



Review/Comparative article



# The impact of NHS outsourcing of elective care to the independent sector on outcomes for patients, healthcare professionals and the United Kingdom health care system: A rapid narrative review of literature

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## ABSTRACT

The NHS is increasingly turning to the independent sector, primarily to alleviate elective care backlogs. However, implications for the healthcare system, patients and staff are not well understood.

This paper provides a rapid narrative review of research evidence on NHS-funded elective care in the independent sector (IS) and the impact on patients, professionals, and the health care system. The aim was to identify the volume and evaluate the quality of the literature whilst providing a narrative synthesis.

Studies were identified through Medline, CINAHL, Econlit, PubMed, Web of Science and Scopus. The quality of the included studies was assessed in relation to study design, sample size, relevance, methodology and methodological strength, outcomes and outcome reporting, and risk of bias.

Our review included 40 studies of mixed quality. Many studies used quantitative data to analyse outcome trends across and between sectors. Independent sector providers (ISPs) can provide high-volume and low-complexity elective care of equivalent quality to the NHS, whilst reducing waiting times in certain contexts. However it is clear that the provision of NHS-funded elective care in the IS has a range of implications for public provision. These surround access and outcome inequalities, financial sustainability and NHS workforce impacts. It will subsequently be important for future empirical work to incorporate these caveats, providing a more nuanced interpretation of quantitative improvements.

## 1. Background

Since the early 2000s, successive governments have facilitated the expansion of NHS-funded elective care by independent sector providers (ISP) in England. The total percentage of NHS funded elective procedures being undertaken in the independent sector (IS) stands at 9% as of November 2022 [1]. For some procedures, such as hip and knee replacements, and cataract surgery, approximately one in three NHS-funded procedures are now undertaken by the independent sector [1]. In total, the NHS spent £11.8 billion on care delivered by ISPs in 2020/22 [2]. This was £2 billion more than the previous financial year.

The aims of this policy have been largely understood as encouraging competition in the healthcare sector, promoting patient choice, increasing capacity for elective care, and improvements in efficiency [3]. However, the extent to which these policy objectives have been met remains subject to considerable debate [4,5].

In this context, there has been a renewed focus from both Conservative and Labour politicians on IS provision of healthcare services as a strategy to address the backlog in NHS elective surgery caused by the COVID-19 pandemic [6,7]. In February 2022, NHS England published an Elective Recovery Plan, which aimed to eliminate all waiting times over 52 weeks by March 2025 and highlighted the role of the

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independent sector in achieving this goal. This also follows developments during the pandemic, when the government signed a contract which saw 100 % of IS facilities being made available to the NHS [8] although significant variation in use of IS facilities for NHS patients remained [9].

The consequences of continued provision and expansion of NHS-funded care in the IS for patients and health systems need to be more fully understood in order to inform current and future policy-making. Although ‘outsourcing’ represents one of the primary means of reducing elective care backlogs [10], the implications of this, particularly in respect of the workforce, funding implications, type of activity provided and associated inequalities, still need to be considered. Inequalities in this context can be defined as disparities in treatment provision in IS or NHS between social groups, potentially leading to inequities. Inequalities may arise because of where patients live or their sociodemographic characteristics.

The purpose of this paper is to provide an insight into existing evidence through a rapid narrative review of the literature. We seek to specifically address the following research question: What is the impact of the NHS outsourcing elective care to the IS on patients, healthcare professionals and the health system? A rapid narrative review approach was chosen in order to offer a timely insight, synthesising a broad range of information to facilitate understanding of what evidence currently exists, in order to identify areas for further empirical investigation [11, 12].

### 1.1. Defining and describing the role of the independent sector in providing elective care in the English healthcare system

The IS has been broadly defined by NHS England (2023) as: ‘any provider of NHS services which are not Foundation Trusts or NHS Trusts’ [13]. The scope of this narrative review is specifically IS providers of elective care services, defined by NHS England (2022, p. 4) as “non-urgent services, usually delivered in a hospital setting, including diagnostic tests and scans, to outpatient care, surgery and cancer treatment.” [14].

