partners with experience of IVF, we demonstrate how participants traversed a hybrid consumption landscape with blurred boundaries between National Health Service (NHS) and private provision. We challenge widespread lay and professional discourses that assume a public/private divide in IVF provision (Mahoney, 2009) and we argue that spatially and socially uneven processes of privatisation have had important consequences for patient choice, agency and decision-making. In making this argument, we build on and extend two bodies of scholarship: our first area of interest is ~~recent~~ work on the geographies of assisted reproduction; the second concerns practices of consumption in the field of reproductive healthcare. While the commercialisation of the fertility sector (~~Author 2 and X, XXXX~~; Meerabeau, 2002; van de Wiel, 2020) ~~and its consequences for fertility research and practice (Author 2 and X, XXXX)~~ have has been explored in the literature, little is known about how the privatisation of fertility services in the UK shapes the lived experiences of patients going through IVF.

In what follows, we ~~provide some background to describe~~ the contemporary landscape of IVF in the UK, ~~and England specifically~~, and we situate our contribution within the geographical scholarship. Then, we ~~provide a description of outline~~ the study methodology, before turning to the empirical material. Our findings are organised in two parts: the first considers how IVF patients approached the financing of treatment and the second considers the offering of additional treatments that supplement 'routine' IVF. Through ~~this material and our~~ analysis, we argue that there is not a clear divide between privately and NHS funded IVF, and patients are forced to engage with a consumerist model of healthcare by navigating ~~highly~~ complex arrangements of public and private treatment provision.

1. IVF in the UK

The live birth rate per embryo transferred is about 24% across all age groups in the UK (Human Fertilisation and Embryology Authority, 2021). The implication of this is that fertility patients expect to undertake multiple treatment cycles to increase their chances

of success. The UK's National Institute for Health and Care Excellence (NICE)¹ recommendation is for women under the age of 40 to have three cycles of IVF to have the best chances of a live birth (NICE, 2013). However, the NHS is organised such that a person's place of living and the location of their registered ~~g~~General ~~p~~Practice (GP) determines whether a treatment is available to and funded for that person (Powell, 1995). At the time of the research, The local provision, funding and commissioning of health care services, including fertility treatment, ~~is was~~ determined by ~~c~~Clinical ~~c~~Commissioning ~~g~~Groups (CCGs)². ~~CCGs are statutory NHS bodies that replaced Primary Care Trusts in 2013.~~

~~Some prospective IVF patients are eligible for a limited number of NHS funded treatment cycles, otherwise they are required 'go private' and access treatment through private provision (Meerabeau, 2002; Mahoney, 2009).~~ There ~~is was~~ significant geographical variation between CCGs in terms of the funding offered to cover IVF. Whereas some CCGs offer~~ed~~ three cycles of funded IVF, others offer~~ed~~ none, and some ~~have had~~ complex eligibility criteria for available funding. This differentiated financing, combined with a concentration of private fertility clinics in urban locations, has produced an uneven geography of treatment provision. For example, in 2019 the percentage of IVF cycles funded by the NHS was over 60% in Scotland and only around 20% in London and the east of England (Human Fertilisation and Embryology Authority, 2021). ~~Sometimes, even NHS treatment is not free of charge and patients have to pay for essential parts of their treatment, such as donor sperm or eggs.~~

Our analysis starts with the observation that IVF patients' pathways through treatment are shaped by hybrid treatment settings, which require patients to continuously navigate the boundaries between NHS and private providers (Guy, 2019). Some prospective IVF patients are eligible for a limited number of NHS funded treatment cycles, otherwise they are required 'go private' and access treatment through private provision (Meerabeau, 2002; Mahoney, 2009). For the purpose of this article, we focus on three processes through which the privatisation of the sector complicates the

¹ ~~The National Institute for Health and Care Excellent~~ (NICE) is a non-departmental public body that produces evidence-based guidelines, quality standards, information services and performance metrics for public health and social care in England.

