

## Terms of reference and conduct of our investigation

### Terms of reference

1. On 4 April 2012, OFT sent us the following reference:
  1. The OFT, in exercise of its powers under Sections 131 and 133 of the Enterprise Act 2002 (the Act), hereby makes a reference to the CC for an investigation into the supply or acquisition of PH in the UK.
  2. The OFT has reasonable grounds for suspecting that a feature or a combination of features of the market or markets for the supply or acquisition of PH prevents, restricts or distorts competition.
  3. For the purposes of this reference, PH means privately funded healthcare services. These are services provided to patients via private facilities/clinics including private patient units, through the services of consultants, medical and clinical professionals who work within such facilities.

*(signed)* JOHN FINGLETON  
CEO  
04 April 2012

### Conduct of our investigation

2. This appendix provides a more detailed explanation of the conduct of our investigation from the reference by the OFT to the provisional findings.
3. On receiving the reference from the OFT on 4 April 2012, we published on our website an [invitation to interested parties](#) to provide evidence about private-funded healthcare. We also sent out on the same day and over the course of the following weeks over 239 letters to private hospital operators, PPUs and interested third parties requesting initial information about their businesses. A notice inviting interested parties to submit evidence was also placed in the *BMJ* in April 2012.

4. On 7 June 2012, we published [a notice](#) setting out how we proposed to deal with interested parties, including how we intended to gather information and evidence during the course of the investigation and how interested parties would be kept updated as the investigation progressed.
5. An [administrative timetable](#) for the investigation was published on 15 June 2012. Revised versions were published on 28 September 2012, 22 May 2013 and 1 August 2013.
6. On 22 June 2012 we published the [issues statement](#), setting out the areas of concern on which the investigation would focus. We received 15 responses from hospital operators, PMIs and trade associations in response to the issues statement. Non-confidential versions of [responses to the issues statement](#) have been published on our website.
7. Throughout the investigation to date we have received numerous [submissions](#) from individual consultants and members of the public. We have published over 290 such submissions on our website.
8. In July 2012 we held initial meetings with 11 parties and Healthcode Ltd (Healthcode) to help identify data and information held by the industry operators. In July 2012 we sent out 14 financial questionnaires to parties. In August 2012 we sent out market questionnaires to 12 hospital operators and 6 PMIs. Data questionnaires were also sent out in August 2012 to five hospital operators, five PMIs and Healthcode. In November 2012 further market questionnaires were sent to 89 PPU's and between December 2012 and January 2013 questionnaires were sent to over 100 anaesthetist groups. Many of these information and data requests were followed up with further written requests and/or telephone calls and/or meetings.

9. During June and August 2012 we visited the hospitals of seven private hospital operators and the offices of four PMI companies. We also made contact with a large number of third parties throughout this period of the investigation including the BMA, the Department of Health, the NHS Commissioning Board Authority, Northern Ireland Health & Social Care Board, PHIN, the Scottish Executive, the Welsh Executive and several consultant trade associations.
10. Between February and April 2013 we held 16 hearings with parties and a number of third parties.
11. As well as the information and data gathering, we published on 11 September 2012 our [survey methodology](#). Following a tender process, we commissioned GfK to carry out a quantitative online survey with consultants who work in the private healthcare market, GPs who refer patients to consultants in private practice and patients who had received treatment/tests as a private patient. The [results of these three surveys](#) were published on our website in February 2013.
12. On 7 November we published our [profitability methodology consultation document](#). In that document, we set out our intention, following a tender process, to commission DTZ to estimate the modern equivalent asset value of land. Relevant parties were sent a draft of the report on 31 January 2013 for comment and DTZ produced a final report dated 4 June which is at Appendix 6.15.
13. Prior to the publication of our provisional findings, in addition to the issues statement, profitability methodology and survey methodology and results described above, in order to facilitate contributions from parties, we published a range of papers at various stages and, where appropriate, the results and our thinking at the relevant time of our analysis. Papers published to date include:

- [annotated issues statement](#) which contained as appendices a number of papers setting out our analyses and the results, where appropriate, of our analyses on, in particular, market definition, local market concentration, anaesthetist groups, bargaining between hospital operators and PMIs, barriers to entry and on corporate PMI;
- [empirical analysis methodology](#) of price outcomes in negotiations between hospital operators and insurers;
- [entry and expansion case study 1](#): Circle Holdings PLC, Bath;
- [entry and expansion case study 2](#): The London Clinic;
- [entry and expansion case study 3](#): Edinburgh and the Lothians;
- [hospital competition for clinician referrals](#);
- [information availability](#);
- [local competition assessment of hospitals of potential concern](#);
- [price-concentration analysis for self-pay patients](#); and
- [private healthcare in central London: horizontal competitive constraints](#).

14. Some of our analyses and results relating to specific parties have also been shared with relevant parties at various stages, including our work on land valuations and our assessment of hospitals which may have local market power. Following publication of a notice dated 15 June 2013 inviting interested parties to attend a roundtable on 9 April and a data room, we also held a data room open between 15 and 19 April 2013 to allow the economic advisers of some of the parties to review our analyses, including the underlying data relating to catchment areas, concentration in local markets and price concentration for self-pay patients. Nine parties took the opportunity to attend the roundtable and four parties took the opportunity to attend the data room.

15. We would like to thank all those who have assisted in our investigation to date. A non-confidential copy of these provisional findings has been placed on the CC's website.

## **Employers' private healthcare schemes**

### **Executive summary**

1. Nearly three times as many people enjoy access to private medical care as part of the compensation and benefits scheme provided by their employer as pay for PMI themselves and the majority of these are members of large corporate (rather than SME) schemes.
2. Larger companies provide access to private healthcare principally to attract and retain staff and to minimize disruption arising from sickness-related absences. They seek to balance the cost of providing access to private healthcare with the benefits that they derive from it.
3. Companies differ in the importance they attach to containing the costs of providing access to private healthcare. Some (we believe a minority) have maintained benefits while funding the increased costs themselves. Some have maintained the level of benefits but shifted part of the funding burden to staff. Some have sought and more are planning to reduce the costs of their schemes, including by adopting 'open'<sup>1</sup> referral processes and restricted hospital networks.
4. While there is thus variation between employers as to the degree of flexibility that employees are permitted when making healthcare decisions, the 'direction of travel' appears to be towards seeking ways of containing the cost burden on the employer of providing access to private healthcare including by adopting a more guided approach.

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<sup>1</sup> Open referrals are referrals made without specifying a particular clinician. This is typically accompanied by a process whereby the PMI will recommend suitable specialists to the patient.

## Introduction

5. Our first theory of harm postulates that some hospital groups may have market power in particular geographic areas. This might arise from the absence of comparable or suitable facilities in the area concerned and hence the lack of an alternative for patients. To assess whether or not this is the case, we will need to understand the requirements of hospital users and in particular the extent to which they regard different hospital facilities as substitutes. We are conducting survey research to understand what the requirements of individual patients/consumers are. However, for the majority of consumers with access to private medical care, their employer is the purchaser of their hospital services and will thus be in a position to decide which hospital facilities to make available to employees. We therefore wished to understand what the purchasing requirements of employers are. We also wished to consider whether large employers, in particular, may be able to exert buyer power.
6. This paper looks at private healthcare schemes provided by larger employers for their staff. It begins by providing some background information on the company-paid sector and how it compares with the individual-paid sector. It identifies segments within the company-paid market that may be relevant to our analysis, noting trends in numbers of subscribers<sup>2</sup> covered and premiums paid. It goes on to describe the requirements of large employers as regards the features and benefits of their schemes, including the degree of flexibility that they permit their staff when making healthcare choices.

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<sup>2</sup> 'Subscribers' are used to denote the individual policyholders. The number of lives covered may exceed the number of subscribers as a subscriber's dependants may also be covered.

## The company sector: industry background

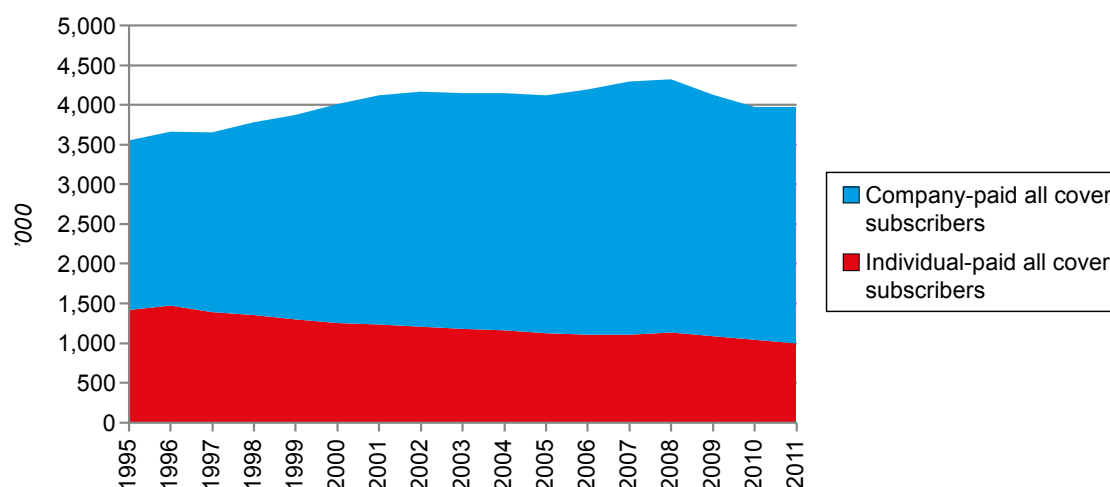
### *The company-paid vs individual-paid sectors*

#### *Subscriber numbers*

7. Almost three times as many subscribers are part of company-paid schemes as pay for their own PMI and the majority of these are part of large corporate schemes. In 2011, the number of individual subscribers fell to below 1 million for the first time in recent decades (down from almost 1.5 million in 1995) while the number of subscribers to company schemes remained at about the same level, having been falling since 2008. Laing and Buisson estimate that, as of December 2011, large corporates<sup>3</sup> accounted for 64 per cent of company-paid subscribers, amounting to 1.9 million subscribers, and that SMEs accounted for 36 per cent or 1.074 million subscribers.

FIGURE 1

#### **Company and individual subscribers**



Source: Laing and Buisson, *Healthcare Market Review 2011–2012*.

<sup>3</sup> Large corporates are defined by Laing and Buisson as companies with 250+ employees.

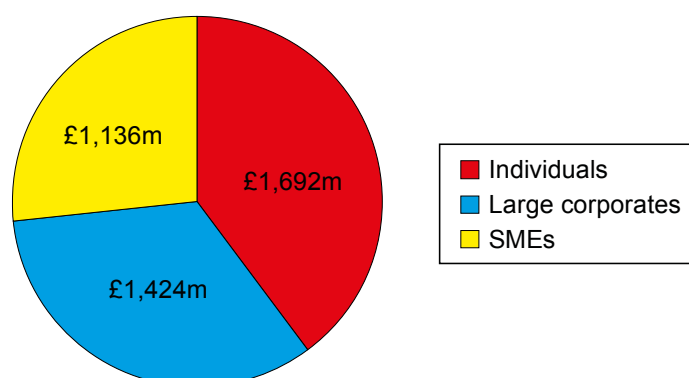


### *Spend on medical cover*

8. Total spending on private medical cover by companies in the UK was estimated by Laing and Buisson at £2,560 million in 2011, large corporates accounting for 56 per cent of this and SMEs 44 per cent.
9. In total, companies spend significantly more than individuals: £2,560 million by companies and £1,692 million by individuals in 2011. However, individuals (and SMEs) pay higher premiums per individual than do large corporates. Because of this, large corporate spending on health cover in total (including the claims costs met by self-insured companies) is less than individuals spend and not very significantly more than SMEs spend in total.

FIGURE 2

#### **Health cover spending, 2011**



Source: Laing and Buisson, *Healthcare Market Review 2011–2012*.

### ***Types of company schemes—fully insured and self-insured***

10. Company schemes may be ‘fully insured’ or they may be ‘self-insured’. In the former case the insurer bears the risk of claims<sup>4</sup> and in the latter all or some of it is borne by the employer.

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<sup>4</sup> Unlike some forms of insurance, PMI is not bought to mitigate the impact of a single, unlikely but catastrophic event. Sickness occurs inevitably on a greater or lesser scale and may be predicted reasonably well based on the nature of the population

11. If fully insured, a PMI will be selected by the employer to provide a specified level of healthcare cover in exchange for an annual premium. Typically, this will reflect the company's claims history, being higher or lower according to the size and number of claims being made against the policy.
12. If the employer decides to self-insure, it will, probably with the assistance of specialist compensation and benefit consultants, design its own scheme and create and fund a trust to meet claims from its employees. Typically, an employer will appoint a PMI to administer the scheme, assessing claims and managing the payment process on the trust's behalf.<sup>5</sup> In circumstances where the employer appoints a PMI to administer the scheme, the company will benefit from the rates that the PMI has agreed with private hospital groups and consultants and also with third parties which provide managed healthcare solutions.
13. The benefits of self-insurance to an employer include the avoidance of Insurance Premium Tax, which is currently levied at 6 per cent. However, only larger firms are likely to self-insure since only with a fairly large group of members is the claim rate reliably predictable.<sup>6</sup> Even so, the employer may choose to hedge, taking out 'stop loss' insurance with the PMI, for example in respect of individual claims or the aggregate value of claims.<sup>7</sup>
14. Subject to the trust's compliance with HMRC rules, the value of claims paid on behalf of individual employees will not be considered as a taxable benefit to the employee concerned. The tax burden on the employee will be calculated on the basis of the

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concerned. The 'risk' here might perhaps be better characterized as the possibility that the cost of meeting claims significantly exceeds that predicted.

<sup>5</sup> As we contacted corporate customers of the major PMIs, all the companies we spoke to use a PMI to administer their trust. Our understanding is that most third party administrators (TPAs) of trusts are PMIs but we found one non-PMI company, Healix, which provided TPA services to large employers: [www.healix.com/employers/healthcare-trusts/claims-administration/](http://www.healix.com/employers/healthcare-trusts/claims-administration/).

<sup>6</sup> Laing and Buisson estimate that only 1 per cent of SMEs self-insure, whereas 37 per cent of subscribers to large corporate schemes are self-insured. Most, but not all, of the companies we contacted were self-insured, though one [X] with 20,000 employees told us that it had saved money by becoming fully insured.

<sup>7</sup> Alternatively a company may arrange cover with a captive insurance underwriter.

cost per employee to the employer in a similar way that the benefit of a fully-insured scheme would be calculated: on the value of the premium per employee.

15. It should be noted that even if 'fully insured', the employer is not insulated from the costs of providing medical care as premiums are likely to rise in subsequent years if the cost of meeting claims increases.

### **Health cover requirements of large corporate customers**

16. Our first theory of harm postulates that private hospital groups may exert market power in local areas where they own a large proportion of local healthcare facilities. This, as envisaged by our third theory of harm, might be exploited by hospital groups in conducting national negotiations with PMIs. High fees negotiated by hospital groups with the major insurers will in turn affect the policy premium paid by fully-insured corporate customers or, in the case of self-insured companies, the fees paid to hospitals as negotiated with the relevant PMI.
17. We wanted to understand whether corporate customers were able to reduce their healthcare costs by either requiring their staff to be more flexible as regards the hospitals where they could be seen and treated or by negotiating directly with hospitals. If companies were willing to ask their staff to travel further to attend a private hospital or to use a restricted set of consultants, they might be able to reduce their overall healthcare costs, either by avoiding the use of particularly expensive providers or by securing preferential rates with a particular hospital group. For example, we thought that a large company (rather than an SME) which does/could represent a significant share of a particular hospital's revenue might be able to exert a degree of local buyer power over that hospital if it sought to negotiate directly. We therefore asked large firms operating health cover schemes how important it was to them to

have access to particular hospitals and the extent to which they were able to exert buyer power.