The Health Foundation (2022) [15] provided a summary of IS provision of NHS-funded care in the context of response to backlogs caused by Covid-19. The summary found that the highest proportion of NHS-funded care in the IS takes place in Yorkshire and the Humber (21 %), the South-West (20 %), and the North-West (19 %). The authors also found that ophthalmology, trauma and orthopaedics, general surgery and gastroenterology were the areas of speciality in which the IS delivered the largest share of treatments. The majority of private providers offer low complexity and high-volume treatment such as hernia repair, cataract surgeries and hip and knee replacement [16]. However, there is a small number of private hospitals that can provide a broader range of specialist services, including most types of cancer and critical care [17].

There have been several reforms over the last two decades which have facilitated the expansion of NHS-funded care within the IS. In 2000, the NHS Plan proposed a policy that patients should be able to choose the times and dates of their hospital appointments [8]. The associated implementation plan, “Delivering the NHS Plan: Next steps on investment, next steps on reform” NHS England [18], also included a commitment to offer patients the choice of an alternative provider if they could not be treated within six months by the NHS. From the end of 2005, all patients were intended to have choice of provider at point of referral in primary care, including choice of both NHS and IS providers [19]. In 2009, patient choice of provider was embedded as a formal right within the NHS Constitution [20]. In 2012, the “Any Qualified Provider (AQP)” contractual system expanded the range of services that independent providers could compete for with NHS providers [21]. Alongside a push for greater patient choice, the introduction of the Payment by Results (PbR) programme in 2003 provided a standardised framework to use when contracting with the IS to provide NHS-funded

services. The PbR programme is a national tariff system involving fixed activity-based payments for Healthcare Resource Groups (HRGs) based on average costs for equivalent operations or hospital stays. However, concerns have been raised that HRGs do not comprehensively capture differences in case-mix between IS and NHS providers [22]. From 2003, the introduction of IS Treatment Centres (ISTCs) also increased capacity in the IS to provide NHS-funded elective care. ISTCs are independent sector owned centres that specialise in the provision of NHS-funded high-volume and low complexity elective care procedures, many of which could be done as day cases. By 2010/11, there were 161 ISTCs operating in England [23]. However, NHS-funded services take place in a range of different types of independent sector providers including both ISTCs and private hospitals that treat both NHS and privately funded patients.

## 2. Methods

### 2.1. Inclusion and exclusion criteria

We included all peer reviewed empirical research studies or literature reviews which explored the consequences of IS provision of NHS-funded elective care for patients, healthcare professionals, and the health system. Studies which took place in a UK health care system context and published in English from 2000 onwards were included. There were no limitations on specific study design. Where available, we analysed data on performance metrics such as waiting times/lists, volume/activity, vacancy rates, productivity measures, staffing levels, surgical outcomes, length of stay, readmissions, and mortality. If available, we also ascertained demographic information such as ethnicity, sex, age, location, socioeconomic deprivation and patient complexity, which offered insight into inequality. Patient and workforce perspectives relating to satisfaction and quality were also of interest, offering a broad basis from which to reflect the myriad impacts of NHS/IS partnership working. Studies which explored NHS provision in isolation were not included in the review. Editorials, short reports and commentaries have not been included. Although there are likely to be implications for privately funded patients, we are primarily concerned with outcomes for NHS funded patients treated in IS contexts. Studies which are predominantly focused on exploring consequences for privately funded patients have therefore not been included.

### 2.2. Information sources and searching

We searched the following electronic databases for publications from 2000 onwards in July 2024: Medline, CINAHL, Econlit, PubMed, Web of Science and Scopus. These databases were selected in order to offer a broad range of literature whilst producing relevant results. The search period was selected in order to reflect the range of key policy interventions that have taken place from 2000 onwards. Beginning with the 2000 NHS Plan, there was an identifiable shift towards agendas of ‘choice’, which opened up the market to a range of provider types. The impact of successive policy intervention to this end [3] is still visible in contemporary NHS use of IS settings.