² CCGs were abolished shortly after the empirical research took place and replaced by integrated care systems (ICSs) as part of the Health and Care Act (2022). At the time of writing, the local criteria for NHS funded IVF are determined by NHS integrated care boards (ICBs). These criteria still remain stricter than the NICE recommendations. CCGs were statutory NHS bodies that replaced primary care trusts in 2013.

landscape of fertility treatment. Firstly, many NHS fertility services are being privatised or outsourced such that the NHS pays private fertility clinics to treat patients who qualify for funding, rather than providing this treatment via NHS services (Linton and Pidd, 2020; Marsh, 2018; Montgomery, 2020). Secondly, in a context where the NHS has experienced significant financial pressures, restricting access to funded IVF treatment is one option for cost reduction adopted ~~by some CCGs in some local areas~~. This can involve a reduction in funded IVF or the tightening of eligibility criteria for prospective patients ~~in certain areas~~ (British Pregnancy Advisory Service, 2020). Thirdly, ~~in at some CCGs clinics~~ patients are given the option to blend NHS and private fertility treatment by paying for certain additional tests or treatments, known as treatment add-ons, on top of their 'routine' fertility treatment. This has created a context where some patients, in particular those who can afford the additional cost, can blend treatment provision and be both private and NHS patients at the same time (Guy, 2019).

2. Geographies of assisted reproduction

~~Critical and feminist scholarship in human geography has explored the spatialities of reproductive bodies, labour and technologies (Dyck, Lewis and McLafferty, 2001; Longhurst, 2012).~~ Whereas earlier geographical work focuses ~~d~~ primarily on the lived experiences of women and (potential) mothers ~~(Dyck, Lewis and McLafferty, 2001)~~, more recent attention to the geographies of reproduction encompasses e a more diverse range of experiences, technologies and bodies (for example, see England, Fannin and Hazen, 2018). This growing body of scholarship highlights the multiple sites and scales of reproduction, including the market of fertility treatment and its dynamics at intersecting personal, local, national and global scales. González-Santos (2011) has explore ds the relationships between individual experiences of fertility treatment and the spaces and treatment routines of fertility clinics. Drawing on observations at two fertility clinics, one public and one private, in Mexico City, González-Santos' work demonstrates how the physical organisation and layout of these clinics shapes the kinds of social relationships and interactions that are formed between patients and physicians. This work also highlights how patients' expectations of treatment were shaped by their perceptions of the resourcefulness of private versus public clinics. For instance, individual attention and guaranteed privacy in interactions with clinicians

were considered to be 'luxuriss' that are paid for. In this article, we are similarly concerned with fertility patients' expectations of their treatment, which we explore through the relationships between patients' treatment experiences and the structural organisation of IVF provision in England.

The strong privatisation of the fertility sector, similar to many other areas of healthcare and medicine (Curtis and Taket, 1996), has created an arena through which patients have become consumers. The incursion of consumerist ideologies into the spaces of medicine and health has ~~created-produced~~ competitive 'consumption landscapes' (Gesler and Kearns, 2002, p.139), which are permeated with consumerist symbolism, design and marketing (Kearns and Barnett, 1997). Whereas earlier studies considered ~~ed~~ advertising through printed media, in the past decades ~~online and~~ digital media have emerged as key sites for direct-to-consumer advertising in private health care ~~and medicine~~. Fertility clinic websites are often the first point of information for patients and thus play an important role in shaping patients' expectations ~~and~~ impressions of a clinic (Hawkins, 2013). In the fertility sector, common promotional tactics include the advertisement of success rates (usually in terms of ~~the rate of~~ live births per embryo transferred) as well as the promotion of new technologies and treatments. ~~Yet e~~Concerns have been raised about inaccurate claims being made on clinic websites about treatment effectiveness (Hawkins, 2013; Lensen et al., 2021; Spencer et al., 2016) and how the commercial drivers of treatment advertising ~~and how~~ this may compromise ideals of patient choice (van de Wiel et al., 2020; Wilkinson et al., 2018).