18. We contacted the 30 largest corporate customers of the five largest PMIs and asked them why they provided health cover for their employees, the benefits that they required the scheme to provide (particularly in terms of hospital access), how much their scheme cost and whether and if so in what way they had sought to contain the costs of providing private medical cover. Just over 50 companies responded to our questionnaire and we followed this up with telephone interviews with 12 of these. The remainder of this paper is based on what they told us.

### ***Reasons for providing health cover***

19. The two most common reasons firms gave for providing health cover to employees were:
  - (a) to attract and retain staff; and
  - (b) to reduce absences/disruption arising from sickness.

### ***Attracting and retaining staff***

20. This was the reason given most often by companies across all industry sectors. In the financial and professional services sector in particular the benefit was seen as a standard part of the remuneration package which employees would expect to be offered by an employer. Indeed, several firms in the sector [X] told us that they regularly monitored the healthcare benefits provided by their competitors to employees, subscribing to various surveys and taking advice from their compensation and benefits consultants to as to how their healthcare benefits compared with competitors'. The most commonly mentioned sources of advice on employee benefits, including healthcare, were Towers Watson and Aon Hewitt.

21. The positioning that employers sought, relative to competitors, varied. One financial services company [X] wanted to be slightly ahead of the average in respect of benefits, if less so on salaries. Another [X] recognized that its benefit package was less generous than competitors' but took the view that its staff preferred cash to benefits. A major bank, encompassing retail and investment banking activities [X], told us that for the latter it was an expected part of the remuneration package and was therefore necessary to attract and retain staff, but for the retail side of the business it was over and above the industry benchmark. However, health cover was seen as an essential part of the occupational health and well-being support that the business provided to its staff. Private healthcare shortened the time frame between health problems arising and effective intervention taking place and resulted in a quicker return to work by the employee.
22. Outside of this sector, an oil company [X] said that it had tried to match competitors' benefits when it introduced the scheme but had also wanted to differentiate its package and so had enhanced a particular aspect of its cancer care. A logistics company [X] told us that it liked to go beyond what its competitors offered, making health benefits available to first-line managers, for example.

### *Reducing absences/disruption*

23. Because private treatment could generally be accessed more quickly than through the NHS and could be arranged at a time convenient to the patient, disruption as a result of sickness and sickness-related<sup>8</sup> absence could be minimized. Rapid access to diagnostic services was seen as beneficial in that early diagnosis might result in more effective treatment and that treatment could be scheduled so as to minimize the disruption to an employee's work. Additionally, diagnostic facilities (including GP practices and testing/scanning services) close to the workplace reduced the time an

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<sup>8</sup> For example, care of a dependant.

employee would need to be away from their desk for a consultation/examination.

Having diagnostic, examination and testing facilities close to the workplace was seen by one bank [X] as being more important than having treatment available close by since employees would probably prefer to be treated at a hospital close to their home rather than to their workplace.

### ***Importance of particular hospitals***

24. We asked firms in which parts of the country they employed large numbers of staff and, in those areas, whether there were particular hospitals that it was important were available to their employees. We asked them, if there were such hospitals, whether they had sought to negotiate special terms with the hospital operator and, if so, what the outcome had been.
25. Because of the size and nature of the firms we were approaching, we reasoned that many of them would employ staff in central London and the City. As it had been put to us that HCA had a strong position in London, we asked companies with a significant number of employees in London specifically how important it was to them to have access to particular HCA hospitals.<sup>9</sup>

### ***Companies with staff concentrations outside London***

26. Companies generally took the view that staff outside London would prefer to be treated close to where they lived and worked, though acknowledged that for more serious or unusual conditions it might be appropriate for them to have access to hospitals further afield. They therefore cited hospitals situated in areas where they had a significant concentration of employees as important in access terms.

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<sup>9</sup> We listed HCA's hospitals and asked companies how important it was that their scheme provided their employees with access to them and whether some were more important than others.

27. One transport business [X] said that it adopted a network arrangement in 2010 to help cut the costs of its scheme but that it added a non-network [X] hospital in one of its locations specifically to ensure that its staff could be treated there. Similarly, a pharmaceutical company [X], with operations in the North-West, the South and the South-East, told us that it was very important for its staff to have access to two particular [X] hospitals in the North-West (Spire Liverpool and Spire Cheshire) and another one in the South [X]. A retailer [X] cited a particular hospital located close to its Manchester HQ that it said was important for its staff to have access to. A financial services company with several thousand employees on the south coast [X] told us that a hospital in the area was second only to London Bridge in terms of its usage. A TMT company [X] said that it employed a large number of people in the Edinburgh area and the hospital that it used most in the UK was the Spire Murrayfield.
28. Generally, companies told us that they thought their PMI would be able to negotiate better terms with the hospital group concerned than they would.<sup>10</sup> It was very rare for companies to have successfully negotiated special terms with such hospitals, though we did find this in one case outside London. This was a volume-related discount scheme which a financial services company [X] had, through its PMI [X], negotiated with Murrayfield Hospital in Edinburgh where it had around 5,000 staff based. This arrangement was made prior to the hospital's acquisition by its current owner, Spire, but was still in force. The TMT company referred to above [X] with 5,600 staff in the area told us, on the other hand, that it used the facilities of the Spire hospital in Edinburgh more heavily than any other hospital in the UK but had been unable to negotiate preferential terms.

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<sup>10</sup> The PMI concerned had, in some circumstances, negotiated special terms with a hospital into whose catchment area a concentration of the employer's workforce fell. A PMI told us that it had come to such an arrangement on behalf of an employer in the West Country, for example.

### *Companies with staff distributed nationally*

29. None of the companies we contacted had sought to negotiate special terms on a national basis with a major hospital group. One major bank, with staff distributed across the UK [REDACTED], told us that it thought the bulk purchasing power of its scheme administrator [REDACTED] would outweigh any leverage it could apply direct.

### *Companies with large numbers of staff in London*

30. We asked companies with large numbers of staff based in London how important it was for their employees to have access to named HCA hospitals. Their responses varied. All three of the professional services firms that we heard from [REDACTED], said that access to the HCA hospitals was either 'very important' or 'essential'.
31. Within the financial services sector, investment banks tended to have the same view, one [REDACTED] telling us that the cost saving likely to arise from restricting access would not compensate for the likely negative reaction from senior executives that would ensue. Another [REDACTED] said that it had considered continuing to permit consultations and diagnostic tests at the London Bridge Hospital whilst insisting that treatment took place elsewhere, but said that this would lead to a 'significant backlash' and had not pursued this.
32. Even so, not all investment banks took this view. One [REDACTED] told us that as the costs of its healthcare cover rose by 12 per cent in 2012, it was considering and was likely to adopt an open referral scheme which would allow its employees access to two hospital chains only [REDACTED], excluding HCA hospitals, unless treatment at another hospital could be medically justified. Its PMI [REDACTED] would determine whether claims met this test on a case-by-case basis.



33. The attitudes of the major high street banks which responded differed as regards restricting access to particular hospitals and consultants.
34. One [X] permitted staff to attend whichever consultant at whichever hospital they wanted but made them pay more for this than if they accepted a more directional pathway. It offered three levels of cover. Its default scheme for managers was the middle level, at a monthly cost to the employee of £40 but it funded this through an equivalent salary enhancement if the employee joined the scheme. Middle level healthcare did not, however, provide employees with access to HCA hospitals: this would require the top tier. If bank executives wished to avail themselves of this level of cover, they could subscribe at a cost of £140 per month, though this would not be funded by the employer.
35. Another bank [X] told us that it provided access to all hospitals in London. It said that this was because while retail banking staff would not be likely to insist on a particular hospital, staff on the investment banking side of the business would. This bank told us that it would not be practicable to offer two different schemes through the same trust.
36. A third [X] introduced open referral in January 2011. It told us that it offered two levels of cover: standard and enhanced. Under the former, staff were limited to the recommendations of the scheme's administrator [X] but under the enhanced scheme, to which employees had to contribute, they were not. It said that a majority of its staff had opted for standard cover but, of those that joined the enhanced scheme, 33 per cent receiving treatment opted to stay within the guided pathway.
37. Still within the financial services sector, the two insurance brokers which responded [X] told us that they did not consider it important to provide access to HCA hospitals.

One [REDACTED] said that it did not aim to provide a 'Rolls Royce' scheme, though some form of health cover was a standard element of remuneration packages in the sector generally.

38. Outside the financial services sector, some other firms with large numbers of staff in London operated relatively unrestricted schemes. These included TMT [REDACTED], logistics [REDACTED] and FMCG [REDACTED] businesses. That said, other large companies operated more restrictive schemes. Some very large corporations [REDACTED] told us that it was not important to provide their staff access to the HCA hospitals, for example.
39. It was not clear why these differences existed. Where such firms explained the reasons for considering staff access to the HCA hospitals important, they tended to cite the convenient location of the HCA facilities more than other factors. The location of the London Bridge Hospital, in particular, made it possible for employees of City firms to minimize their absence from the office when attending medical appointments.
40. Some of these companies cited the reputation of these hospitals for high-quality healthcare as being the reason for including them in their schemes. Others [REDACTED], however, told us that since no appropriate quality measures were available it was impossible to draw value-for-money conclusions.
41. In this context, we also note that four financial services firms [REDACTED] expressed some concern at the ownership of private GP and occupational health facilities by the hospital group HCA in that these might be more likely to refer patients to consultants at HCA hospitals on grounds other than medical necessity. One [REDACTED] said that it might be difficult to detect if this was happening since referrals could be driven by the perceived quality of the healthcare available at HCA hospitals or their convenient location. Another [REDACTED] noted that the Roodlane practice did frequently refer patients to

London Bridge and contrasted their referral practice with that of two other clinics used by the firm. None of these firms was able to offer any evidence of a systematic bias towards HCA referrals or of particular instances where they believed a referral had been made on non-medical grounds.

### *Measures to contain costs*

42. The amount that companies spend on the provision of health cover is significant, averaging £865 per employee covered.<sup>11</sup> Based on what the large companies that we contacted told us, expenditure per head appears to vary considerably, from less than £400 to over £1,000.
43. The priority that companies attached to containing the costs of private healthcare for their employees and maintaining the benefits of their scheme also varied. Some companies had considered but refrained from adopting cost-cutting measures in the past. One professional services firm [X] told us that it had investigated introducing an excess and reducing the number of staff covered by the scheme but had not done so as this 'would be seen as degrading the benefit level'. Another [X] said that it had considered introducing excesses and caps but had decided not to since there was not a great deal of pressure ('noise') to reduce the costs of the scheme, and to downgrade the benefits would be seen as counter to the firm's culture of treating people very well. A bank [X] said that it had not seriously considered changes for several years but the rise in costs in 2012 had made reducing the costs of the scheme a higher priority. A public sector services company [X] had rejected a number of cost-cutting initiatives as these would not generate sufficient savings 'to offset likely adverse reaction from staff'. One TMT company [X] said that it had explored the introduction of open referrals in 2008 and had decided not to adopt it but was currently reconsidering this option.

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<sup>11</sup> Laing and Buisson, *Health Cover, 2011–2012*, p21.

44. Some said that they had made changes at the margin ('tweaks') such as discontinuing providing the benefit to retirees [redacted] or raising the cost to employees of adding dependants to the policy [redacted].
45. The most common measure adopted was the introduction of or an increase in a policy excess which, we were told, was effective in reducing claims.<sup>12</sup> Other measures included 'shared responsibility' (whereby the employee would pay, say, 25 per cent of the cost of treatment up to a limit of, say, £150), removal of free cover for dependants and, less commonly, open referrals.
46. Bupa launched open referrals as a pilot in 2011 at the request of one of its corporate customers. Bupa made it an option available to corporates as from January 2012. Bupa told us that open referral was not mandatory on clients but that it was Bupa's recommended position. As a result, all clients coming up for renewal from January 2012 were offered terms on an open referral basis, though also given the option to request continuation of their current service without open referral. Bupa told us that as of July 2012, just under half of the lives it covers or provides administrative services for in the corporate segment (including Health Trusts) were on open referral policies.
47. AXA PPP, announcing an extension of its corporate Pathways open referrals product in October 2012, said that it hoped that this would become the preferred option for its corporate clients in two to three years.<sup>13</sup>
48. Open referrals had been introduced by one major retail bank [redacted] specifically as a way of reducing costs and three other companies [redacted]. Three further companies said

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<sup>12</sup> For example, one company [redacted] told us that its claims fell from £670,000 to £480,000 when it introduced a £100 excess in 2008/09.

<sup>13</sup> [www.hi-mag.com/health-insurance/product-area/pmi/article408950.ece](http://www.hi-mag.com/health-insurance/product-area/pmi/article408950.ece).

that they were planning to introduce open referrals in 2013 [X]. One of these companies [X] told us that it had concluded that open referral would reduce the cost of the scheme but with no reduction in clinical care. It said that a further benefit of open referral was that its employees would not be 'shortfalled'. Another [X] said that its decision had been prompted by a 12 per cent increase in the cost of the scheme in 2012.

49. Other measures aimed at containing costs mentioned by more than one company included the use of alternative treatment pathways for particular conditions. Most commonly mentioned were referral to physiotherapy services procured by the insurer/trust administrator where staff had musculoskeletal conditions [X] or potential psychiatric problems [X].
50. One bank [X] told us that about one-third of its claims were associated with musculoskeletal problems and that the traditional pathway of visiting the GP, referral to a physiotherapist or surgeon was slow and expensive. It said that the Nuffield service, offering telephone advice and home exercises initially, which was available to its scheme members, was more flexible, quicker and cheaper.
51. None of the companies we contacted indicated that they had considered withdrawing private health cover from its benefit package entirely, though one retailer [X] said that it had withdrawn cover from a layer of its workforce. However, we were told by one firm of employee benefit consultants (Towers Watson) that a 'tipping point' may be approaching. It told us that, increasingly, its clients found the existing model of healthcare provision unsustainable as a result of rising costs. It told us that a tax burden of £500 had been sufficient to lead some of its clients' lower-paid employees to withdraw from the scheme, thus increasing the companies' risk profile and attracting higher premiums. It said that companies in the UK, including those which were

part of US corporations, may adopt different types of schemes such as Healthcare Savings Accounts or Consumer Directed Healthcare Arrangements which had become much more common in the USA. These schemes provide employees with a 'fund' of healthcare benefits which they may spend or accumulate in a tax-free savings account which may transfer with the employee between employers and into retirement. We were told that such schemes were cheaper for employers to provide and that since employees were spending 'their own' money they may be expected to consider questions of value for money more carefully than they would under insurance-based schemes.