We adopted the following broad search strategy:

((NHS) OR (National Health Service) OR (Public Sector)) AND ((Independent Sector) OR (Private Sector)) AND ((Elective Care) OR (Elective Surgery) OR Planned surgery))

Given the differences across the platforms this strategy was adapted for each database. Whilst the terms remained consistent some limits and truncation differed between platforms. This has been detailed in [Appendix 1](#). Test searches of relevant material assisted in the identification of keywords that were subsequently used in our search strategy. To identify additional studies potentially excluded from the original searches, the research team hand searched several journals who have published heavily in this field (BMC Health Services Research, BMJ Open, BMJ Quality and Safety, Journal of Patient Reported Outcomes,

Journal of Social Policy, Health Economics, European Journal of Health Economics and Journal of Health Economics) to also gauge a greater depth of understanding. Manual searches of reference lists and the grey literature, in addition to relevant Government and NHS documentation, formed part of this process.

### 2.3. Screening and selection process

The main review team initially screened the studies. Assessing title and abstract against the inclusion/exclusion criteria, any studies which met these criteria were selected to be read in full. Any disagreements at this stage were resolved through discussion with a third review team member. Reasons for exclusion have been recorded.

The review team extracted data using a collaboratively designed form. This form included information on: study design, sample size, relevant methodology and methodological strength, outcomes and outcome reporting, risk of bias and strengths and limitations. The quality of the articles was also assessed using this form. Any disagreements were again resolved through the involvement of a third reviewer, and the forms were also piloted across a sample of papers before the screening process began in order to establish consistency.

### 2.4. Analysis and synthesis

After completion of data extraction and quality assessment, we conducted a thematic analysis of papers included in our review [24].