Notably, patients are often not the 'rational' consumers that typically characterise market ideologies, nor are they always able to access the information needed to 'shop around' for the best treatment (Wiles and Higgins, 1996, p.342). As Meerabeau's (2002) work highlights, a neat alignment between patient and consumer does not accurately reflect the experiences of fertility patients. ~~In particular, she notes that p~~Patients are not always informed consumers, in part because they may not be interested in independently seeking this information or because the information available is impenetrable (~~Authors 2 and 1, XXXX~~). Recognising the complicated status of fertility patients as consumers, in 2021 the UK Competition and Markets Authority intervened by publishing guidance documents that specify the applicability of consumer law to the fertility sector and advise patients on their consumer rights. In this guidance,

the cost and marketing of non-essential treatment add-ons, which we explore below, ~~was is~~ raised as a particularly pressing issue. While the privatisation of fertility treatment in the UK ~~has been is~~ widely acknowledged (Authors 2 and 1, XXXX; Mahoney, 2009; Spencer et al., 2016; van de Wiel et al., 2020), little is known about how fertility patients navigate the complex landscape of private and NHS treatment offerings. In this article, we show how the process of privatisation has been uneven and produced a blurred division of private and NHS treatment provision for IVF patients, which reproduces socio-spatial inequalities in access to and experiences of assisted reproduction.

3. The study

The data and analysis that we present here emerge from a larger study that explored professional and patient perspectives on technological innovations in IVF. The study received ethics approval from the Health Research Authority (ID XXXX) and local approval from each participating fertility clinic. Prior to arranging an interview, patients and partners were ~~provided with given~~ an information letter and ~~given the opportunity to could~~ ask questions about the research. Participants had a week to consider whether they would like to participate and they signed a consent form prior to the interview taking place. Each participant ~~was given received~~ a £20 voucher after the interview.

In this article, we focus on findings from interviews with a subgroup of 42 IVF patients, which included 34 women who were undergoing IVF, seven male partners and one female partner. We use the term patient for the women who intended to receive the embryo; however, we recognise that male partners, and female partners in cases such as intra-partner egg donation, are also patients at various points in the treatment cycle. In our participant group, the medicalised interventions that characterise IVF were heavily focused on women's bodies regardless of the cause of infertility (Turner et al., 2020). The aim to ~~include-interview~~ partners ~~in the research draws drew~~ on findings from ~~prenatal healthcare that have research that has~~ shown how both members of a couple play a role in navigating treatment decisions in prenatal healthcare (Farrell et al., 2019). Our interviews confirmed ~~ed~~ that couples discuss treatment options and decisions, yet we also recognised ~~d~~ that each partner's ~~considerations and~~ experiences ~~can might~~ diverge. To explore these ~~potential~~ differences, we interviewed each member of a

couple separately, although one couple was interviewed together at their own request. However, we experienced considerable difficulty in recruiting male partners for interviews. Challenges in recruiting men are ~~not un~~common in research on reproduction. This reflects a broader cultural marginalisation of men's ~~roles and~~ experiences of reproduction (Culley, Hudson and Lohan, 2013), which might deter men's participation in research on these issues. ~~In our empirical analysis, we use the term patient for the women who intended to receive the embryo; however, we recognise that male partners, and female partners in cases such as intra-partner egg donation, are also patients at various points in the diagnosis and treatment cycle. In our participant group, the medicalised interventions that characterise IVF were heavily focused on women's bodies regardless of the cause of infertility (Turner et al., 2020).~~

22 participants were recruited via collaborating NHS fertility clinics in England and 20 participants were recruited via an online survey (n=314). The participants recruited by research nurses were interviewed on-site at the collaborating clinics but separately from any other clinical appointment. Participants recruited through the survey were interviewed over the phone, at the participant's home or in a café, ~~depending on the participants' preference.~~ Immediately following the interview, participants were asked to complete a short questionnaire to collect basic personal details, including age, treatment financing and perceptions of treatment affordability. Patients were aged between 29 and 41, with a mean age of 35, and partners were aged between 33 and 47, with a mean age of 38. Participants in heterosexual relationships had usually been trying to conceive for at least a year before accessing their GP. While low ovarian reserve and poor sperm quality were common explanations for participants' infertility, any clear distinction between female-factor or male-factor infertility was frequently complicated by diagnoses that emerged over time. For many others, fertility tests revealed no reason for their inability to conceive and they were diagnosed as having 'unexplained infertility.' The female same-sex couple had no known fertility issues, but after two rounds of unsuccessful intrauterine insemination with donor sperm, they decided to self-fund the IVF procedure. Participants were at various stages in their IVF treatment trajectories. Whereas some were at the beginning of treatment and still awaiting embryo transfer, others had been through multiple cycles over several years. At most, one participant had been through seven embryo transfers.