## **Conclusions**

52. Our first theory of harm postulates that some hospital groups may have market power in particular geographic areas where they own a large proportion of local healthcare facilities. We wanted to understand whether, in such circumstances, corporate customers were able to reduce their healthcare costs either by requiring their staff to be more flexible as regards the hospitals where they were seen and treated or by negotiating directly with hospitals.
53. The extent to which companies require flexibility from their staff in selecting hospitals for treatment varies. As we have seen, employers generally aim to strike a balance between the costs of their schemes and the benefits they derive from them in terms of staff satisfaction and absenteeism. Some, including but by no means all, or only, the professional services and investment banking sectors, appear to lay greater stress on the latter than the former and have met the rising costs of their schemes with only minor reductions in benefits. Others have opted for or maintained schemes which permit employees greater choice of hospital or consultant but at a price to them. Still others have adopted or are in the process of introducing open referrals or

restricted networks, despite the fact that these measures might be unpopular with some staff.

54. That said, while there are variations, if there is an overall 'direction of travel' it appears to be towards seeking ways of reducing the cost burden on the employer of providing private health cover including by adopting a more guided approach.<sup>14</sup>
55. A more guided approach may enable companies to reduce the cost of private healthcare where alternative, cheaper facilities are available to which employees may be directed but where one hospital operator owns most of the private healthcare facilities in an area neither adopting a more guided approach nor attempting to negotiate preferential terms appear likely to reduce the private healthcare costs of even a large corporation.

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<sup>14</sup> It was suggested to us [§] that Consumer Directed Health Care, which is growing in acceptance in the USA, and whereby employees have access to a fixed sum to spend on healthcare benefits but may do so as they wish, may become more popular with UK employers.

## Private Patient Unit expansion

### Introduction

1. This appendix describes the results of our research into the impact of expansion of PPUs following the removal of the private patient income cap by the Health and Social Care Act 2012 (the 2012 Act). It incorporates the relevant findings from our PPU market questionnaires, among other sources of information.
2. In our annotated issues statement, we said that in considering the relevant product market(s) for private healthcare, we needed to understand the extent to which PPUs and the NHS represented competitive constraints on private hospital operators.<sup>1</sup> In particular, we needed to consider the competitive effects of planned expansion of PPUs following the coming into force of the 2012 Act.
3. Prior to the 2012 Act, legislative restrictions limited the amount of income that NHS Foundation Trusts (Foundation Trusts) could earn from private patient work. This private patient income cap meant that Foundation Trusts could not exceed the proportion of the total income that they derived from private charges in 2002/03 (the year before the first Foundation Trusts were authorized),<sup>2</sup> and varied from about 1.5 per cent to about 30 per cent. Under the 2012 Act, the cap has been lifted so that Foundation Trusts are now permitted to receive up to 49 per cent of their total income from private sources. However, if a Foundation Trust proposes to increase the proportion of its total income that comes from private sources by more than 5 per cent, it requires majority approval by its council of governors.

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<sup>1</sup> AIS, paragraph 29(e).

<sup>2</sup> [www.foundationtrustnetwork.org/influencing-and-policy/system-reform/ppic/](http://www.foundationtrustnetwork.org/influencing-and-policy/system-reform/ppic/).



## Overview of our findings

4. Based on our review of the evidence submitted by the parties and independent research, concerns about the effects of lifting the cap are varied.
5. The Department of Health undertook an Impact Assessment of the Health and Social Care Bill 2011, and in it noted that Monitor had collected data indicating that in 2010/11, most Foundation Trusts operated at a level well below their private patient income cap. Further, that data showed that there was not a strong relationship between the level of the cap and the usage that the Foundation Trusts made of their entitlement: 'Whilst it is not possible to predict how Foundation Trusts will behave with the lifting of the caps, the evidence indicates that many Foundation Trusts will not automatically make use of any ability to earn private income offered to them'.<sup>3</sup>
6. On the one hand, hospital providers generally see the lifting of the cap as having far-reaching expansionist effects.<sup>4</sup> We were told by one hospital provider that in addition to PPU expansion projects in the public domain, there were undoubtedly other expansion projects which had not been officially publicized. We were also advised there was a risk that Foundation Trusts would pursue private patient income rather than focusing on delivering high-quality care for all.<sup>5</sup> The BMJ reported that a growing number of hospitals were offering patients self-funding options for treatments for which there were long waiting lists on the NHS, and critics of these options believed that it muddled the waters between the private healthcare and the NHS, creating a two-tier system. However, the BMJ also reported that while the Foundation Trust Network, which represented Foundation Trusts in England, expected more treatments to be available through self-funding in the future, 'most trusts [had] systems in

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<sup>3</sup> [www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/147536/dh\\_129917.pdf.pdf](http://www.gov.uk/government/uploads/system/uploads/attachment_data/file/147536/dh_129917.pdf.pdf).

<sup>4</sup> HCA Initial Submission, paragraph 1.3, HCA response to AIS, paragraphs 7.14-7.17; Spire response to IS, paragraph 4.74 and Appendix D; BMI response to AIS, paragraph 4.32.

<sup>5</sup> <http://m.guardian.co.uk/society/2013/apr/06/nhs-hospitals-increase-private-patients>.

place to stop paying patients “queue jumping” ahead of NHS patients when being treated in the same facility’.<sup>6</sup>

7. Another hospital provider told us that removing the private patient income cap would encourage plans for large-scale PPU expansion, adding the ‘full capacity of 400 hospitals to the private pay market’,<sup>7</sup> and that this would lead to the potential threat of additional capital coming into the sector without necessarily being accompanied by market growth.<sup>8</sup> Some providers also took the view that PPUs had an unfair competitive advantage due to cross-subsidization (eg of the cost of capital, pensions, clinical infrastructure and staff), tax status, abuse of the NHS monopsony position as consultant employer, the close proximity of the NHS hospital to the PPU, and issues arising from the vertical integration with NHS GP services and the horizontal integration with NHS secondary care services, leading to a risk of preferential internal referrals.<sup>9</sup> This, in combination with the lifting of the cap, we were told, could afford PPUs the opportunity to set prices below those of a fully efficient private provider, which would comprise de facto predatory pricing if prices were then raised after PPUs had gained market share.<sup>10</sup> Other concerns included the prospect of Foundation Trusts earning private patient revenues that breached EU competition rules prohibiting the use of state aid to distort competition.<sup>11</sup>
8. On the other hand, we were told that there were barriers to expanding, particularly for small hospitals, which lifting the cap would not address quickly or materially, and that therefore PPUs did not provide a competitive constraint on the conduct of the large

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<sup>6</sup> BMJ 17 July 2013, [www.rochdaleonline.co.uk/news-features/2/news-headlines/81474/one-in-six-hospitals-offers-private-services-to-boost-income-finds-bmj-investigation](http://www.rochdaleonline.co.uk/news-features/2/news-headlines/81474/one-in-six-hospitals-offers-private-services-to-boost-income-finds-bmj-investigation).

<sup>7</sup> [38]

<sup>8</sup> [38]

<sup>9</sup> Nuffield Health Main Submission; HCA Initial Submission, sections 7 and 8; HCA response to IS, paragraph 5.13.

<sup>10</sup> Nuffield Health response to AIS, paragraphs 1.39-41.

<sup>11</sup> Laing’s Healthcare Market Review 2011-12, p56: ‘This claim is based on the assumption that private prices charged by the NHS are lower than the market average because their private services are subsidised by state aid.’ Laing & Buisson also noted in its Private Acute Medical Care 2012 report (p92): ‘However, these concerns have not raised a significant issue in the past, and Monitor, the regulator of competition within the sector, is likely to closely monitor these dynamics.’

hospital providers at the local or national level.<sup>12</sup> Specifically, PPUs struggled to attract new consultants and regularly performed below other private hospitals in patient satisfaction surveys.<sup>13</sup> Addressing these problems would require significant investment given PPUs' generally small sizes and limited capacity. PPUs faced political pressure, including expanding the provision of private health care services in the face of a reduced number of NHS beds, and organizational pressure such as the duty to serve NHS patients first. They also had weaker capabilities in commercial strategy and contract handling.<sup>14</sup> For some PPUs outside London, private patient activity was well below the cap when it was in place, and 'the exclusion of a significant number of PPUs from hospital networks used by the leading private health insurers also dampened activity, particularly outside of London'.<sup>15</sup> This, and other issues particular to smaller PPUs based outside London (described below), have factored into their views on the effect that the lifting of the cap will have on PPU expansion.

## **London**

9. More than two-thirds of PPU bed capacity is located in London and the Home Counties.<sup>16</sup> In general, London-based PPUs, which are broadly larger and have historically dominated the NHS private healthcare revenue stream, are positioning themselves to take advantage of the lifting of the cap more quickly than those outside London, by, for example, investing in additional capacity, refurbishing their existing facilities, and specializing in the provision of privately-funded healthcare services, such as cancer services.<sup>17</sup> This is in part due to the size of the potential market as

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<sup>12</sup> Bupa response to IS, Annex A.

<sup>13</sup> Bupa response to IS, Annex A.

<sup>14</sup> Bupa response to IS, Annex A.

<sup>15</sup> Laing & Buisson, Private Acute Medical Care, 2012, p80.

<sup>16</sup> Laing & Buisson, Private Acute Medical Care 2012, p88.

<sup>17</sup> For example, one recent development is 'the opening of a new private cancer care outpatient facility by HCA at University College Hospital's Macmillan Cancer Centre in July 2012. HCA also operates a private patient unit with overnight beds, Harley Street at University College Hospital, at University College Hospital's main site.' Laing & Buisson, Private Acute Medical Care, 2012, p90.

well as to demographic factors which drive demand and create significant opportunities for new entrants. One party told us that:

the London market possesses unique characteristics that off-set the risk of market failure for new entrants. Specifically, London's economic resilience, its vast patient and consultant population, its position as a centre for healthcare research and development, and its transport infrastructure lower the risk associated with market entry compared to many other parts of the UK.<sup>18</sup>

10. In these circumstances, we were told that 'there is a danger in making over-generalised and simplistic conclusions for the UK as a whole, which do not take account of the specifics of individual markets'.<sup>19</sup>
11. While many London-based PPUs are investing or contemplating investment with a view to increasing their private patient income,<sup>20</sup> it does not appear that this will provide additional significant competitive constraints on private hospital operators in London in the short term, for reasons discussed in the rest of the appendix. Similarly to other PPUs, London-based PPUs expressed to us their concerns about the risks associated with expansion, and at least one major PPU has at the forefront of its growth strategy the retention of its current private patient income base.

## **Responses to market questionnaires**

12. In our market questionnaires, we asked both large and small PPUs (and specialty PPUs) about their plans for expansion in general, as well as about the potential impact that the 2012 Act and the lifting of the private patient income cap might have on their business. Specifically, we asked:

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<sup>18</sup> [HCA response to IS](#), p3.

<sup>19</sup> [HCA response to AIS](#), paragraph 7.12.

<sup>20</sup> Laing & Buisson, Private Acute Medical Care 2012, p91.

- (a) Please provide any relevant internal documents which set out the views of your senior management in terms of your PPU's key competitive strengths and disadvantages in relation to private patients and how your competitiveness in the provision of privately funded healthcare, or of any specific medical treatments/specialty, has changed over the last 3 years or is likely to change in the future; and
- (b) What impact do you expect the lifting of the cap on private revenue will have on your private patient business? Please support your answer with any relevant internal documents, including analysis, that discuss the lifting or removal of the cap.

***Change in competitiveness over the last three years and in the future***

13. Both large and small PPUs told us that the market for private healthcare had suffered decline over the past several years due to the economic recession, but that the outlook for the next few years was likely to be more favourable with an NHS spending squeeze potentially increasing demand for the private sector, and market growth, albeit at a slower rate than before the recession.
14. We were told that the competitive advantages enjoyed by PPUs included Foundation Trusts being better able to integrate their and the NHS's work by making use of common resources, and being able to offer clinical safety and service capability where there was a lack of safe private alternatives due to access to a full range of sophisticated technology, particularly for those specialty PPUs which traded internationally on their brand name.
15. Conversely, we were told that PPUs were disadvantaged by pricing pressures from private medical insurers and lack of insurer accreditation, capacity constraints

(especially by a lack of easy access to dedicated private patient capacity) and the inability to attract consultants willing to undertake private work,<sup>21</sup> and the requirement to cede to NHS priorities. Issues around capacity and upgrade may be addressed in time, but there is a considerable lag in terms of being able to create the necessary infrastructure to do so, and a risk of underperformance should target then prove overoptimistic.<sup>22</sup>

### ***Impact of lifting the private patient income cap***

#### ***Smaller PPUs***

16. For some smaller PPUs located outside London, the lifting of the cap is of little strategic importance and unlikely to have a significant impact on their business, as we were told that some were operating well within the cap when it was in place. The lifting of the cap could introduce pressure on already limited local markets from local Foundation Trust competitors, who may invest in (additional) private work as a consequence.
17. One of the major restrictions on expansion that smaller PPUs face is the fact that many of them do not have dedicated private units or facilities. Capacity pressure means that the priority goes to NHS patients and that private work is conducted on an ad hoc basis, in speciality areas that cannot be managed in private hospitals. In some cases, we were told that their private patient expansion strategy was a matter to be reviewed at a future point in time.
18. However, we were also told that the lifting of the cap offered greater income generation opportunities. While they might not currently have dedicated private patient facilities, they were exploring ways to expand their private patient work, including

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<sup>21</sup> Bupa response to IS, Annex A.

<sup>22</sup> See *Analysed: District general hospitals look to private patient income*, a report published 6 June 2013 in the Health Service Journal.

developing dedicated private outpatient departments and units, and dedicated operating theatres. One of the ways that this might be accomplished was by partnering with private hospital operators. We were told that some insurers were also embarking on new initiatives to work with PPUs to reduce costs and encourage customers to choose lower cost options in an effort to win back market share and new customers. The degree to which an increase in PPU activity might constitute greater competition for private hospital operators would be affected by the number of Foundation Trusts that decided to expand in partnership with private hospital operators and insurers, with whom they partnered and on what terms.

### *Larger PPUs*

19. In general, the private patient income cap appeared to be more of a concern to larger PPUs, particularly for those with a relatively low cap and for those within London. We were told that the removal of the cap would allow larger PPUs to exploit the market potential by undertaking more private patient activity without fear of contravening private income restrictions. It also offered opportunities to grow the amount of international private patient work for which they were able to compete. Some of these larger PPUs indicated that they were already contemplating a strategic approach which incorporated an increase in private patient income by refurbishing their facilities, widening the scope of their services and attracting new consultants, and partnering with private operators to further develop activity in this area.<sup>23</sup> Efforts made by the leading PPUs to position themselves to expand and take advantage of the lifting of the cap are evident.<sup>24</sup>
20. We were also told, however, that growth was likely to be tempered by several factors, including the need to seek approval from their council of governors for increases in

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<sup>23</sup> Laing & Buisson Private Acute Medical Care 2012, p90. For example, the Clatterbridge Centre for Oncology NHS Foundation Trust together with a private investor opened a joint venture private cancer treatment centre in Merseyside in June 2013: [www.clickliverpool.com/news/liverpool-news/1219166-first-private-dedicated-cancer-clinic-opens-in-merseyside.html](http://www.clickliverpool.com/news/liverpool-news/1219166-first-private-dedicated-cancer-clinic-opens-in-merseyside.html).

<sup>24</sup> See Laing & Buisson Private Acute Medical Care 2012, p90–1.

private patient income of more than 5 per cent, the overall reduction in the amount of private work brought about by the recession, and the increased competition between Foundation Trusts for private patient work (which was previously dampened by the cap). Moreover, though PPUs might provide some competition for the independent sector, they could also 'exacerbate local concentration should they be partnered (managed) by the local independent sector operator'.<sup>25</sup>

21. Similar to some smaller PPUs, some larger PPUs said that they had been operating well within the cap, so that its lifting would have no significant impact on them. Where the fact that they had been operating within the cap was due to limited capacity, we were told that if they were able to increase their capacity to accommodate additional private patient services, they would then be in a better position to fully utilize any potential increase in private patient activity.