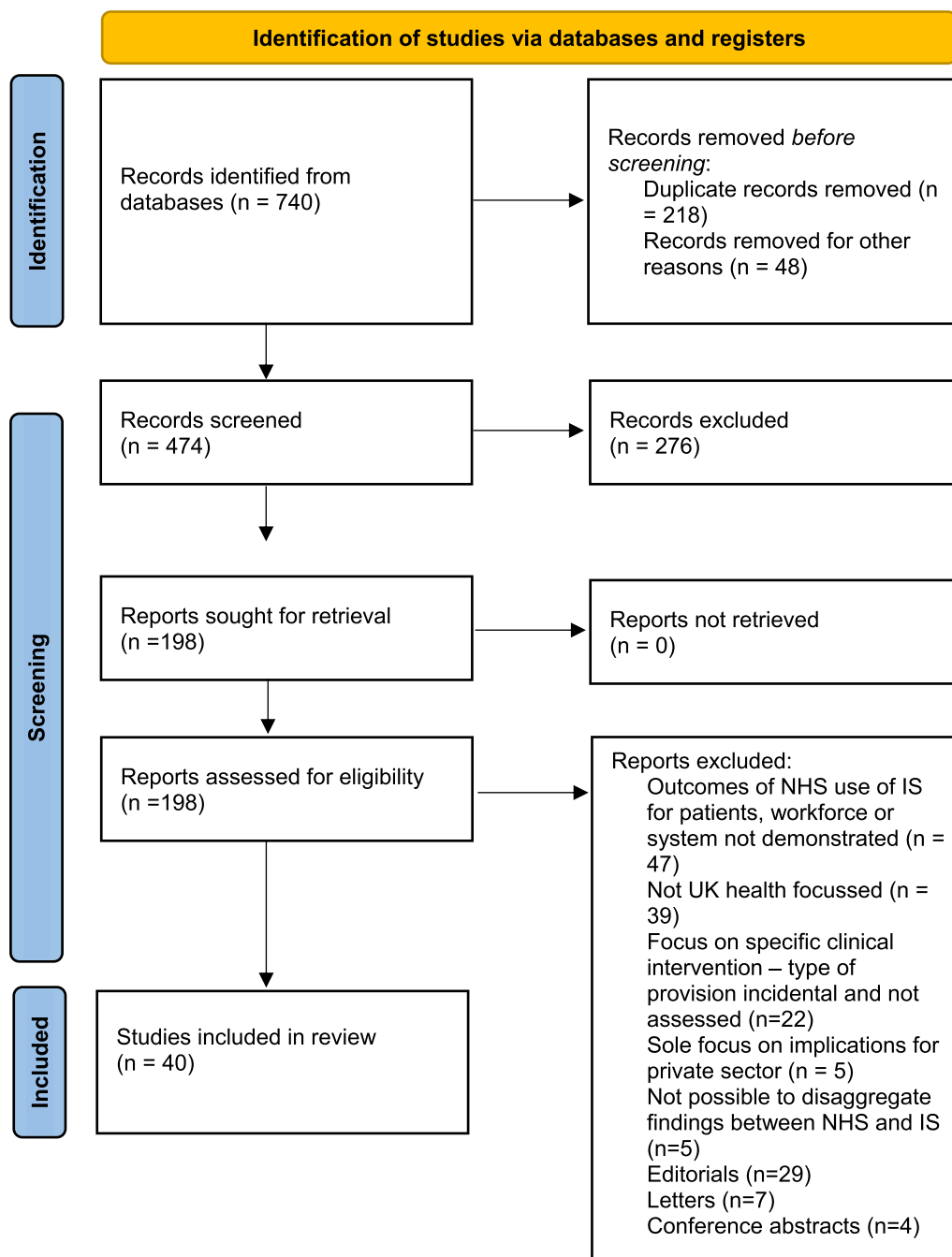


Fig. 1. PRISMA 2020 flow diagram for new systematic reviews which included searches of databases and registers only  
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Source: Page MJ, et al. BMJ 2021;372:n71. doi: 10.1136/bmj.n71.

This process was guided by a deductive coding approach in which predetermined areas of interest were populated. These areas emerged from a preliminary engagement with the research literature and the studies which we found were categorised accordingly. This enabled a narrative to develop around research prevalence and gaps in the literature, as well as insight into areas requiring further exploration.

### 3. Results

#### 3.1. PRISMA flow diagram

Fig. 1 uses the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) approach to show the information through different phases of our review. This has been done to aid transparency, however it should be acknowledged that this review is not systematic and results may not be replicable. 740 records were identified from the database searches. After screening the titles and abstracts of these records, 198 studies were deemed relevant for full text reading. 40 studies were subsequently included for final selection. Details of the 40 included studies can be found in the data extraction/quality assessment table (Supplementary Table 1).

#### 3.2. Narrative analysis

A narrative review approach [25,26] was undertaken in order to respond to the anticipated breadth of literature, whilst enabling a more critical and thematic analysis of findings. This has allowed an in-depth discussion to develop, also guided by a priori categories as discussed previously. The researchers both identified recurring patterns in the data and through coding and categorising, this enabled themes to emerge. Validation, by comparing and contrasting themes across different studies with the aim of identifying consistencies and discrepancies, allowed for the refinement and generation of sub themes. We attempted to demonstrate both the nature of the research and how this reflects the less overtly visible implications of IS provision of NHS-funded care. The following five themes (developed prior to our analysis) often coexisted concurrently, reflecting the complexity of this topic: Patient outcomes and healthcare quality, inequality and inequity, system efficiency and capacity, workforce, and financial outcomes. The majority of included studies provide data on NHS patients only, however there are exceptions in which a mix of NHS and private patient data was used. These include [9,43,44,46,50]

#### 3.3. Patient outcomes and healthcare quality

Many comparative analyses of patient outcomes and healthcare quality between ISPs and NHS hospitals have been conducted over the last two decades, assessing a range of patient outcomes. These included: readmissions [27,29-32,65] mortality [32-34,65], re-operation rates [31], inter-hospital transfers [32,65], Patient Reported Outcome Measures (PROMs) [35-39] and patient experience surveys [40].

Generally, evidence to date indicates that ISPs provide care that is associated with lower risk of mortality, readmissions, and inter-hospital transfers. Treatment in ISPs is also associated with a small, but statistically significant, improvement in post-operative PROM scores [37,39]. On reviewing the evidence produced so far, Bottle and Browne [41] (2021, p. 2) state “the evidence base as a whole,..., provides a strong reassurance that outsourced private care for NHS patients is at least as safe as that provided in NHS facilities.” However, the majority of the literature has exclusively used quantitative methods that can only adjust for observable differences in patient characteristics, and medical complexity. Two studies have used an instrumental variable approach to attempt to adjust for unobservable confounders and found no significant differences in readmission rates between NHS hospitals and ISPs [30, 65]. Bannister et al [31] also found that some surgeries needed to be corrected in the NHS after being performed in the IS and re-operation

rates were higher despite excluding patients who were of higher complexity and with greater comorbidities. Whilst these findings are in themselves problematic, information on results and performance by IS providers are not generally made available to the same extent as in the NHS, offering a further example of the disparity between the two sectors.