The geographical distribution of participants was largely a result of the location of participating fertility clinics. Three quarters of the participants lived in the North West and Yorkshire, and the remaining participants were spread across the Midlands, London and South of England. Of particular significance to our analysis in this article, participants had undertaken IVF through a range of financial pathways: 19 had undertaken IVF on the NHS, 12 had combined NHS and privately funded treatment, and 11 had undertaken only privately financed treatment.

4. Findings I: Anticipating private treatment

The temporal mode of anticipation significantly shapes ~~many aspects of~~ how people experience and navigate health and healthcare. Anticipating potential futures, as conceptualised by Adams, Murphy and Clarke (2009), involves always 'being ready for' and 'poised awaiting the predicted inevitable' (2009, p.254). In interviews, participants readily articulated their future treatment plans, especially at the early stages of treatment. Future considerations included how many IVF cycles ~~they thought~~ they could afford or were prepared to go through before ending treatment or considering alternative routes to parenthood. Participants ~~often~~ noted that there was a high likelihood that they would *not* have a baby following their NHS funded treatment cycles. ~~and They often~~ cited the 'low' success rates of IVF ~~in articulating to explain~~ the probability that they would need to consider paying for further treatment. In this way, they imagined IVF on the NHS as a starting point in a longer and more hybrid treatment trajectory, which might involve a shift to private ~~treatment provision-fertility treatment.~~

Many participants pre-empted this shift by considering the feasibility of undertaking further IVF on a self-funded basis, which can cost up to £5000 per cycle (National Health Service, 2018). Each participant was asked to evaluate their ability to afford three cycles of privately funded IVF, which corresponds to the number of cycles recommended in the NICE guidelines. Out of 42 patients and partners, 17 perceived private fertility treatment as unaffordable or completely unaffordable, 17 thought this would be just about affordable, and eight felt that they were able to afford private treatment. The implication of this is that a large proportion of participants were not in a position to pursue private treatment or they would need to make substantial financial arrangements in order to afford this.

While hopeful that their treatment would work, participants knew that each round of IVF might not lead to a baby, and it ~~is was~~ generally accepted (by both patients and professionals) that multiple attempts ~~will would~~ probably need to be undertaken. For many, the possibility that they might become private patients in the future involved substantial financial planning. ~~It has been argued that~~ ~~€~~calculations of financial ability against the uncertain prospects of IVF are connected to the speculative financialisation of fertility, where fertility becomes entangled with future-oriented ~~financial markets~~, investment and debt accumulation (van de Wiel, 2020). For ~~those participants~~ who were putting their savings into IVF, this financial planning was sometimes accompanied by changing expectations about the kind of family that they could feasibly achieve. For example, once their finances started to run out some participants considered using donor eggs or sperm, which may be associated with a higher chance of ~~a successful~~ pregnancy but entail a different genetic relationship to the future child. Others described sacrificing expenses associated with holidays, weddings or the prospect of a larger home in order to fund as many IVF cycles as possible. On the other hand, becoming pregnant on one of their early attempts at IVF opened up the possibility of affording more rounds of ~~future~~ treatment in the hope of ~~having~~ more than one child ~~in the future~~.

As the following male partner described, anticipating private fertility treatment had a significant impact on his and his wife's lives both in the immediate and longer term. This included the imperative to avoid large expenses, such as buying a new car and moving into a larger, family-sized home, in order to save money for IVF:

You've got 30% chance [of a live birth], so that 30% chance on the three [funded] goes that you get [...] We've been saving money up like thinking we'll not move house, we'll not buy a new car, literally trying to cut back. We hadn't been going out as much as we had anyway because of following the avocado lifestyle. So we were like well, we'll put our life on hold. (Male partner aged 36, NHS treatment, currently expecting baby from first IVF cycle).

Another participant ~~also~~-described how she ~~wanted to be was~~ prepared for her funded IVF cycles not to be successful and ~~therefore~~ started to save money. She emphasised the importance of being prepared to start further treatment 'straightaway.'