### *Specialty PPUs*

22. Specialty PPUs, which are largely London-based, told us that the private patient income cap significantly limited their potential to increase activity and income from private patient services, and that lifting it would allow them to increase their overall revenue. There was still a lack of easy access to dedicated private patient capacity, which had meant a loss of revenue in some specialty areas such as cardiology, oncology and orthopaedics. However, some speciality PPUs told us that the lifting of the cap would allow them to meet the needs of private and public patients better, and that they expected moderate growth, which would enable some renewal of equipment and facilities. Great Ormond Street Hospital said publicly:

Our private work is largely international, with families funded by foreign governments and healthcare systems to receive care not otherwise available to them. Revenues generated by this can only be reinvested

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<sup>25</sup> Laing & Buisson, Private Acute Medical Care 2012, p171.



to the benefit of NHS patients. This is currently less than 10 per cent of our total clinical income. The lifting of the private patient cap will allow us, as a Foundation Trust, to treat more patients but also, through reinvestment, to help more NHS patients as well. However, we will continue to see ourselves as primarily an NHS hospital.<sup>26</sup>

23. As a result of an increase in private patient work, Moorfields Eye Hospital anticipated growing the provision of international private patient services, particularly in the Gulf region through Moorfields Eye Hospital Dubai. The effect of this would be to increase clinical provision, opportunities to generate research themes, and surpluses available to address eye disease through research and care: 'all patients attending Moorfields Eye Hospital Dubai are fee-paying. Profits made come back into the UK and are used to fund the treatment of NHS patients.'<sup>27</sup>

## Conclusions

24. Many of the PPUs indicated a positive response to the lifting of the private patient income cap under the 2012 Act to the extent that it created increased potential for additional revenue streams. After five consecutive years of contraction in the private patient market, there was strong growth in NHS private patient income in 2011/12 which was estimated at 3.5 per cent.<sup>28</sup> This may indicate the beginnings of an upward growth trend.<sup>29</sup>
25. However, the evidence also showed that many PPUs were operating well within the cap prior to its being lifted, and that therefore the lifting of the cap will have little effect

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<sup>26</sup> [www.gosh.nhs.uk/about-us/foundation-trust/what-it-means-to-be-an-nhs-foundation-trust/frequently-asked-questions-faqs/](http://www.gosh.nhs.uk/about-us/foundation-trust/what-it-means-to-be-an-nhs-foundation-trust/frequently-asked-questions-faqs/)

<sup>27</sup> [www.moorfields.nhs.uk/Aboutus/MoorfieldsDubai](http://www.moorfields.nhs.uk/Aboutus/MoorfieldsDubai).

<sup>28</sup> Laing & Buisson Private Acute Medical Care 2012, p80.

<sup>29</sup> See *Analysed: District general hospitals look to private patient income*, a report published 6 June 2013 in the *Health Service Journal*. The report states 'a number of foundation trusts indicated plans to increase private patient income in their forward plans for Monitor ... This upswell of interest is evident to those advising both foundation and NHS trusts ... But both [the Chief Executive of Independent Care and an executive director of Capita Symonds' health division] stress the need for trusts to be realistic about what can be achieved—and the length of time it will take to build up a successful PPU.'

on their business. For those PPUs with concrete plans to develop their private patient services, including some of those based in London, there remain significant hurdles which may prevent wholesale expansion of that work. Where PPUs do not face major capacity or other constraints on their planned expansion, for instance specialty PPUs, the stated intention is to expand growth in a tempered manner and with the main priority continuing to be to serve NHS patients in the first instance.

26. Based on the evidence we have received and reviewed, the lifting of cap is unlikely to give rise to such significant expansion that PPUs will operate as a substantially greater competitive constraint on private hospital operators in the near future.

## Entry and expansion case study 1: Circle Holdings PLC, Bath

### Introduction

1. This paper examines the entry of Circle into the private healthcare market in Bath and its purpose is to identify what barriers it encountered in doing so. We begin with a brief description of Circle, its business model and the characteristics of the local market it planned to enter. We then describe Circle's entry plan: its strategy for attracting healthcare business from the private sector and the NHS, the scale of its investment and the risks that it identified. We next analyse the response of the incumbent private healthcare provider, BMI, and the conduct of the major private PMIs as Circle sought network recognition for its new facility. Finally, we set out the main conclusions that we draw from this episode in the wider context of our fifth ToH: barriers to entry and expansion.

### Circle Healthcare

2. Circle was set up in 2004, originally as Centres of Clinical Excellence. The feature that distinguished its business model from other private hospital operators' was that, in return for committing to undertake a certain proportion of their work at a Circle facility, consultants would be entitled to an equity stake in the business. Circle told us that [redacted] consultants had entered into contractual commitments.
3. Circle's strategy was to provide healthcare to both private and NHS patients from its facilities, the latter arising from what it saw as the growing demand for independently provided healthcare services created by NHS reforms.
4. Circle's first acquisition was made in 2007, when it bought Nations Healthcare, an operator of three NHS Independent Sector Treatment Centres (ISTCs) in Bradford, Burton and Nottingham. Two of these contracts have now expired, with the

Nottingham facility still operated by Circle.<sup>1</sup> In addition to its NHS-focused activities, Circle opened its first private hospital in Bath in March 2010, followed by its Reading hospital in August 2012. At the current time, Circle is seeking to secure sufficient consultant commitments and raise financing for a third private hospital in Manchester.

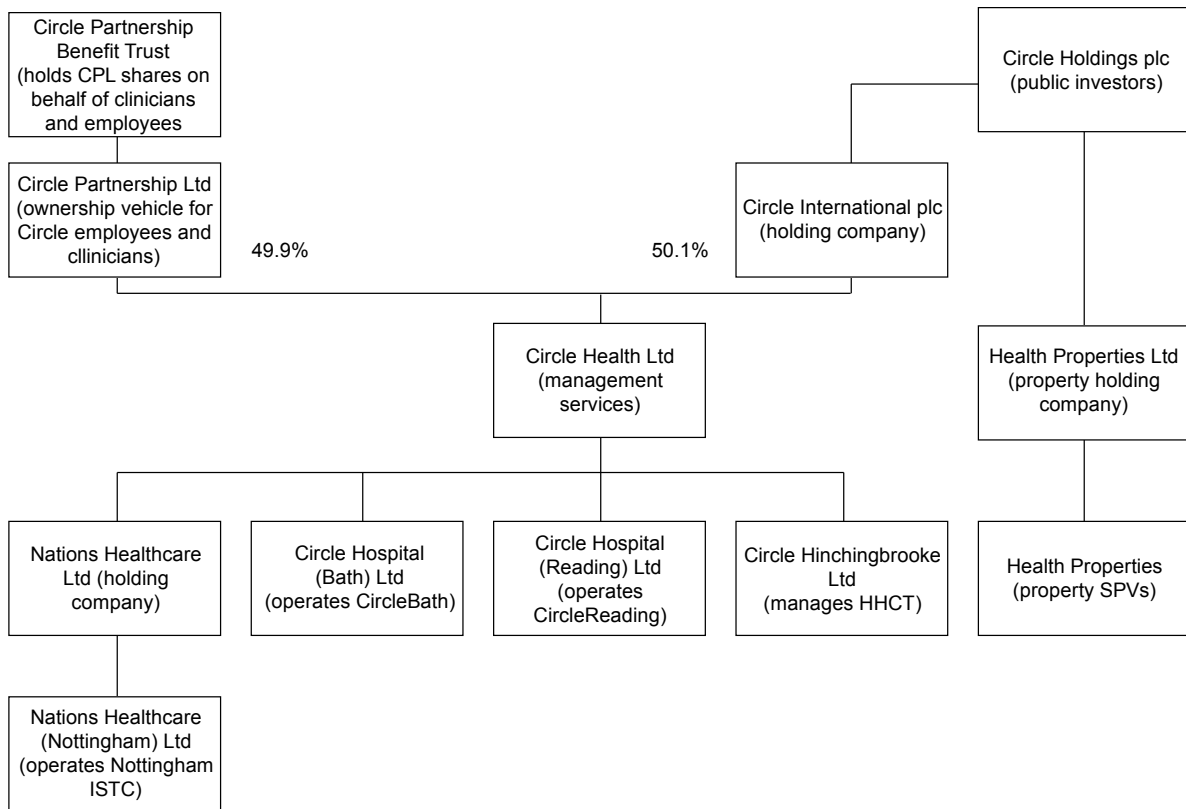
5. As noted above, Circle's business model relies on consultants committing to undertake a proportion of their work at a Circle facility in return for an equity stake in the Circle Partnership and a role in managing and organizing the delivery of services. The consultant may terminate his/her commitment with 12 months' notice at any time following the first anniversary of the relevant facility's opening. The legal structure of the Circle business is shown in Figure 1.

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<sup>1</sup> Circle Holdings, AIM Admission Document, June 2011, p47.

FIGURE 1

### Circle group structure



Source: Circle.

6. In addition to the entities shown here, the Group also holds a minority interest in a company that owns the Bath hospital and leases it to the Circle Independent operating business.<sup>2</sup>
7. The consultants that hold equity in the Circle Partnership have not been asked to provide funding directly: they do not have to pay for shares in the Partnership when they are allotted, only when they wish to sell them. However, their contractual commitments to bring revenue to any new facilities built in their local area have been pivotal in raising capital from third party debt and equity investors.<sup>3</sup>

<sup>2</sup> The hospitals are leased on 25-year terms.

<sup>3</sup> Circle noted that lenders and equity investors had requested copies of consultant contracts prior to agreeing to provide funds to the Group.

8. Circle has raised funds for the development of the business from three principal sources:
- (a) Circle Holdings Plc was listed on AIM via an initial public offering in June 2011;<sup>4</sup>
  - (b) the Bath hospital was largely funded by bank debt, both senior and mezzanine; and
  - (c) much of the equipment used in providing services from the Bath (and Reading) hospital(s) is leased under a financing arrangement with GE and Singers.<sup>5</sup>

### **Local demographics**

9. Bath and the immediate surrounding area (North-East Somerset) has a population of around 180,000. Bath is within a 45-minute drive of Bristol, with a population of over 400,000.
10. The Bath area is relatively affluent and healthy, scoring above the England average on virtually all indicators.<sup>6</sup> Although there are pockets of deprivation, the area is generally prosperous with levels of unemployment that are below the national average. As of June 2012, unemployment in the area stood at 6.2 per cent, compared with a national average of 8.1 per cent.<sup>7</sup>

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<sup>4</sup> Circle Holdings, AIM Admission Document, June 2011. Circle Holdings Plc raised an additional £47.5 million through a further placement of shares in May 2012.

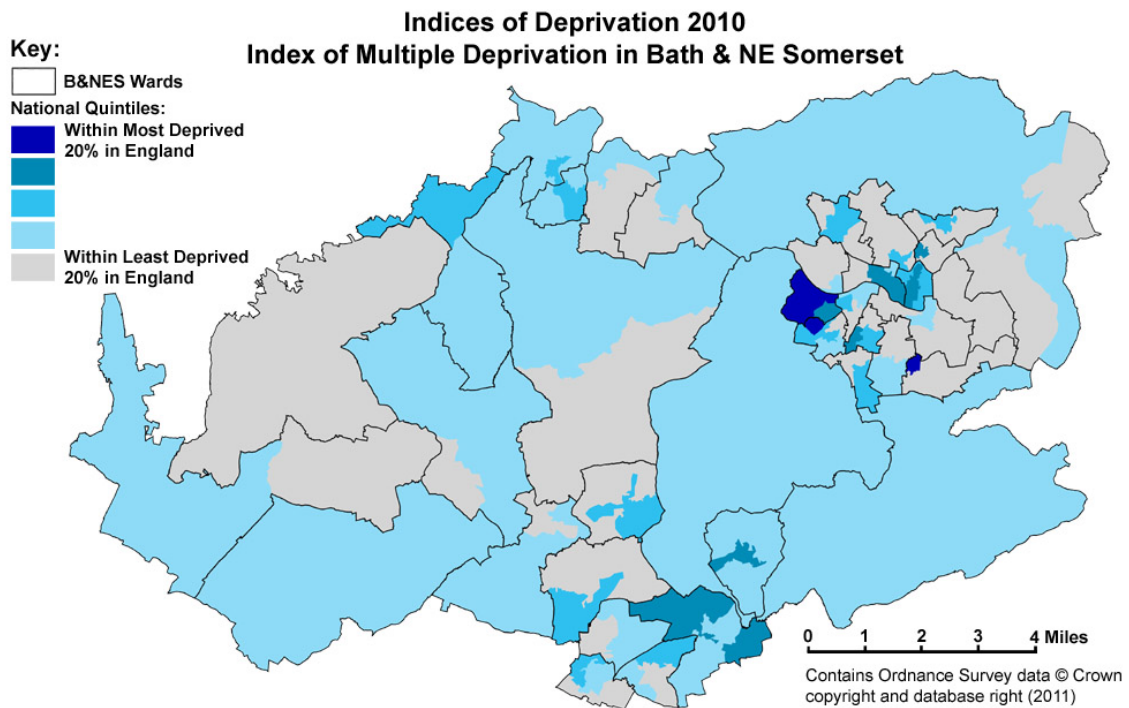
<sup>5</sup> Circle Holdings, AIM Admission Document, June 2011.

<sup>6</sup> [www.apho.org.uk/resource/view.aspx?RID=117246](http://www.apho.org.uk/resource/view.aspx?RID=117246).

<sup>7</sup> Source: ONS data: [www.nomisweb.co.uk/reports/lmp/la/2038431893/report.aspx?town=Bath#tabempunemp](http://www.nomisweb.co.uk/reports/lmp/la/2038431893/report.aspx?town=Bath#tabempunemp).

FIGURE 2

### Indices of deprivation in Bath and North-East Somerset, 2010

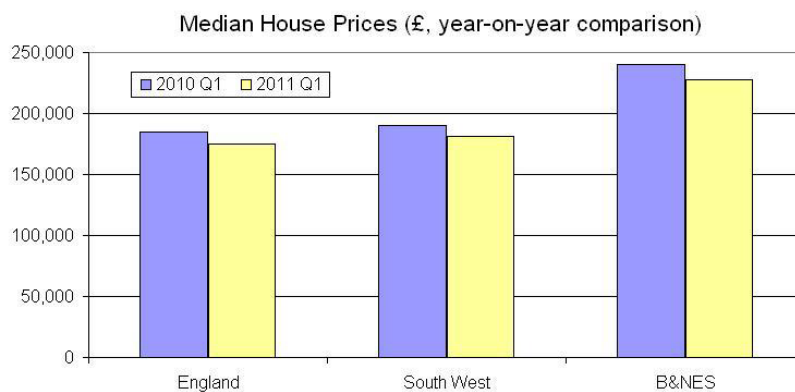


Source: Bath and North East Somerset Council.