Beyond patient-level outcomes, aggregate regional level analyses can provide some insights of the system-level impacts of outsourcing NHS-funded care to the independent sector. Goodair and Reeves [33] found a positive association between the proportion of expenditure on the IS by clinical commissioning groups and treatable mortality between 2013 and 2020, suggesting that increased provision of NHS-funded care in the IS may have negatively impacted quality of care. However, this study captured all NHS spending on IS activity not only elective care.

We identified only four studies focused on NHS funded patient satisfaction in the IS. [40,42-44] Patiar et al [42] involved a limited survey of 130 patients who travelled out of region to have their tonsillectomy at an ISP after their wait on the NHS waiting list exceeded 12 months, with the majority of patients rating their experience as excellent (71 %) or satisfactory (25 %). Owusu-Frimpong et al [43] involved a comparative assessment of patient satisfaction in ISPs and NHS hospitals using a combination of semi-structured interviews and patient surveys. They discovered that patients treated in private hospitals generally had higher levels of satisfaction and found it easier to access healthcare services at short notice. Sanjay et al [44] compared post-operative patient satisfaction between 436 patients treated in a NHS hospital and 119 patients treated in a ISP by the same surgeon, and found no statistically significant result. Pérotin et al [40] provide different measures with their use of patient reporting through NHS survey material, which looks beyond clinical experience alone and provides insight into a range of additional elements of care, including comfort, cleanliness and noise levels in order to compare the impact of ownership. Their findings among different specialties were mixed but, when all specialties were aggregated, showed no significant difference in patient satisfaction between private and NHS hospitals.

#### 3.4. Inequity and inequality

A number of studies suggested differences in the characteristics of patients who received NHS-funded elective care in the IS. We found 19 studies that contained demographic information on populations treated in the NHS compared to the IS. They found that IS treat lower complexity, wealthier, and younger patients. In addition, two studies indicated that White patients are disproportionately treated in the IS [27,32]. Moreover, studies found that IS provision is more likely to take place in more affluent locations [22,27-29,45-48,64]. These trends were not as visible under Pandemic conditions however, as case mixes in IS settings were reported to be of higher complexity, with associated impacts elongating length of stay [9].

Most studies that examined inequalities [22,27,29,46-49] used regression or descriptive analyses of Hospital Episode Statistics (HES) data. The HES dataset is collated by NHS England, and includes information on patient characteristics, activity, and outcomes for NHS-funded care in NHS and private hospitals [66]. The HES dataset also includes information on privately funded care in NHS hospitals, although this occurs in small volumes and was not analysed in any studies we identified. Demographic information enabled confirmation of the unequal and/or disproportionate case mixes and representation, and the large cohorts in addition to longitudinal study periods, enhanced the confidence with which these associations can be made.

#### 3.5. System efficiency and capacity

System efficiency was commonly measured in the studies we found using hospital length of stay, whereas capacity was understood as the ability of the health system to reduce waiting times for NHS-funded care, the number of patients on NHS waiting lists, or ability to provide

increased numbers of elective care procedures.

There was consensus that treatment in ISPs was associated with reduced length of stay compared to NHS providers among identified studies [32,34,45,50,51]. However, these findings need to be interpreted in the context of different patient case-mixes between NHS and IS sectors. While these studies do attempt to adjust for observable patient confounders, there is still the potential for unobserved patient confounding that may not be accounted for. Anderson et al 2024 used an instrumental variable approach to attempt to account for unobservable confounding due to differences in patient morbidity and found that treatment in ISPs was associated with greater LOS than in NHS hospitals [65]. There appeared to be some spill-over effect on pre-operative length of stay in NHS hospitals following ISP entry into local healthcare markets. Cooper et al [45] found that ISP entry was associated with reductions in pre-operative length of stay in nearby NHS hospitals, suggesting this may be because of increased competition. Although, the authors also noted that ISPs took on healthier patients and left NHS hospitals treating patients who were sicker.