The ~~imperative and~~ pressure to get through treatment ~~as quickly as possible is was~~ closely tied to the social and biological limitations of increasing age ~~on fertility in the context of reproduction~~:

I just wanted to get it in my head that I thought it's going to cost us 16 grand in total to get two [private cycles of IVF], if it was eight grand each time, so I just needed that in my head so I thought I could start saving and so I'd be ready if it didn't work, I could look for the next one straightaway. (Patient aged 36, NHS treatment, currently pregnant from first IVF cycle)

The imperative to circumvent NHS waiting lists ~~is was~~ a typical motivation for accessing private medicine (Guy, 2019). For the following participant, the uncertainty of how long it would take to receive confirmation of NHS funding provided the impetus for them to investigate private treatment from the start:

In the meantime, luckily, my husband had been saving so then I started, well, I said to him we can't keep waiting around for the NHS while they dither over what they can do and what they can't and we just, let's just go private. (Patient aged 35, private treatment, currently pregnant from first IVF cycle)

Sometimes, patients who had exhausted their NHS funded ~~fertility~~ treatment described complex transitions ~~from NHS treatment~~ into ~~various kinds of~~ private treatment arrangements:

We had the first cycle, which was on the NHS, and then after that, [there] was then no more NHS treatment but actually the consultant who was at the NHS hospital said that we could sort of stay with her as her private patient but be treated at the same hospital. So that's what we did then for the next sort of lot of treatment. (Patient aged 38, NHS and private treatment, had one baby from IVF and starting further treatment).

Becoming a private patient ~~does did~~ not necessarily involve moving to a private clinic. As the previous participant described, her first experience of private treatment

~~took place much in the same way as her NHS funded treatment, was~~ with the same consultant and at the same clinic ~~as her previous NHS treatment~~. In this way, the spaces of private and NHS treatment overlapped. After these treatment cycles did not lead to pregnancy, the participant described how they ‘needed a bit of a fresh start somewhere else’ and chose to pursue further treatment at a fully private fertility clinic: ‘we decided to move on then to have private treatment at a private clinic and you know, somewhere that I guess they do have higher success rates.’ This constituted her third treatment arrangement. The shift to a private clinic often involved different sets of expectations (González-Santos, 2011), as demonstrated through this participants’ reference to ~~the private clinic’s~~ higher success rates ~~at the private clinic~~.

All participants described some element of choice between several clinics in their area. Most described choosing their clinic based on the funding options available or cost, as well as practical concerns around the ease of accessing the clinic for frequent appointments. Whereas most participants were limited to their local fertility services, some described traveling over greater distances. Those who sought specialist medical services, such as screening for rare genetic conditions, would travel to clinics that were ~~mainly~~ concentrated in London, and some were considering more affordable treatment abroad. Clearly, the ability for many of the participants ~~in this study~~ to anticipate private IVF demonstrates a certain level of financial resourcefulness. Whereas many ~~of the participants~~ had savings that they could draw on to finance private treatment, others described borrowing arrangements, often from their own parents. For others, the cost of private IVF was entirely prohibitive, meaning that their NHS funded cycles constituted their only possibility for accessing treatment. For these patients, the so-called ‘postcode lottery’ of IVF funding (British Pregnancy Advisory Service, 2021; Royal College of Obstetricians and Gynaecologists, 2019) ~~could have had~~ a particularly severe impact on ~~how they approached~~ their treatment options.

The following participant described how the entitlement to funding ~~is was~~ both social and spatial in nature. She could circumvent restrictive eligibility criteria by moving to a different CCG catchment area, so she moved 50 miles to a new home in a neighbouring city and qualified for three rounds of funded IVF:

I actually wasn’t entitled to IVF funding because my partner had a previous child from a previous relationship and that’s, that was that. And I kind of, went into a

deep depression for six months because I didn't know how to get out of this situation that I was in. Didn't have the money, didn't have anything. [...] [Then] I found out that if I lived in certain areas I would have had three rounds funded. So we moved [to another city] within about three weeks of finding that out and got the funding. (Patient aged 29, NHS treatment, no eggs collected from first IVF cycle, currently pregnant from second cycle).