11. House prices are higher than those in England generally and the South-West region in particular.

FIGURE 3

### House prices in Bath and North-East Somerset, 2010 to 2011

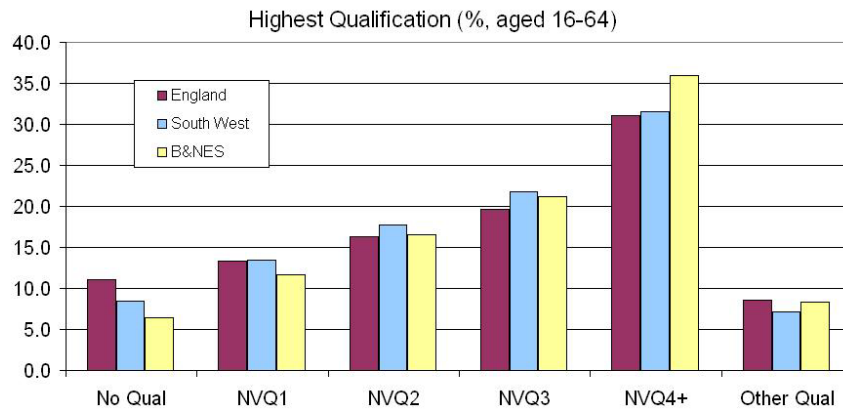


Source: Bath and North East Somerset Council.

12. The local population is relatively well educated.

FIGURE 4

**Terminal qualification levels, Bath and North-East Somerset, 2011**

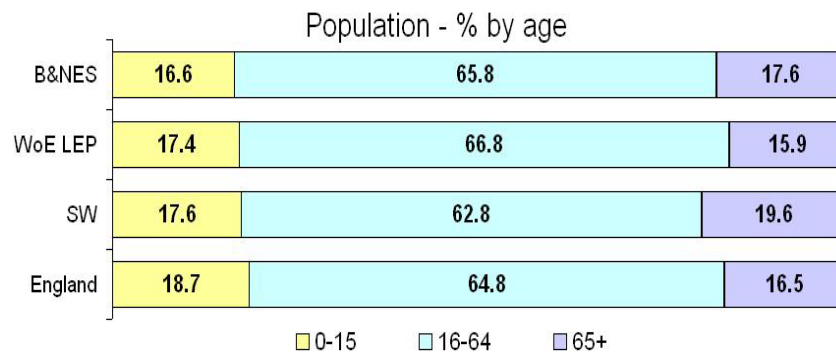


Source: Bath and North East Somerset Council.

13. The local population is older than average for the UK but lower than the South-West region.

FIGURE 5

**Population age, Bath and North-East Somerset, 2011**



Source: Bath and North East Somerset Council.



## Secondary healthcare services in and around Bath

FIGURE 6

### Private hospital and PPU locations in the Bath area



Source: Parties and CC analysis.

### **Private hospitals**

14. Private hospital facilities within around one-hour's drive of Bath are shown on the map above. Prior to 2010 there was only one private, acute hospital in Bath, the BMI Bath Clinic, situated approximately 2.5 miles south-east of the city centre. It had 75 beds, a high-dependency unit, static MRI and CT scanners and an endoscopy suite. The building housing the Bath Clinic was bought from Grand Metropolitan plc in the 1990s and converted from hotel to hospital use.

FIGURE 7

**The BMI Bath Clinic**



Source: BMI Bath website.

15. Further afield, the Nuffield and Spire Bristol hospitals were a 35-minute drive away<sup>8</sup> and BMI operated a hospital in Swindon, about a 60-minute drive from Bath.

**NHS**

16. The main NHS hospital in the area was the Royal United Hospital (RUH), a relatively modern, 560-bed facility occupying a 52-acre site roughly 1.5 miles from the city centre. In the early 2000s, the RUH experienced some challenges as regards its financial management and the quality of healthcare provided.<sup>9</sup> In 2010, the condition of its some of its buildings were the subject of criticism<sup>10</sup> and recent HES statistics suggest that the RUH underperforms the national average in a number of areas, in some cases significantly, for example deaths in low-risk conditions.<sup>11</sup> The RUH does not provide private healthcare services other than through a private, assisted

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<sup>8</sup> Nuffield is currently refurbishing the hospital on its Chesterfield site in Clifton, Bristol [www.thechesterfieldhospital.com/](http://www.thechesterfieldhospital.com/).

<sup>9</sup> [www.hsj.co.uk/news/ruh-bath-report-pushes-reputation-aside/19557.article](http://www.hsj.co.uk/news/ruh-bath-report-pushes-reputation-aside/19557.article).

<sup>10</sup> [http://news.bbc.co.uk/1/hi/somerset/hi/people\\_and\\_places/newsid\\_9267000/9267593.stm](http://news.bbc.co.uk/1/hi/somerset/hi/people_and_places/newsid_9267000/9267593.stm).

<sup>11</sup> [www.drfoosterhealth.co.uk/hospital-guide/trust/Royal-United-Hospital-Bath-NHS-Trust-181.aspx?cid=164&ctype=1](http://www.drfoosterhealth.co.uk/hospital-guide/trust/Royal-United-Hospital-Bath-NHS-Trust-181.aspx?cid=164&ctype=1).

conception clinic (the Bath Fertility Clinic) launched in a joint venture with BMI in 1994.<sup>12</sup>

FIGURE 8

### **The Royal United Hospital, Bath**



Source: RUH website.

### **Circle's planned entry**

#### ***Market assessment***

17. Circle considered that Bath was an attractive market in which to launch its first private hospital. It believed that: PMI penetration was very high, indicating strong demand; that the Bath Clinic did not represent a serious competitive threat; that the superior facilities of its new hospital would attract NHS patients; and that these facilities, plus its business model, would encourage consultants to treat private patients at Circle Bath. In this context, Circle told us that it had a very active and supportive network of consultants in the Bath area.

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<sup>12</sup> The joint venture has ended and RUH now runs the business.

18. The 6,600 sq metre hospital was designed by Fosters and Partners and built at a cost of £33 million on a business park, nine miles south of Bath. It would have four operating theatres, 57 beds (30 overnight and 27 day-care) including two critical care (level 2) beds as well as up-to-date diagnostic facilities including x-ray and ultrasound equipment, a fixed MRI scanner and a mobile high-resolution multi-slice CT scanner. The hospital would be owned by Health Properties (Bath) Limited<sup>13</sup> and leased to Circle. The majority of medical equipment would be leased from leasing organizations. It was planned to open in September 2009.

FIGURE 9

**Circle's Bath hospital**



Source: Circle.

***Business plan***

19. Circle's plan document valued the local market for private healthcare services in Bath at £[§] million in 2006 for approximately [§]. Its strategy was based on the quality of the facilities that it would provide and the support of local consultants who it had or would enlist as 'Partners' (ie consultants with an equity stake in the hospital business

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<sup>13</sup> A company within the Circle Group.

who would commit to undertaking a certain proportion of their private work at the hospital).

20. [REDACTED]

21. The plan set out details of the proportion of local consultants within each specialty who had committed to bringing work to the Circle hospital and the amount of revenue this represented.<sup>14</sup> [REDACTED]

22. Regarding NHS patients, Circle said that the hospital's opening was timed to take advantage of NHS reforms which would, from 2008, permit NHS patients greater freedom to choose where they received treatment. It estimated that local NHS elective surgery spending was approximately £[REDACTED] million in 2007 for approximately [REDACTED].

23. [REDACTED] is shown in Table 1.

TABLE 1 [REDACTED]

[REDACTED]

Source: [REDACTED]

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### **Risk assessment**

24. Circle cited a number of risks that it said might impact the forecasts made in the business plan. These included that local competitors might engage in 'guerrilla' tactics, that Circle might not be able to secure the necessary regulatory approvals from the Healthcare Commission (HC)<sup>15</sup> and that it may not be able to secure

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<sup>14</sup> Circle's contract with clinicians committed them to undertake a specified proportion of their practice at the Circle hospital in exchange for which they would be awarded shares in Circle Partnership, which would own 49.9 per cent of Circle, the operating company. The other 50.1 per cent of Circle would be owned by Circle International (now Circle Holdings Plc). The extent of the commitment varied but, weighted by revenue, amounted to 65.5 per cent on average, as set out in the Bath hospital plan.

<sup>15</sup> The Care Quality Commission (CQC) replaced the Healthcare Commission, the Commission for Social Care Inspection and the Mental Health Act Commission in 2009.

recognition from the leading private medical insurance providers to become part of their networks.

25. Local 'guerrilla' action, such as objections to Circle's planning application for the new hospital, did not materialize in Bath (unlike Southampton where Circle's application to build a new hospital was taken to appeal). Circle received planning permission for the hospital, involving a change of use for which the plot was zoned, on 13 March 2007. No objections to the application were lodged.
26. Circle told us that some local consultants did come under pressure from the Bath Clinic not to work with Circle. Circle told us that the practicing privileges of one consultant were suspended by BMI Bath. However, BMI told us that this suspension was temporary, pending the clarification of the clinician's role at Circle Bath, and that once this had been established the suspension was lifted.
27. Registration by the HC/CQC does not appear to have been a significant problem though the inspection of the premises was delayed and the regulator required some changes to be made to the facilities. Circle told us that certain additional building works were required in the theatre and recovery areas which contributed to Circle's decision to postpone opening to 1 March 2010.
28. Regarding PMI recognition, Circle said in its plan that both Bupa and AXA PPP, while recognizing all Healthcare Commission accredited hospitals, had networks of provider hospitals. Subscribers who held network policies, which on Circle's estimates accounted for 50 per cent of Bupa policyholders and 95 per cent of AXA PPP policyholders, were restricted to using hospitals registered on these networks. The plan document said that in order to capture the volume of private patients projected in its business plan it would have to be registered by both Bupa and AXA PPP. It said that,

to that end, it had been having regular discussions with both Bupa and AXA PPP for the previous 18 months and that feedback from these companies had been consistently positive. It said that it was confident that Circle Bath would be successful in achieving network status with both Bupa and AXA PPP.

## **Responses to Circle's entry in Bath**

29. We now describe the responses of Circle's competitor in Bath, BMI's Bath Clinic, and then go on to set out how the major PMIs responded to Circle's requests for inclusion on their networks.

### ***BMI***

30. Circle had two potential competitive advantages over the Bath Clinic: the newness of its facilities and the financial incentives that it was able to provide to its consultant Partners through its equity sharing business model. BMI sought to match these by introducing its own consultant incentive or 'loyalty' schemes and by investing in new equipment at the Bath Clinic.

### ***Consultant 'loyalty' schemes***

31. In the period between the granting of planning permission for Circle's Bath hospital and its opening, BMI adopted two schemes that were available to consultants practicing in Bath: the initial scheme, which became known as 'Mark 1' launched in 2007 and the Mark 2 scheme, launched in 2010.

#### ***The Mark 1 Scheme***

32. BMI group management considered consultant loyalty schemes in 2007 as part of its strategic response to increased competition from other hospital operators, including Circle. A board paper of April 2007, a month after Circle obtained planning permission for its Bath hospital, assessed the severity of the competitive threat to

each of its hospitals. [REDACTED] were considered to be exposed to the highest risks and, accordingly, were proposed as the first hospitals where consultant loyalty schemes would be set up.

33. The Mark 1 scheme combined profit sharing and 'virtual equity' elements which aimed to engage and motivate current and future [REDACTED]. The scheme was designed in part to mimic an equity share plan [REDACTED].
34. The scheme covered a six-year period and entitled consultants to a share of the Bath Clinic's profits, [REDACTED].<sup>16</sup>
35. As well as the rolling share of the Clinic's profits and the long-term payment referred to above, consultants would be entitled, depending upon their level of membership, to receive some or all of: [REDACTED]
36. In addition to these benefits, if a Member were to introduce a new consultant to the clinic who subsequently went on to enter into a similar agreement, then the introducing Member/consultant would be entitled to receive [REDACTED].
37. The 'Mark 1' scheme was, unlike Mark 2, contractual. [REDACTED]
38. Consultants were also required to agree that they would not enter into any form of agreement or contract with any Competitor relating to operation of a private medical practice including acquiring any financial interest in such Competitor, although they could retain practising privileges elsewhere.

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<sup>16</sup> [REDACTED]



39. [X] The ethical issues from the consultants' side were considered, including that: patient volume incentives were not acceptable; that consultants would be obliged to disclose any financial interest; and that the value of the payouts under the scheme should not be disproportionate to the consultant's practice income. Subject to a requirement for feedback on the incremental activity that the schemes were generating the committee gave its approval.
40. The terms and conditions of the scheme required the consultant 'comply with the requirements, rules, regulations and guidance of, or issued by, the GMC, including the guidance of the Good Medical Practice (2006), as amended from time to time. In particular, the Consultant shall have regard and comply with paragraphs 72–73 of the Good Medical Practice (financial and commercial dealings)'. The GMC's guidance requires that clinicians with a financial interest in an organization providing healthcare should not allow this interest to influence the way they treat or refer patients and that they should tell the patient about the interest that they have if they are intending to refer the patient to that organization.<sup>17</sup>

#### *The Mark 2 Scheme*

41. As the scheduled opening of the Circle Bath hospital neared, the Bath Clinic began putting further measures in place to protect both private and NHS revenue. These included: a pilot scheme to subcontract GPs to undertake preoperative examinations of patients referred by them to the Bath Clinic and to receive payment for these examinations in the event that the patient was treated at the Bath Clinic; some changes to NHS and self-pay pricing;<sup>18</sup> and an additional consultants' loyalty scheme: Mark 2.

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<sup>17</sup> See paragraphs 77–80.

<sup>18</sup> Prices for NHS and self-pay work were decreased whilst consultants' fees for this work were increased. In March 2010, BMI Bath Clinic also launched a 'Lowest Price Guarantee,' for self-pay inpatient and day-case treatment.

42. In April 2010, shortly before the (delayed) opening of Circle Bath, Richard Foulkes, the Executive Director of the Bath Clinic, wrote individually to consultants setting out the terms of the new Consultant Engagement Scheme. This Mark 2 scheme would operate for calendar year 2010 [REDACTED].
43. The letter said that there was to be no formal contract with consultants and that unless the Clinic heard to the contrary it would assume that consultants wished to participate. [REDACTED]
44. The Mark 2 scheme also differed from Mark 1 in that there were no bars to [REDACTED].

#### *Cost of the two schemes*

45. Payments made under these two schemes are shown in the table below. By the end of 2012 Bath Clinic had made over £[REDACTED] in payments.

TABLE 2 **BMI Bath expenditure on consultant loyalty schemes, 2010 to 2012**

<i>Scheme/consultant name</i>	<i>Incentive basis</i>	<i>FY10</i>	<i>FY11</i>	<i>FY12 est</i>
Consultant Engagement Scheme Mk1	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Consultant Engagement Scheme Mk2	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

Source: BMI.

#### *Investment in the Bath Clinic*

46. BMI also invested in new equipment at the Bath Clinic, a few months before the opening of Circle Bath.
47. In January 2010 BMI considered a capital expenditure request of £[REDACTED] for the Bath Clinic to replace the Stack, Light Source and Scopes in the Endoscopy Suite. The request noted that the current scopes (colonoscopes, gastroscopes, cystoscopes and a bronchoscope) were between 10 and 13 years old and that this meant that their image quality was degraded to the point where abnormalities might become difficult to detect, giving rise to risks of misdiagnosis. It pointed out that new

equipment had been installed in the RUH the previous June and that Circle Bath had also been equipped with HD scopes. [REDACTED] It said that this would only become more marked with the opening of Circle Bath the following month and that a failure to invest in new equipment at Bath Clinic would lead to a rapid and sizeable collapse in this specialty, with an associated drop in surgical procedures and Oncology work that could be expected to follow on from Endoscopy.