Waiting times were explored across around a third of studies. In general, the expansion of NHS-funded elective care in the IS coincided with reductions in overall waiting times for NHS-funded care. However, there are a range of caveats which need to be considered alongside these findings. From a methodological perspective, it is particularly challenging to disentangle the impact of the expansion of NHS-funded care in the IS on overall waiting times as this period coincided with significant increases in overall NHS funding and the introduction of targets with strong sanctions for poorly performing hospital managers [52]. However, it is clear that differences in waiting times between ISPs and NHS hospitals have benefitted different groups of patients. For example, Beckert and Kelly (2021, p. 820) [27] found that “reduced waiting times in ISPs benefitted the richest patients twice as much as the poorest, and White patients six times as much as ethnic minority patients”. Therefore, the entry of ISPs may have served to introduce a mechanism for disproportionately quicker access to NHS-funded care for less deprived patients, linking to the previous theme of inequalities.

Kelly and Stoye [29] found that the introduction of IS providers in local healthcare markets increased the overall number of NHS funded hip replacements taking place by 12%, however they emphasised that the growth in number of hip replacements in the least deprived 10% of areas grew by three times the rate in the most deprived 10% of areas during their period of analysis. Anderson [50] reported reductions in NHS-funded “low-value” activity (providing minimal benefit to patients—such as surgical interventions for conditions where conservative treatment is equally effective) in IS hospitals. This followed a national programme to reduce the provision of low-value care that aimed to free-up capacity for “higher value”, clinically recommended procedures. However, the same study found that there were corresponding increases in privately-funded “low-value” activity that may have been the result of supplier-induced demand. Anderson et al [53] also found that reductions in NHS-funded “low-value” activity were significantly smaller in IS hospitals than in NHS hospitals following implementation of this national programme.

There was also additional evidence which highlighted the impact of the Covid-19 pandemic and how the IS was of some value to a health system under unprecedented strain. Hampton et al [54] use day case lists at a single district general hospital between April 2020 and December 2020 to offer an indication of how cross-sectoral collaboration allowed the continuation of NHS day case surgery for orthopaedic elective care, with only small increases (1.6%) in the number of patients on day-case waiting lists compared to large (73.2%) increases in the number of patients on inpatient case waiting lists. Barker et al [55] and Dixon et al [56] also found that the IS was able to offer an environment for the safe continuation of elective surgical care during the COVID-19 pandemic. Friebel, et al [9] however report mixed findings after analysis of NHS use of the IS during Covid-19, with significant regional variation in NHS-funded care provision in the IS.

### 3.6. Workforce

The evidence on workforce and healthcare professionals was generally limited and predominately focused on Independent Sector Treatment Centre (ISTC's). The literature did not allow a statistical insight into workforce dynamics across sectors. For example, there was no quantitative evidence on professional satisfaction, burn-out, or mental health and wellbeing of healthcare professionals working in the IS. There was also no quantitative evidence to understand the extent to which NHS staff recruitment and retention is affected by increased IS activity and outsourcing of NHS care.

There was however, a small but notable number of studies which offered some insight into the implications of IS use for healthcare professionals. Eight studies noted some professional impact in ISTC contexts. In the first ‘phase’ of the ISTC contract, only non-NHS staff were recruited, however this rule was relaxed in the second phase. There was evidence of key cultural and structural tension as a result of increasing numbers of NHS staff working in the IS [31,45,58-62]. Distinct findings included diminished opportunity for staff training and development [52] and a professional culture more predisposed towards profit driven risk selection [45], however there were also nuanced suggestions of divergent professional ethos visible across studies. Indeed, division and opposition were key characteristics of the workforce dynamics referred to in the studies detailed above, and the difficulties inherent in the introduction of ISTCs and equivalents are arguably hardest to reconcile from a professional perspective. Waring and Bishop [59-62] have also explored professional identity in ISTC staff and IS professionals more broadly. They found that staff from a range of backgrounds struggled with such discontinuity and reported a sense of powerlessness and scepticism about the intentions behind implementation of ISTCs in addition to a more general loss of professional identity, as they were required to adapt to roles in which ambiguity of purpose resulting from divergent intention and ethos between public and private was more likely.