Once she had secured NHS funding she had the choice of receiving treatment at a prestigious private clinic, which would be funded through her new CCG. She went on to describe how, despite being eligible for treatment at this clinic, she felt out of place as an NHS patient: 'I always assumed that a private clinic would be nicer and I'd get spoken to, um, possibly with more respect. Felt a bit embarrassed that I was NHS at a private clinic.' This sense of embarrassment had a material impact on her use of the clinic. For example, she decided not to attend the clinic's open evening and tour, which she thought was 'more for private funded people.' This participant's experience reproduced ds a divide between NHS and private patients, but at the same time she complicated ds any clear public/private division by presenting herself as an NHS patient at a private clinic.

5. Findings II: The place of IVF treatment add-ons

The second hybridisation of private and NHS treatment ~~provision~~ that we explore here is the possibility for patients at certain fertility clinics to pay for ~~a diverse range of~~ treatment add-ons, including tests, therapies, medications and, techniques ~~or treatments~~, on top of the clinic's 'routine' IVF procedure. For example, add-ons include time-lapse imaging to aid the evaluation and selection of embryos, preimplantation genetic testing of embryos for aneuploidies, and surgery to scratch the endometrial lining with the aim of encouraging embryo implantation. Whereas some fertility clinics ~~will~~ include certain add-ons as an integrated part of their '~~standard~~' IVF procedure, others offer add-ons at an additional cost to the patient (from a few to several thousands of pounds). Importantly, add-ons are usually not supported by evidence produced by randomised control trials (Author 2 and X, XXXX), which limits the ability of the NHS to adopt and fund them. Yet the marketing of add-ons is frequently

accompanied by unsupported claims that these will improve patients' chances of pregnancy and live birth (van de Wiel et al., 2020).

Here, we explore cases where patients undertaking IVF on the NHS considered the option of paying for add-ons, which further complicates the distinction between NHS and privately funded fertility treatment. We focus on the patients who sought a particular category of add-on broadly referred to as immunological tests and treatments. This case study is pertinent given the polarised debate on these tests and treatments, which are considered to be controversial by the medical community (Moffett and Shreeve, 2015; Royal College of Obstetricians and Gynaecologists, 2016) and, at the time of writing, unproven and potentially harmful by the Human Fertilisation and Embryology Authority. The theory behind immunological tests and treatments is that an imbalance of immune cells, specifically Natural Killer (NK) cells, ~~might lead~~causes the body to reject an embryo or early-stage pregnancy. Following from this, knowing about the presence of NK cells in the body may offer explanatory potential for patients who have ~~experienced~~ recurrent failed embryo transfers or early miscarriages (Kuon et al., 2017). If blood tests or uterine biopsies show high levels of NK cells, the patient may be prescribed immunosuppressive medications such as steroids and intravenous intralipid infusions.

Despite being unsupported by evidence of efficacy through randomised control trials, it is recognised that a significant number of IVF patients request NK cell testing (Sacks, 2015). In our participant group, two participants had considered and explicitly rejected these tests, citing the lack of knowledge about how NK cells affect reproduction ~~as well as~~and the unknown harm versus benefit of immunological therapies. Eight participants ~~described how they~~ had considered and actively pursued NK cell testing. Some of these were undertaking IVF on the NHS and described how they had paid to have additional NK cell testing, which involved travelling to a separate clinic. In these cases, the precise arrangement of funded versus non-funded elements of a treatment was often complex. The following participant explained how she was able to pay for NK cell testing privately, but depending on the test result ~~of this test and whether treatment was deemed beneficial~~, the ~~treatment medication~~ would be available on the NHS:

The natural killer cells I'd never heard of. That was something that was put to me here at [my clinic] but I was told it's not an NHS treatment, it is, or ... Sorry, it's

not an NHS *test* so I could pay privately for it. I can have the *treatment* on the NHS so the NHS have provided me with the blood thinning injections and the steroids but not the test. (Patient aged 33, NHS treatment, three embryo transfers with no pregnancy, preparing for fourth transfer).