48. In addition to replacing the Endoscopy equipment Bath Clinic purchased new digital mammography and other equipment costing around £[REDACTED].

### ***The PMIs***

49. We next examine the responses of the PMIs to Circle's request that its Bath hospital be included in their networks. This process was straightforward as regards Bupa and WPA but more protracted in the case of AXA PPP and Aviva, as shown below by the documents we have reviewed.

### ***Bupa***

50. In 2008 Circle wrote to Bupa with a list of hospital facilities that it intended to provide medical services from together with an indicative schedule of their planned opening dates. Bath was the first and was projected to open in H2 of 2009.
51. Bupa responded that it had a standard process for recognizing new facilities and that it intended to adopt this process with Circle. Bupa confirmed that it was its intention to recognize all the facilities listed by Circle subject to five conditions:
- (a) that the parties agree acceptable prices for the proposed services. Bupa said that its policy was to ensure that new entrants increase competition in local markets;
  - (b) that the parties negotiate and execute a definitive hospital agreement plan (HAP);

- (c) that satisfactory inspection and review arrangements of the proposed facilities were put in place;
- (d) that the clinical standards that Circle would achieve would be included in the HAP; and
- (e) that all necessary regulatory clearances, permits and licences would be obtained by Circle.

- 52. Bupa signed a three-year agreement with Circle, commencing 1 August 2010, covering Circle Bath as well as Circle's clinics in Windsor and Stratford. Circle told us that the rates agreed were set at a [REDACTED]. As the [REDACTED] rates were much higher [REDACTED] the rates for [REDACTED].
- 53. In July 2009 BMI had written to Bupa expressing concerns in connection with Bupa's recognition of Circle Bath. It said that, typically, consultants would contract to undertake 50 per cent of their private work at a Circle hospital and a consultant might therefore be faced with the dilemma that a patient's best interests in terms of hospital referral might be in conflict with the consultant's contractual obligations. It said that the situation would be made worse if, as it seemed to consider likely, not all PMIs recognized the Circle hospital. In these circumstances, where Bupa had, but other PMIs had not recognized Circle's hospital in Bath, Bupa patients would be required to attend the Circle hospital to ensure the individual consultant's contracted case load obligations were met.
- 54. BMI's second concern related to future pricing of its services as a result of 'adding new footprint to an already over supplied market'. It said that it was committed to investing in its hospitals but that this was predicated on [REDACTED].

55. Bupa's response began by referring to BMI's second area of concern, that relating to the importance of increased Bupa volumes to deliver efficiencies, which it said was part of Bupa's wider discussions and should be dealt with in that context.
56. Turning to the points that BMI made regarding the Circle business model it observed that doctors as a profession were expected to practise consistent with the best interests of their patients and to put that interest before personal financial gain. Doctors were expected to disclose to patients such interests so that there could be no real or perceived conflict when they were advising patients. It went on to say that there were a myriad of arrangements within the private sector that may require consultants to have to warrant such disclosures ranging from free consulting rooms to clinicians owning their clinical facilities in toto or through equity stakes. Bupa noted that BMI had 'recently tried to interest consultants in a contractual model linking their income to hospital profit growth' and concluded that there was nothing inherent in the Circle model that represented a greater issue as regards the ability of patients to exercise informed choice than these current schemes.

#### *WPA*

57. On the same day that BMI wrote to Bupa it also wrote to WPA, and in virtually identical terms.
58. WPA responded by, first, setting out its general position that 'WPA has neither supported nor obliged our customers to use networks of 'approved' private hospitals'.
59. The letter went on:
- it is our understanding that many beneficial arrangements have prevailed historically between providers of private medical facilities and Consultants and continue to do so. Indeed, we hear of generous

inducements, for the direction of patients, from and to existing and long established private medical facilities. I sense that if these rumors have foundation, in addition to the matter that you raise, then the BMA Private Practice Committee should urgently consider issuing guidance; and the GMC reconsider their Guide to Practitioners in Private Practice with definitive ethical instruction.

60. Finally, WPA turned to BMI's statement in the last part of its letter, that falling volumes of patients through its facilities as a result of PMIs including new hospitals in their networks could lead to rising prices. WPA again pointed out that it did not operate a network but that if this were to be the outcome it would have to consider adopting networks to contain any such price rises.

#### *AXA PPP*

61. AXA PPP told us that it had chosen to recognize healthcare facilities on a selective basis in its Acute and Day-case network, in effect inviting tenders for recognition on its network. Whilst recognition on AXA PPP's Acute and Day-case network does not grant contractual exclusivity to the recognized provider, non-recognized competing providers will not have access will not have access to inpatient and day-case patients funded by AXA PPP who hold a network policy unless the patient is granted a medical exemption, but will nevertheless have access to AXA PPP patients requiring outpatient diagnostics and treatment.
62. In 2008 Circle told AXA PPP that it intended to open a hospital in Bath in September 2009 and began discussions over recognition. AXA PPP told Circle that it already had a provider in Bath and that in order to recognize Circle there it would need to conduct a formal tender which it had no immediate plans to do. [REDACTED]

63. [REDACTED], Circle wrote to AXA PPP, setting out a revised proposal, stressing the quality of the services it would provide patients which would be 'in a different league to the local competitor'. AXA PPP did not consider these revised proposals to be 'commercially compelling'.
64. AXA PPP staff visited Circle Bath in January 2010 and, though observing that its location was not ideal, produced a favorable report on the hospital's facilities and the likely patient experience noting that: 'As far as anyone can enjoy going to a hospital, patients will like what they see and experience.' [REDACTED]
65. In addition to trying to engage AXA PPP in price negotiations Circle adopted other tactics to try and take discussions further.
66. Circle began treating AXA PPP patients at its own expense since, if it had not done so, consultants might not have treated Bupa patients at Circle Bath even though Bupa had recognized the hospital. This was because consultants practicing at Circle Bath might not wish to split the list of patients that they were operating on between two different hospitals. If they could treat Bupa patients at either the Circle or BMI hospitals but AXA PPP patients only at the Bath Clinic, they would tend to treat both at the BMI hospital.
67. In addition, Circle instructed lawyers to consider the merits of making a complaint under the Competition Act arising from the difficulties that it was facing in entering the market. [REDACTED] expose the 'cosy' relationships it had with providers nationally.
68. [REDACTED]

69. In September 2010 AXA PPP, after Circle Bath had opened, met Circle again and AXA PPP undertook to carry out a full review of Circle's commercial proposition taking into account existing provision in Bath. [REDACTED]
70. However, according to AXA PPP internal documents, AXA PPP decided not to include Circle Bath on the grounds that:
- (a) it had to take into account the broader national relationship that it had with BMI;
  - (b) AXA PPP did not need additional provision in the Bath area based on existing subscriber numbers there; and
  - (c) Circle Bath did not offer any additional services to the BMI Bath Clinic.
71. AXA PPP wrote to Circle, informing them of its decision on 18 November 2010 citing the second and third grounds. The letter stated that as a result of its analysis AXA PPP had concluded that they had no need for additional provision in the Bath area on the basis of their current insured population and that they were satisfied with their existing network provision. AXA PPP had therefore decided not to add Circle Bath to its network [REDACTED]. The letter hoped that the existing good working relationships within the outpatient contract<sup>19</sup> would continue and that if any of AXA PPP's corporate clients expressed a desire to specify Circle Bath as their preferred provider then AXA PPP would seek to accommodate this.<sup>20</sup>
72. Internal AXA PPP correspondence at the time noted that while Circle Bath was continuing to treat AXA PPP members on an inpatient and day-case basis at no cost to AXA PPP, Circle had indicated to it that this was not sustainable. [REDACTED]<sup>21</sup> While Circle was treating its policyholders at its own expense, therefore, AXA PPP was benefitting from cost savings related to these treatments [REDACTED].

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<sup>19</sup> Circle Bath was recognized for outpatient work and was also part of AXA PPP's scanning and ophthalmic networks.

<sup>20</sup> Circle subsequently wrote to around 20 of AXA PPP's corporate clients setting out the benefits of Circle Bath.

<sup>21</sup> [REDACTED]



73. A Circle email quantified the cost of this treatment. It said that from its opening in 2010 up until June 2011, 557 individual AXA PPP members had been treated at Circle Bath as outpatients, day-case or inpatients. It said that had these patients been billed for their treatments in full the total would have amounted to £775,000.
74. In October 2011 AXA PPP told Circle that it intended to recognize Bath and, following final negotiations, did so with effect from 1 January 2012. Circle told us that the terms agreed were not materially different from those offered previously. [✂]
75. [✂]

#### *Aviva*

76. Aviva has two main hospital lists. Its 'Key' list of hospitals as well as its more extensive, premium 'Extended' list containing, additional, generally more expensive hospitals. The majority of its customers hold a product that provides access to the hospitals on its Key list. A smaller proportion of customers hold a product that provides access to its Extended list and can choose to access one of the additional hospitals recognized on this list.
77. Although Aviva was willing to list Circle Bath on its Extended network it did not wish to include it on the Key list of hospitals. This position (ie limited recognition) appears to have been adopted towards the end of 2009 and represented a change of view (ie away from not recognizing) based on its concerns about what it felt were commercially unattractive pricing terms in circumstances where it considered additional capacity was not required.
78. In the event, Aviva did decide to recognize Circle Bath on its Extended network only, (though Circle subsequently claimed that they had understood that they had been

asked to prepare their price proposals on the basis of full recognition). Circle continued to press for recognition on the Key list.

79. In May 2010, following a visit to Bath by Aviva, as was the case with AXA PPP, Circle had gained the impression that Aviva wished to list Bath on the Key network but that their contractual arrangements with BMI were an impediment to doing so.

80. On 25 May Circle emailed Aviva:

We concluded the meeting by saying that we would like to see if we can help you get around any problems that you may experience in your providing full network recognition to Circle Bath. It would be helpful if you could show us the extent of the problem that needs resolving and in any event, as discussed, work with us to come up with an interim solution which allows your members to benefit from the facility.

The letter went on to tell Aviva that Circle had taken advice from competition lawyers from whom they would be hearing shortly.

81. Aviva's response to Circle denied that Aviva was somehow constrained in what degree of recognition it could or would grant Circle Bath because of any contractual obligations to BMI. Aviva made clear that its position on recognizing Circle Bath on its Key list would be determined internally and on the basis of its commercial interest. In the meantime, the letter said, Circle Bath's place on the Extended list properly aligned Aviva's PMI product with the quality of the proposition that Circle offered.

82. [REDACTED]

83. Aviva responded that it did not consider itself constrained by any agreement with BMI and neither did it wish to be drawn into a dispute between Circle and BMI.

84. Against the background of a possible dispute between Circle and BMI a discussion took place between Aviva and BMI which prompted Aviva to write to BMI clarifying its position. Aviva said that its concern arose from BMI's request 'to agree that we will not "recognize" the Circle/Bath hospital on our Trustcare or Key hospital lists'. Aviva said that the hospitals that comprised Aviva's hospital lists and the manner in which Aviva worked with other providers of hospital services must be a matter for Aviva. Aviva said that it had taken legal advice, which supported its view that such a restriction might be unlawful given the strong position that BMI enjoyed in the UK and in the Bath area in particular.
85. BMI's response reflected a different interpretation of their discussions. It said that these arose because Aviva approached BMI in the context of its commercial tariff negotiations and pursuit of a means of BMI providing additional discounts in return for incremental volume from Aviva. It said that, in order to achieve the volume hurdles that had been agreed, Aviva decided to exclude a number of hospitals from its Key hospital list in order to generate the required volume to BMI. BMI explicitly denied that it had asked Aviva not to recognize Circle Bath.
86. Aviva's incentives to meet the volume hurdles it had agreed with BMI were significant. Aviva had negotiated what it described as a 'game changing' four-year deal with BMI in 2008 which was designed to deliver substantial discount benefits to Aviva if volume thresholds were successfully achieved but would result in penalties if they were not. As originally envisaged, Aviva was targeted to increase turnover with BMI by an incremental £[REDACTED] million. Doing so would, on Aviva's estimate, add £[REDACTED] million a year to its margin: failure to do so would result in price increases from BMI going forward [REDACTED]. In the event, this proposed agreement with BMI was not finalized and the eventual agreement that was signed was more modest in the rebates on offer and penalties for failure to meet them were removed.

87. Discussions continued across the summer and, following negotiation, Aviva agreed that: Circle Bath would be recognized as part of Aviva's MRI network, subject to the proviso that this should not negatively impact Aviva customers who would not be eligible for follow-up treatment at Circle Bath.<sup>22</sup> In the event of complaints from customers about this arrangement Aviva retained the right to reverse this decision.
88. In the first week of September, [REDACTED], the parties were moving closer to an agreement based on more attractive pricing arrangements for Aviva, a longer-term contract, the prospect of an open book cost model, joint efforts to influence consultant behaviour and targeting reductions in AVLOS. On pricing in particular Aviva discussed with Circle the need to be competitive generally and that Aviva would need to review the current Bath tariff to ensure that Aviva was no worse off commercially by including Circle Bath on its core hospital list.
89. Final terms, reached in November, included that all other Circle facilities would be recognized on the Key network as they came on stream, that all new facilities would be competitive in their local market and that Aviva would not be liable for any charges arising from Circle treating patients in Bath whose policies did not provide them with access to Circle Bath.
90. These features were reflected in the terms of the agreement recognizing Circle Bath as part of Aviva's Key network as from January 2011.

### ***The effect of Circle's entry***

#### ***Market share***

91. [REDACTED]

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<sup>22</sup> Circle had also started treating Aviva patients at its own expense, as it had done with AXA PPP patients. Since the volume of Aviva patients was lower, and the contribution to 'out of network' care was higher, however, this cost Circle far less than the initiative with AXA PPP patients.

FIGURE 10

**Circle Bath and Bath Clinic share of net revenue, 2009 to 2012**

[REDACTED]

Source: CC analysis.

92. [REDACTED]

TABLE 3 Circle Bath and Bath Clinic net revenue, 2009 to 2012

	<i>£ million</i>			
	2009	2010	2011	2012 est
Circle				
BMI	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Total	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

Source: Parties submissions.

FIGURE 11

**Circle Bath and Bath Clinic net revenue (£ million), 2009 to 2011**

[REDACTED]

Source: Parties' submissions.

TABLE 4 Circle Bath and Bath Clinic revenue breakdown, 2009 to 2012 (Circle)

	<i>£'000</i>			
	<i>FY09</i>	<i>FY10</i>	<i>FY11</i>	<i>FY12 est</i>
BMI private revenues	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
BMI NHS revenues	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Circle private revenues	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Circle NHS revenues	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

Source: Parties' submissions.

Notes: [REDACTED]

FIGURE 12

**Circle Bath and Bath Clinic Revenue breakdown, 2009 to 2012 (£'000)**

[REDACTED]

Source: Parties' submissions.

93. [REDACTED]

94. In aggregate terms, BMI told us that, taking into account an estimated 7 per cent decline in the volume of private healthcare activity in the period concerned, the Bath

Clinic suffered a [X] per cent decline in activity (cases) as a result of Circle's entry. In some specialties it told us that the effect was quite sudden and dramatic. BMI told us that in February 2010 all its ophthalmic surgeons opted en masse to cease consulting at Bath Clinic and to undertake their private practice solely at Circle Bath. It told us that in the same month several consultants in a range of specialties (including orthopaedics, general surgery, urology and gastroenterology) commenced splitting their private patients with Circle Bath and that [X] out of [X] consultants moved their entire private practice to Circle.