### 3.7. Financial outcomes

There was an absence of studies which examined quantitatively the association between the expansion of NHS-funded care in the IS and financial outcomes (i.e. extent of deficit) of NHS organisations. However, many studies discussed the potential negative financial implications of greater IS provision of NHS-funded care for NHS providers drawing on the experience of interviewees. Eleven studies referred to ‘cherry picking’ in some form, in which the IS selects patients on the basis of risk. Described as ‘patient sorting’ by Beckert and Kelly [27] ‘cream-skimming’ by Cooper et al [45], Goodair and Reeves [33] and Street et al [47], ‘patient selection’ by Mason et al, [22,57] ‘risk selection’ by Sutaria et al [49] and ‘cherry picking’ by Kelly and Stoye [28, 29] Siciliani et al [51] and Turner et al [58]. Whilst this can be in part attributed to the lack of intensive care capacity and/or multidisciplinary team support in IS settings, the ability of ISPs to select comparatively healthier and less complex patients provides them a financial advantage over NHS hospitals which are left with comparatively costlier patients. Mason et al [57] mapped out several other factors which could lead to financial advantages for ISPs, including taxes and performance management regimes, and input costs, such as the provision of emergency care.

Thirteen studies discussed payment mechanisms and financial implications for the NHS [9,22,27,28,34,36,40,45,47,52,57,63,64]. Pollock and Kirkwood 2009 suggested that the initial ISTC contract in Scotland based on reimbursement for referrals rather than operations did not represent value for money for NHS funds [63]. Contracts have since evolved and reimbursement systems and contracting under choice reforms were intended to be broadly equal across provider settings. This has been partially maintained through HRGs tariffs which were designed to enable the categorisation of specific activity deemed to broadly

consume similar resources [22,27,57]. However, this assumes that similar activity takes place across providers, which evidence suggests is not the case. A range of differences, most notably in case mixes, subsequently leads to disparities and incentives in favour of the IS. The current classification of HRGs does allow for some disparities in patient complexity but does not completely reflect differences in case mix between ISPs and NHS hospitals. For example, several studies emphasised that higher complexity patients are not sufficiently covered by existing tariffs, and how the IS benefits from this [22,40,47,52,57]. Whilst quantitatively based causal connections regarding this and the financial sustainability of NHS providers were not visible in the literature, Mason et al [22,57] suggested that data regarding patient complexity will need to improve before this can be explored with greater accuracy.

## 4. Discussion

### 4.1. Summary of findings

There is evidence which suggests that elective care provided by the IS is associated with better outcomes, higher levels of patient satisfaction, and reduced length of stay compared to NHS hospitals. However, most existing evidence only adjusts for a limited set of observable patient characteristics which may not fully reflect differences in patient complexity. Studies identified that patients treated in the IS were younger, less deprived and had lower numbers of comorbidities than patients treated in NHS hospitals. This suggests that some patients may benefit from NHS-funded elective care in the IS, while others do not. Although evidence on workforce and professional dynamics was limited, it was possible to identify limitations for training and development in IS contexts and divergences in staff culture and identity between NHS healthcare professionals and those employed in and/or by the independent sector. There is evidence that expansion of NHS-funded care in the IS has resulted in reduced waiting times for NHS-funded care, and increased numbers of elective procedures taking place overall. However, it is challenging to disentangle the impacts of the expansion of NHS-funded care in the IS compared to a counterfactual scenario where increased NHS funding is directed towards increased investment in NHS hospital infrastructure and workforce capacity. There are also concerns in the literature that the IS may have a financial advantage over NHS providers as ISPs can 'cherry pick' less complex and costly patients with lower morbidity.

### 4.2. Strengths and limitations

Several studies we included in our review benefited from large HES datasets; yet it is important to note that HES, while extensive, may lack certain details crucial for examining distinctions between IS and NHS provision. For example, key demographic variables such as ethnicity are known to not be recorded consistently in HES data. In addition, many of the studies which used HES data were primarily focused on specific elective surgeries (such as hip replacements) rendering robust conclusions in other areas difficult. Although this review has followed a systematic process for identification of literature, adopting a rapid review approach has potentially precluded literature not contained in the databases we have searched. In addition, our iterative searching of grey literature and reference lists will not have been exhaustive.