The same patient further explained her considerations through a model of individualised decision-making. She had a strong sense of agency and perceived herself as able to make purposeful choices regarding her treatment. Yet her enactment of agency is shaped by the resources available at this place and time (Duff, 2011). Her ability to access additional tests, both in terms of paying for them and travelling to a separate clinic, as well as her ability to evaluate the information provided to her by the consultant, ~~held~~ held a particularly powerful place in facilitating her choice. She articulated the uncertain medical evidence behind these tests and was aware that NK cell testing was in the early stages of research, but this did not deter her from choosing to go ahead:

I was told clearly that that's not something the NHS offer so it's entirely my choice. They weren't telling me to have it done because it's up to you if you want to have it done. But I was also, it was also made very clear that it's not backed [...] it's a theory. So that was made clear. It was just something for me to look into. Which I did look into and I chose to go ahead and have it, and I'm pleased that I did. (Same as above).

The privatisation of IVF add-ons, combined with the limited success rates of individual IVF treatment cycles, has ~~create~~ ds a conducive environment for market dynamics. Entering into private treatment arrangements opened up the possibility of add-ons being marketed more heavily. As one patient explained: 'Maybe if you are paying for private treatment they may push these extra services but for NHS there certainly wasn't that.' ~~Fertility patients become informed, active and 'choosing' consumers (Willis, 2020).~~ While participants in this study did not necessarily associate private clinics with better quality care, there was a general assumption that paying privately would open up a wider range of treatment options and thus extend the remit

of their choice. Through their encounters with market dynamics, participants became informed, active and 'choosing' consumers (Willis, 2020).

Whereas private clinics were often described as offering a wider range of add-ons than NHS clinics, the opposite could also be true. The following participant described paying for NK cell testing, steroids and intralipid infusions on their NHS cycle. She then requested immunological treatments once she started self-funded IVF at a private clinic. Whereas add-ons had been available on NHS cycles, the private clinic was more reserved about the use of these:

I paid for [steroids and intralipid infusions] as extra because obviously that's not covered on the NHS and they let me do that. And then when I went to the [private clinic] they were very against lipids. I think it had taken a bit of a backward turn in terms of, you know, the treatment, so he [the consultant] said 'I'm happy for you to have steroids but I don't want you to do lipids, I don't think you need them.' And that was that really. He was quite anti me putting many add-ons on. (Patient aged 35, both NHS and private treatment, had a baby from fifth embryo transfer following two miscarriages).

Patients who moved between NHS and private treatment sometimes had to adjust their expectations when these did not match their ~~actual~~ experience. In the end this participant decided to follow her consultant's advice: 'I did ask him a couple of times. He was like no, no. So I just sort of had to trust him on that.' The negotiations that ~~take took~~ place between patients and clinicians were powerful in shaping patients' expectations about treatment options. What the example of NK cells testing shows, is that both NHS and privately funded patients encountered ~~ed~~ market dynamics in their treatment trajectories, and that being an NHS patient ~~does did~~ not exclude ~~patients participants~~ from making decisions about paying for ~~IVF-additional tests or treatments~~. It also demonstrates how social, financial and geographical inequalities permeated ~~d~~ treatment choices. There ~~are were~~ disparities not only in access to IVF, but also in the range or combination of treatments that ~~are were~~ available to ~~patients participants~~, which shaped ~~ds~~ their expectations and hopes of achieving pregnancy. Participants frequently described how paying for add-ons might improve their chance of having a baby from IVF.

6. Conclusion

In this article, we ~~have shown~~ show how fertility patients encounter a complex arrangement of public and private treatment provision, which has important implications for their enactment of agency. ~~Firstly, We argue that~~ fertility patients' decision-making must be understood in relation to their broader IVF trajectories (Authors 2 and 1, XXXX), which might include lengthy periods of diagnostic procedures, multiple unsuccessful treatment cycles and, as we demonstrate in this article, anticipations of future treatment options across multiple sites. ~~We argue that it~~ It is crucial to conceptualise patient experiences of IVF along this extended temporal scale in order to appreciate how the limited availability of NHS funded treatment produces the imperative to anticipate private care. ~~Patients-Participants in our study~~ anticipated a future scenario where they ~~will-would~~ need to consider treatment on a self-funded basis. ~~These pre-emptive considerations were driven by an awareness of the limited public funding available for IVF, combined with the relatively low success rate of each IVF cycle, which further decreases with the patient's age. In this way, the spatiotemporalities of fertility treatment shape~~ The urgency that participants felt in pursuing IVF as soon as possible reflected how ~~patients they~~ embodied both hopes and fears of future IVF outcomes (having or not having a baby) in the present. ~~In the context of IVF, the idea of being an NHS patient over-simplifies a much more hybrid experience of treatment in which patients are continuously prompted to engage with private sector offerings.~~