95. The financial impact on the Bath Clinic resulting from Circle's entry is shown below. Following a [X], Bath Clinic's EBITDA fell by [X] per cent and its EBIT fell by [X] per cent. The decline in profitability is magnified by the operational gearing of the business, ie the existence of a number of fixed (or semi-fixed) costs.

TABLE 5 Bath Clinic net revenue and profitability, 2009 to 2012

	FY09	FY10	FY11	FY12	FY09–FY12 change %
Net revenue	[X]	[X]	[X]	[X]	[X]
Gross contribution	[X]	[X]	[X]	[X]	[X]
EBITDA	[X]	[X]	[X]	[X]	[X]
EBIT	[X]	[X]	[X]	[X]	[X]

Source: BMI.

## Conclusions

96. The main impediment to Circle's entry and expansion in Bath was the lack of PMI, and in particular AXA PPP, recognition. AXA PPP was important to Circle Bath in its own right since it had a 25 per cent share of the PMI market but, as a result of 'consultant drag,' Circle faced the prospect that consultants would continue to treat their Bupa patients at the Bath Clinic rather than split their lists.
97. From the documents we have reviewed, AXA PPP's decision not to recognize Circle Bath when it opened would appear to have been based on the importance to it of its broader, national commercial relationship with BMI rather than specific contractual

terms which would have obliged it to incur higher hospital charges at the Bath Clinic as a result of recognizing Circle Bath. [X]

98. By not recognizing Circle Bath, AXA PPP may have put itself at competitive disadvantage with, for example, Bupa (which had recognized Circle Bath): potential users of private hospital facilities in Bath may have chosen to switch to Bupa from AXA PPP since the former offered Circle as an option for treatment but AXA PPP did not. However, the number of subscribers and hence revenue that AXA PPP would have stood to lose as a result would have been small, certainly in comparison with the bigger deals it was negotiating with BMI at the time, including the new AXA PPP Corporate Pathways product.
99. Other potential barriers were less important:
- (a) finance for the Circle hospital was arranged, seemingly without difficulty. The consultant/partner model was successful in attracting the support of consultants and this in turn gave sufficient comfort to investors for them to back the project;
  - (b) in order to retain consultants at its Clinic BMI adopted incentive schemes which entitled consultants to financial rewards if they met certain targets. BMI's schemes appear to have been less attractive to consultants than Circle's Partnership scheme which awarded equity stakes to participating consultants. BMI, because of its ownership structure, could not offer consultants equity in the Bath Clinic business and was thus able only to offer a scheme based on 'virtual equity';
  - (c) no significant impediments were encountered in identifying a suitable site or obtaining planning permission for the hospital;
  - (d) NHS business was available in Bath in quite significant volume; and
  - (e) while the CQC licensing process did cause some delays these were minor.

## **Entry and expansion case study 3: Edinburgh and the Lothians**

### **Introduction**

1. This paper, the third of our case studies on barriers to entry and expansion, examines the various attempts made by private hospital groups to begin providing private healthcare in Edinburgh from 2007. Whilst the other two case studies (London and Bath) focused on specific examples of entry and expansion in those areas, this paper takes a broader approach, examining the activity of a number of private hospital operators in Edinburgh over the last five years and seeks to understand the interplay between them.
2. Edinburgh has been selected for a case study due to the high level of interest shown in this area by a number of operators. In particular, we note the successful entry of TEC, which was subsequently acquired by Aspen, and the expansion of Spire, as well as the decisions of Circle and BMI not to enter despite their interest. We examine the extent to which these players encountered barriers to their entry and/or expansion and the nature of those barriers. In particular, we consider the role of market size, consultants, the PMIs and the Scottish NHS in facilitating or preventing entry/expansion. In addition, we consider the strategies deployed by Spire and Aspen to overcome any barriers to entry/expansion.
3. The structure of this paper is as follows:
  - (a) the first section describes the private hospital operators that have shown an interest in entering or expanding in Edinburgh;
  - (b) the second section provides a brief overview of the provision of healthcare in the Edinburgh area;
  - (c) the third section describes the entry/expansion plans of each private hospital operator and reviews their experiences; and



(d) the final section summarizes the main issues and sets out our current conclusions.

## **The private hospital operators**

### ***Spire***

4. Spire is the second largest private hospital operator in the UK with 37 hospitals and 31 satellite clinics<sup>1</sup> located throughout England, Wales and Scotland. The Spire business was acquired by funds managed or advised by Cinven (a private equity firm), which acquired the business in two stages, reassembling the portfolio of hospitals that had been owned by BUPA. The first stage involved the buyout of BUPA Hospitals in August 2007 and the second involved the acquisition of the Classic Hospitals Group in February 2008.<sup>2</sup> Spire later acquired the Gerrards Cross private hospital (now known as Spire Thames Valley) from BMI Healthcare in March 2008. As at 3 October 2012, Spire's facilities comprised 116 theatres, 479 consulting rooms, 1,564 overnight beds and 210 day-beds. In Scotland, Spire has two hospitals (Murrayfield and Shawfair), both of which are located in Edinburgh.
  
5. In the year ended 31 December 2011, Spire generated turnover of £667 million and EBITDA (earnings before interest, taxation, depreciation and amortization) of £181 million. The business has grown its revenues by an average annual rate of 5.0 per cent between FY08 and FY11, and its EBITDA by 14.1 per cent a year. In FY11, around [X] per cent of Spire's revenue was generated by its Edinburgh hospitals. Figure 1 shows the location of Spire's hospitals in the UK.

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<sup>1</sup> These satellite clinics generally offer consulting rooms and a range of outpatient and diagnostic services. In some cases, they may also have facilities for minor surgical procedures.

<sup>2</sup> The Classic Hospitals portfolio had been part of BUPA Hospitals but was sold to Legal and General Ventures in 2005.

FIGURE 1

**Location of Spire's hospitals**



Source: Spire.

**Aspen**

6. Aspen Healthcare has eight facilities in the UK, five of which are based in and around London, with one each in Sheffield, Edinburgh and Solihull. These vary in size from a full-service hospital with a high dependency unit and dedicated cancer centre (Parkside), to consulting rooms that offer day-case and minimally invasive procedures (Chelmsford Medical Centre). In total Aspen's hospitals contain 15 theatres, 74 consulting rooms, 191 overnight beds and 24 day-beds. In the financial year ended 31 December 2011, the business generated £70 million of revenue and £18 million of EBITDA. Figure 2 shows the location of Aspen's hospitals and clinics in the UK.

FIGURE 2

### Location of Aspen's hospitals and clinics



Source: Aspen.

Note: In addition to the locations shown, Aspen also has a facility in Chelmsford.

7. Aspen is owned by Welsh Carson Anderson and Stowe (a US-based private equity house) and was formed in 1998 via a management buyout of Paracelsus UK from Paracelsus Kliniken Deutschland GmbH. At the time of the transaction, Aspen owned the Parkside and Holly House hospitals. In 2003, the business acquired the Highgate hospital, followed in 2011 and 2012 by the acquisition of TEC, the Claremont (Sheffield), the Midland Eye Clinic and the Chelmsford Medical Centre.<sup>3</sup>
8. Aspen pursues a flexible expansion strategy, acquiring both full service hospitals and Ambulatory Surgical Centres (ASCs), depending on the characteristics of the local market and the opportunities that arise.<sup>4</sup>

<sup>3</sup> Aspen website: [www.aspen-healthcare.co.uk/our-heritage/](http://www.aspen-healthcare.co.uk/our-heritage/).

<sup>4</sup> ASCs provide a range of diagnostic testing as well as day-case surgery and medical treatments but not inpatient services.

9. A market review, carried out for Aspen by Stanbridge Associates in 2009, identified ASCs as offering a significant growth opportunity, based on both the trend towards day-case and away from inpatient treatment and the movement by consultants towards grouping together and investing in setting up their own facilities. Stanbridge Associates suggested that the latter trend was a direct result of the squeeze on consultant incomes by the PMIs.
10. The criteria used by Aspen to identify potential locations for such facilities included: [§]. Aspen's model for investing in ASCs is to set up partnerships with consultants, aligning the interests of the consultants and the healthcare provider in driving highest quality of care for the patients. As discussed in paragraphs 55 to 58, Aspen's decision to invest in TEC was based on its assessment that the business and the Edinburgh area met these criteria and hence was an attractive investment opportunity.

### **BMI**

11. BMI is the largest hospital operator in the UK, with 61 hospitals and nine outpatient clinics located throughout England, Scotland and Wales. The business is majority-owned by Netcare, a South African hospital business, with Apax Partners and London and Regional Properties holding a minority stake.<sup>5</sup> Across its portfolio of hospitals, BMI has 181 operating theatres, 659 consulting rooms, 2,514 overnight beds and 225 day-beds. In FY11, BMI generated around £800 million of turnover and £218 million of EBITDA from its private hospital activities.

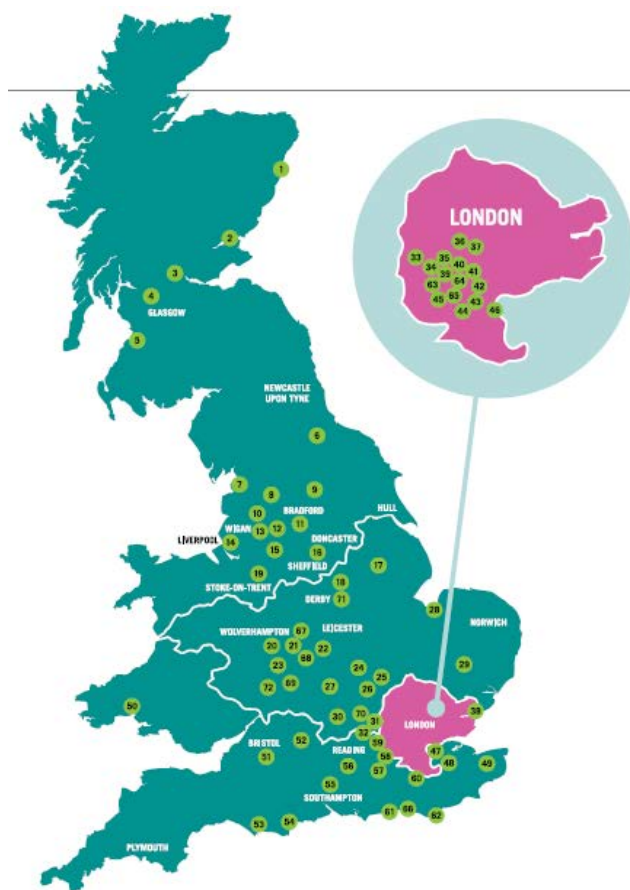
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<sup>5</sup> Apax website: [www.apax.com/news/apax-news/2006/april/network-healthcare-holdings-limited-acquires-leading-private-hospital-group-in-uk.aspx](http://www.apax.com/news/apax-news/2006/april/network-healthcare-holdings-limited-acquires-leading-private-hospital-group-in-uk.aspx).

12. BMI has grown both organically and via a number of acquisitions over the last five years, including the purchase of seven hospitals from Nuffield in February 2008<sup>6</sup> and the acquisition of the Abbey Hospital group in May 2010, comprising four hospitals in Scotland and northern England.
13. BMI has five hospitals in Scotland, located in Aberdeen, Dundee, Stirling, Glasgow and Ayr, which together generate turnover of around £[REDACTED] million, making it the largest private healthcare provider in Scotland. Figure 3 shows the location of BMI's hospitals in the UK.

FIGURE 3

### Location of BMI's private hospitals and clinics



Source: BMI.

<sup>6</sup> BMI originally purchased nine hospitals from Nuffield but pre-emptively sold two of these after having conducted an internal competition analysis and reaching the conclusion that a substantial lessening of competition may have arisen in these local areas. See OFT decision: [www.oft.gov.uk/shared\\_of/mergers\\_ea02/2008/GHG.pdf](http://www.oft.gov.uk/shared_of/mergers_ea02/2008/GHG.pdf).

## **Circle**

14. Circle was founded in 2004 and has pursued a 'mixed' model of independent healthcare provision, supplying both the NHS via Independent Sector Treatment Centres (ISTCs) and the management of NHS hospitals like Hinchingsbrooke Health Care Trust and the private sector via its hospitals in Bath and Reading and its outpatient/day-case clinics in Windsor and Stratford-upon-Avon.
15. The Circle model is based on a partnership with consultants who commit to bring a proportion of their revenue to the Circle facility in return for an equity stake in the business. Consultants are also encouraged to get involved in the management of Circle's hospitals in order to improve financial, operational and clinical performance. In FY11, Circle had turnover of £72 million and EBITDA of £(15) million.<sup>7</sup> (See the Bath Case Study for a detailed overview of the Circle group.)

## **The provision of private healthcare services in Edinburgh**

16. As of mid-2010 the Edinburgh area had a population of around 486,000,<sup>8</sup> making it Scotland's second largest city. Edinburgh is relatively wealthy with a gross disposable income per head of £17,250 in 2010, which is approximately 10 per cent higher than the UK average of £15,730. The city exhibits low levels of unemployment, with a rate of 4.7 per cent as of June 2012 compared with a national average of 8.1 per cent.<sup>9</sup>
17. Estimates of the level of PMI penetration in the Edinburgh area vary, with BMI research putting the proportion at [X] per cent in 2010, significantly below the level for the UK as a whole, whilst Aspen used an estimate of between [X] per cent and [X] per cent prepared by Laing & Buisson in their analysis of the sector.

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<sup>7</sup> Numis, Analyst Report, 21 February 2012.

<sup>8</sup> ONS data, [Region and Country Profiles - Key Statistics Tables, October 2012](#). Glasgow is the largest city with a total population of around 590,000.

<sup>9</sup> ONS data: [www.ons.gov.uk/ons/dcp171778\\_286516.pdf](http://www.ons.gov.uk/ons/dcp171778_286516.pdf).

18. Scotland's population is more highly educated than the national average with around 35 per cent having a qualification at NQF level 4 or above, compared with a national average of around 30 per cent.<sup>10</sup> However, health outcomes are poorer in Scotland than in the rest of the UK, with male and female life expectancy at birth 2.3 and 1.8 years, respectively, below the UK average.<sup>11</sup>
19. There are a number of differences between healthcare policy and practice in England and Scotland which the CC has been told may have an impact on the private healthcare sector. In particular, we are aware of the following differences:
- (a) The Scottish Government is committed to a different model of healthcare provision from that in place in England. In particular, it is committed to delivering services via public facilities, rather than private hospitals and clinics:

The Scottish Government has been clear that it remains committed to the values ... of collaboration, co-operation and partnership working across NHS Scotland, with patients and with the voluntary sector; of continued investment in the public sector rather than the private sector.... The Scottish Government will not follow the route being considered by the NHS in England as their response to the global challenges.<sup>12</sup>

As a consequence of this policy, the Scottish Executive is seeking to minimise the use it makes of private hospitals to deliver its services. Moreover, although there are currently a number of contracts for such publicly-funded and privately-delivered services,<sup>13</sup> patients are unable to choose a private hospital as a matter of course as under the 'choose and book' scheme in place in England.

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<sup>10</sup> ONS data, 2010: [www.ons.gov.uk/ons/taxonomy/index.html?nscl=Higher+Education+Skills+and+Qualifications](http://www.ons.gov.uk/ons/taxonomy/index.html?nscl=Higher+Education+Skills+and+Qualifications).