### 4.3. Future research

There are number of evidence gaps highlighted in our review which need to be addressed through future research. First, most evidence on the outcomes and length of stay for patients receiving NHS-funded care in the IS has focused on low complexity and high-volume work such as joint replacements, cataract surgery, or hernia repair. The COVID-19 pandemic has resulted in a greater variety of NHS-funded elective procedures taking place in the IS [9] and further research is needed to

establish potential differences in outcomes following complex surgery in the IS compared to NHS hospitals. Second, there is a lack of understanding regarding how work stress in the NHS, driven by the necessity to handle a high volume of complex procedures, coupled with competition from the IS, impacts clinical training and performance, and recruitment and retention. Particularly, if greater numbers of surgical consultants are being drawn to establish private practice, questions remain around how the NHS will cope. This is a subject for future investigation and will require addressing workforce data gaps in the IS to ascertain flows and activity of staff between the NHS and IS. Third, there was an absence of studies that examined quantitative financial outcomes in NHS hospitals (such as the extent of deficits) following the introduction or expansion of NHS-funded care in nearby ISPs. This research is urgently needed to understand the implications of continued IS provision of NHS-funded elective care on the financial sustainability of NHS hospitals. Fourth, many studies in this review highlighted how ISPs treat less complex patients than NHS hospitals and this may provide evidence of cream-skimming that is not fully captured in the NHS hospital tariff system. Future research could investigate whether differential pricing mechanisms would remove incentives for cream-skimming, but this would largely depend on the availability and submission of quality costing data from the IS. One way of addressing this information gap would be to mandate the reporting of costing data from the IS so they are included in the calculate of NHS reference costs and prices [67]. Fifth, there is a need for operational research to examine differences in outcomes, quality, and efficiency observed between private and NHS hospitals. This would involve mapping patient journeys, and healthcare processes which may identify factors contributing to reduced rates of readmissions, or shorter LOS in ISPs. Finally, there is a need for research which examines the implications of private healthcare sector growth on quality of, access to, and efficiency of private and NHS healthcare services taking into account changes in both NHS-funded and privately funded care. This is important as the quality of ISPs should be assessed on all patients they treat to maximise statistical power and scope for in-depth investigation; not just those that happen to be NHS funded and therefore recorded in NHS datasets. The Competition and Markets Authority (CMA) private healthcare order [68], published in 2014, established a mandate for the Private Healthcare Information Network (PHIN) to collect activity data for privately funded inpatient care which has helped provide more information on privately funded care in the UK, although patient-level information is not yet available to researchers. The NHS England Acute Data Alignment Programme (ADAPT) may rectify this issue once data streams from NHS and private hospitals become aligned [69] and integrated. There are also important data gaps in the independent sector that need to be addressed including information of workforce levels, hospital capacity, outpatient activity, and pricing of procedures [70].

## 5. Conclusions

It is crucial that the ongoing debate regarding the implications of IS provision of NHS-funded elective care is evidence-based rather than driven by rhetoric or politics. Large quantities of high-volume and low-complexity activity has shifted away from the NHS to ISPs over the last two decades without comprehensive evaluation of the implications for healthcare professionals and the wider healthcare system over the longer-term. NHS reliance on the IS to deliver certain types of elective care is likely to continue in the future, therefore there is an urgent need for research to address these gaps in understanding.

### CRediT authorship contribution statement

**Simon Fletcher:** Writing – review & editing, Writing – original draft, Project administration, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Oya Eddama:** Writing – review & editing, Writing – original draft, Project administration, Methodology,

Investigation, Formal analysis, Data curation. **Michael Anderson:** Writing – review & editing, Writing – original draft, Validation, Supervision, Formal analysis. **Rachel Meacock:** Writing – review & editing, Conceptualization. **Vasudha Wattal:** Writing – review & editing. **Pauline Allen:** Writing – review & editing. **Stephen Peckham:** Writing – review & editing, Supervision, Conceptualization.

### Declaration of competing interest

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### Supplementary materials

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