~~Secondly, d~~ Drawing on the case of immunological tests and treatments, ~~this article has shown-we show~~ how ~~patients-participants~~ learn to navigate NHS and private healthcare settings to ~~extend-expand~~ the range of treatment options available to them, including treatments that are considered to be highly controversial. Our analysis of add-ons ~~that are~~ offered to NHS patients ~~further~~ highlights that the profound consequences of consumerist healthcare are not exclusive to the private sector. ~~Yet it is important to note that movements between the NHS and private sectors are not frictionless. For patients, fertility treatment is frequently accompanied by discourses of choice, yet these choices are strongly shaped by the area-specific availability of clinics as well as access to funding (Guy, 2019).~~ By paying for add-ons, ~~many~~ participants described blending

NHS and private treatment offerings ~~at at the same one or multiple~~ clinics, ~~or traveling between two or more clinics~~ to create a hybrid treatment trajectory. NHS funded patients also had to navigate private fertility clinics if ~~their CCG outsourced~~ IVF services were outsourced in ~~this way~~ their local area. Yet being an NHS patient at a private clinic was often accompanied by differentiated expectations of treatment quality and experience. NHS patients sometimes described how they felt excluded from certain services or spaces within the private clinic, which both reflects and reproduces dominant ideologies around the social groupings that private reproductive medicine caters to.

We want to note that participants' movements between the NHS and private sectors were not frictionless. For participants, fertility treatment was frequently accompanied by discourses of choice, yet these choices were strongly shaped by the area-specific availability of clinics as well as access to funding (Guy, 2019). Their ability to choose was also shaped by social resources (Duff, 2011), which included relationships of trust with medical professionals and wider social contacts. Participants frequently described how they had learnt about funding or treatment options through conversations with other patients or from speaking to medical professionals. These social situations created opportunities for sharing experiential knowledge and information that was more specific to a particular personal circumstance, location or clinic, and they were central to navigating IVF treatment at the local scale (see also González-Santos, 2011). Other participants articulated a different kind of social resourcefulness through their ability to raise funds for IVF from family members. Navigating the landscape of fertility treatment was therefore contingent on patients' ability to traverse the domains of social relationships, finance and information.

In the context of IVF, the idea of being an NHS patient over-simplifies a much more hybrid experience of treatment in which patients are continuously prompted to engage with private sector offerings. Gesler and Kearns' (2002) articulation of consumption landscapes emphasises the material expression of consumerist ideologies and the 'ways in which health care enterprises project themselves in the landscape' (2002, p. 140). We emphasise the times and places in which NHS patients adopt the subject position of consumer and thus offer insights into how patients navigate consumption landscapes. ~~The imperative to anticipate private care due to the limited~~

~~public funding and the hybrid public/private experience of treatment extends the consequences of privatisation to all IVF patients.~~ These insights are particularly timely given the increasingly fragmented provision of healthcare services in the UK (Royal College of Obstetricians and Gynaecologists, 2019), which is creating new inequalities based on where people live as well as their ability to afford private IVF (British Pregnancy Advisory Service, 2020). Many participants commented on the unfairness of how funding for IVF is distributed according to geographical location. From their perspectives, the delineation of ~~CCG geographical~~ boundaries seemed arbitrary but powerful in determining ~~their treatment prospects kind of fertility treatment that they would be able to access~~ and, ultimately, their prospects of achieving pregnancy. Participants' experiences of IVF ~~show revealed~~ how the geographies of assisted reproduction ~~are were~~ inflected by inequalities and moral evaluations of who is more or less deserving of treatment. ~~We have shown how the~~ The persistent discursive representation of a public/private divide generates these inequalities in treatment experience and does not reflect patients' experiences of IVF in the UK. In practice, the distinction between NHS and private fertility treatment is heavily blurred.

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