<sup>11</sup> ONS data: Regional and Country Profiles—Key Statistics, October 2012.

[www.ons.gov.uk/ons/search/index.html?pageSize=50&sortBy=none&sortDirection=none&newquery=qualifications+scotland](http://www.ons.gov.uk/ons/search/index.html?pageSize=50&sortBy=none&sortDirection=none&newquery=qualifications+scotland).

<sup>12</sup> NHS Scotland Chief Executive's Annual Report 2011/12, p7, [www.scotland.gov.uk/Resource/0040/00408794.pdf](http://www.scotland.gov.uk/Resource/0040/00408794.pdf).

<sup>13</sup> See [www.scotsman.com/news/health/private-hospitals-needed-for-three-years-to-clear-nhs-waiting-list-1-2389187](http://www.scotsman.com/news/health/private-hospitals-needed-for-three-years-to-clear-nhs-waiting-list-1-2389187). These contracts are aimed at clearing a backlog of patients, waiting longer for treatment than permitted under current waiting list commitments.

- (b) The Scottish Government has made certain commitments in terms of the quality of NHS services that are more ambitious than those in force in England. For example, the English NHS has a target that no patient should wait more than 18 weeks from the point of referral to commencing treatment.<sup>14</sup> By contrast, in Scotland: 'From October 2012, patients requiring inpatient or day case treatment will be covered by a 12-week Treatment Time Guarantee enshrined in law which will apply every day of the year.'<sup>15</sup>
- (c) Finally, the NHS in Scotland has developed an IT system called SCI Gateway which enables the electronic referral of patients by GPs to a hospital. This system avoids the need to send a referral letter to a hospital, with consultant appointments being confirmed during a patient's GP visit, and their medical information transferred directly to the treating hospital at the same time. Some, but not all, of the private hospital facilities are also connected to this system, which requires NHS sponsorship.<sup>16</sup>

### ***Private healthcare provision***

20. Edinburgh and the Lothians are currently served by one full service hospital (Murrayfield), two day-case hospitals/clinics (TEC and Shawfair Park hospital) and a physiotherapy clinic (the Livingstone Clinic). Three of these facilities are owned by Spire, with TEC now owned by Aspen. There are three other hospitals within a one-hour drive of the city, two in Glasgow (Nuffield and BMI) and one in Stirling (BMI). In addition, BMI has a hospital in Dundee (Fernbrae). Figure 4 shows the location of these facilities.

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<sup>14</sup> [www.nhs.uk/choiceintheNHS/Rightsandpledges/Waitingtimes/Pages/Guide%20to%20waiting%20times.aspx](http://www.nhs.uk/choiceintheNHS/Rightsandpledges/Waitingtimes/Pages/Guide%20to%20waiting%20times.aspx).

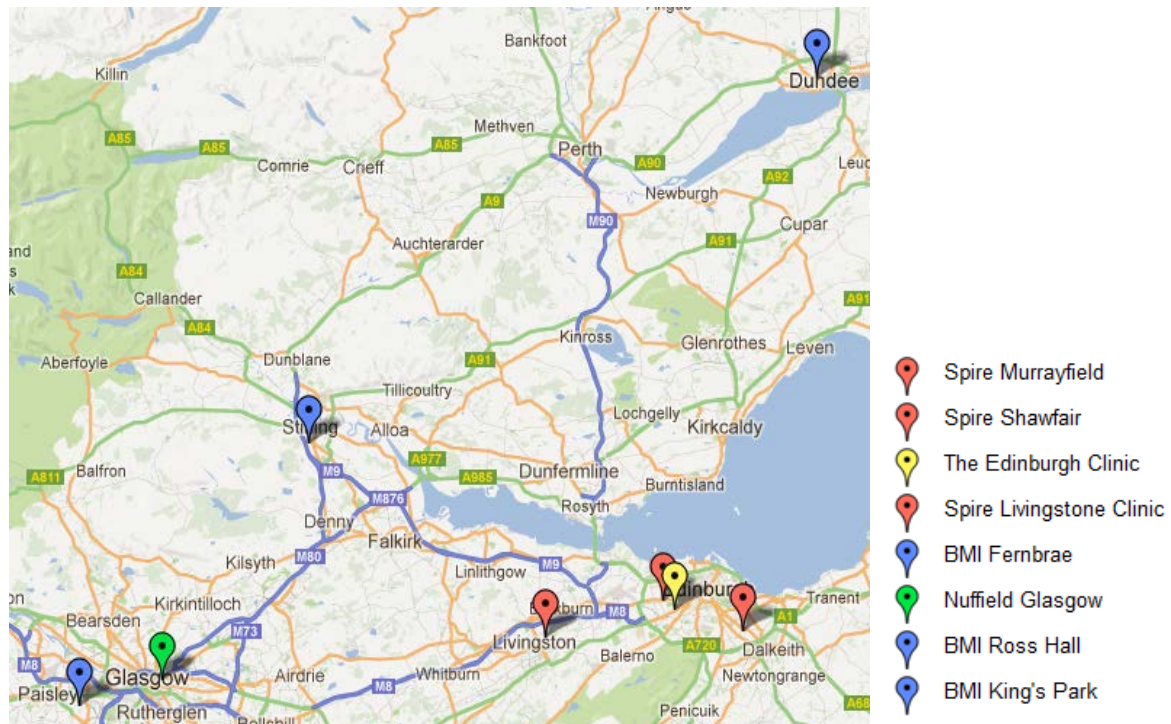
<sup>15</sup> *ibid*, p38.

<sup>16</sup> [www.sci.scot.nhs.uk/products/gateway/gate\\_desc.htm](http://www.sci.scot.nhs.uk/products/gateway/gate_desc.htm).



FIGURE 4

**Private healthcare facilities in and around Edinburgh**



Source: CC analysis and Google maps.

21. Despite the relative proximity of Edinburgh and Glasgow, [X] told us that patients tended to be reluctant to travel between the two cities for private healthcare services.
22. In 2007, private healthcare provision in Edinburgh was significantly more limited—only the Murrayfield hospital (see Figure 5) and the Livingstone Clinic were in operation. The Murrayfield hospital was first opened in 1983 (by BUPA) and offers four theatres, 61 overnight beds and 14 consulting rooms. [X]. The hospital is located in the north of the city, close to the former site of the Edinburgh Royal Infirmary (ERI).

FIGURE 5

**Spire Murrayfield hospital, Beechwood House building**



Source: Spire website.

23. The next section sets out the opportunities identified by the various operators and their plans for entering into or expanding within the Edinburgh area.

***Edinburgh Royal Infirmary***

24. The ERI is the main NHS hospital in the city. Up until around 2002/03, it was located in Lauriston Place, near the centre of the Edinburgh and close to the Murrayfield hospital. Between 2002 and 2005, the ERI moved its main site and several additional functions/specialisms to a new location in the Little France area in the south-east of Edinburgh. Several of the parties told the CC that this move had an impact on the dynamics of private healthcare provision in the city.

**Entry and expansion plans**

***Introduction***

25. This section provides an overview of the attempted entry by Circle into Edinburgh, the successful entry of TEC and the successful expansion by Spire, the incumbent operator. In addition, it sets out the issues considered by BMI in deciding not to enter the area.

## **Circle**

26. Circle's strategy for expansion in the UK was based around identifying the 15 to 20 largest markets for private healthcare (outside London), raising the required levels of committed revenue from local consultants in each area and building hospitals in those markets. The funding for each hospital building was to be raised on the basis of the consultant commitments. One such target area identified by the group was Edinburgh. Circle's assessment of the market opportunity was as follows:

In 2007 Circle saw Edinburgh as a market with PMI and cash pay revenues in excess of £20m. This market was dominated by Spire Murrayfield, which at the time was capacity constrained and enjoying a monopoly market position. The new Edinburgh Royal Infirmary was located to the East of the city with Spire Murrayfield located in the Western suburbs. Circle saw that an opportunity existed to provide more capacity closer to the Edinburgh Royal Infirmary.

27. In February 2007, Circle was approached by an agent with details of a site in Edmonstone, near the new Royal Infirmary site. The business decided to pursue the opportunity and began the process of seeking revenue commitments from consultants in March 2007. Circle's management set a target for revenue commitments of £[REDACTED] million, which the business reached in less than a year. In August 2007, Circle secured an option over the site and then submitted an application for outline planning permission, which was granted in February 2008. The hospital was to offer four operating theatres, 30 inpatient beds and 25 day-case beds, with diagnostic imaging and outpatient facilities.
28. In early 2008 [REDACTED]. Circle was able to secure [REDACTED] funding of approximately £9 million from AIB, which allowed it to complete the acquisition of the Edmonstone site in March 2008. Circle subsequently appointed architects to draw up more detailed plans

for a new hospital on the site. However, the business was unsuccessful in raising the financing required to build the hospital. [X]

29. In early 2012, Circle made the decision not to proceed with its entry into Edinburgh.

### **Spire**

30. Prior to 2008, when TEC opened, Spire was the only private hospital operator active in Edinburgh and the Lothians with its Murrayfield hospital and Livingstone Clinic, which had been acquired from BUPA as part of a larger portfolio in 2007.
31. Spire presented its initial business case for a new hospital to its Board in November 2007. According to the 2007 Board Paper, Spire's decision to invest in a second hospital in Edinburgh (at Shawfair Park) was motivated by three considerations, namely: (a) the relocation of the ERI and the stated preference of the Edinburgh consultants for a private hospital location nearer to their NHS base and the consequent threat to the Murrayfield hospital; (b) the threat of competitive entry, and (c) the growth of the Edinburgh market. In this Board Paper, Spire identified the threat of competitive entry, stating that its 'ambition would be to deter Circle or other competitors from entering the market'. In particular, Spire was concerned that the movement of the NHS's main facility—the ERI—from Lauriston Place to a new site in Little France, made its Murrayfield location less attractive to its consultants. The new ERI location was in the south-east of the city, whilst Murrayfield was located to the west of the centre of Edinburgh, a 25-minute drive away: Spire indicated that, as a result of the ERI move, the location of the main NHS practice of many of Spire's consultants shifted from the city centre to the south-east of the city. 'The location issue has opened up a chink in Murrayfield's armour that competitors are seeking to exploit. Developers have sought to identify sites which are capable of being

developed into a new private hospital close to the ERI. This search has been encouraged by strong interest from potential competitors, most recently Circle.'

32. Spire indicated that its main concern was that consultants based at the ERI would move their private work to a new facility built close to the ERI in order to avoid the inconvenience of travelling between Murrayfield and the ERI. The business case presented to the Board set out a number of scenarios showing the potential impact on Murrayfield in the case of entry by Circle.
33. The business identified a growing private healthcare market in Edinburgh, which was under-served by its existing facility. [X] A new facility would allow Spire to treat more patients, carry out more complex procedures and to provide several new service lines, including paediatrics, oncology, cardiology and IVF.<sup>17</sup> [X]
34. The November 2007 business case recommended the building of a new day-case hospital on the Shawfair site, whilst maintaining its existing facility in Murrayfield, with services being split across the two sites. [X]<sup>18</sup>
35. Spire acquired the Shawfair site in November 2007 and began a process of more detailed financial planning and evaluation prior to making a final decision regarding the site.
36. The November 2007 Board Paper highlighted the following 'critical success factors' that would minimize the probability and potential impact of competitor entry:
  - (a) 'Securing a site which is close to ERI and affords easy access for both patients and consultants.'

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<sup>17</sup> IVF was added to the planned new service offering in the April 2008 business case that was submitted to the Board for final approval. Spire told the CC that, at the time, there was a six-month wait to obtain privately-funded IVF treatment in NHS Lothian, and the next closest private IVF provider was located in Glasgow.

<sup>18</sup> [X]

- (b) Acting quickly to ensure potential competitor investors know they would not be in a position to exploit the location weakness of Murrayfield unchallenged.
- (c) Demonstrating our commitment to supporting the growth of consultants' private practice.
- (d) Demonstrating the capability to improve the range and complexity of clinical services and to market aggressively in the region.'

37. In April 2008, [REDACTED]

TABLE 1 [REDACTED]

[REDACTED]

Source: [REDACTED]

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38. The board paper reported that Circle had lost some credibility among the consultants due to its failure to keep to its original timetable for acquiring the site and building the Edmonstone hospital (see paragraphs 26 to 29). However, it also noted that Circle had completed the purchase and appointed architects in March 2008:

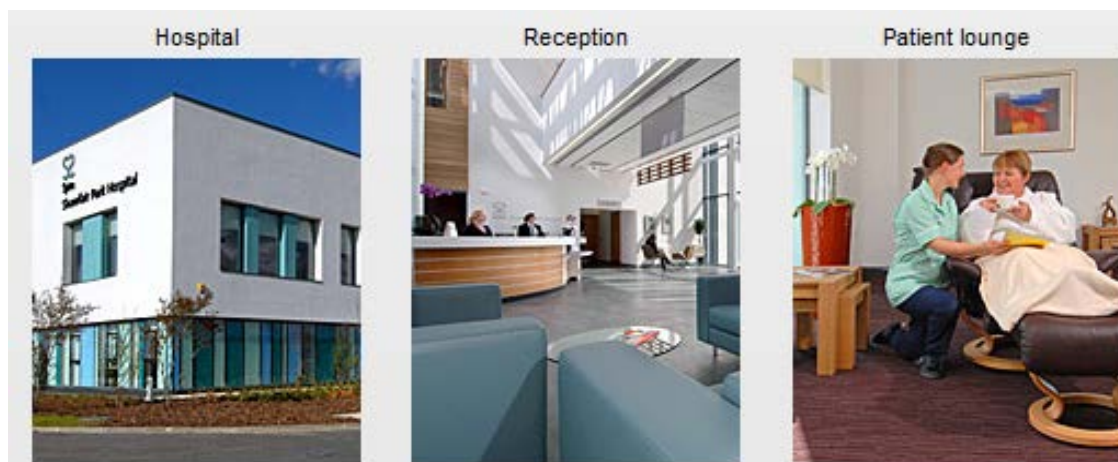
Whilst Circle has not abandoned proposals to establish a hospital in Edinburgh, if the Board accepts the recommendation to proceed with developing a new Spire hospital at Shawfair Park, the Spire facility will be operational for several months prior to a new Circle hospital. [REDACTED]

39. During this period, Spire Edinburgh considered the introduction of a cash-based, deferred payment incentive scheme for consultants to secure their loyalty for a period of five years from 2008. [REDACTED]

40. [REDACTED], Spire did not proceed with the consultant incentive scheme. Spire told the CC that the reason it had not proceeded with the scheme was because it considered such a strategy to be inappropriate.
41. Spire decided to proceed with construction of Shawfair Park in April 2008 with work starting in January 2009 and the hospital opening in March 2010. In total, the new facility cost £[REDACTED] million to develop, comprising £[REDACTED] million of land costs, £[REDACTED] million of build costs and £[REDACTED] million of equipment (see Figure 6). Facilities include two operating theatres, 18 day-beds, an IVF treatment centre, a cardiac catheterization laboratory and imaging facilities, including X-ray and ultrasound equipment.

FIGURE 6

**Spire Shawfair Park Hospital**



Source: Spire website.

42. The business plan targeted new revenue of £[REDACTED] million and EBITDA of £[REDACTED] million by FY11, based on a [REDACTED] per cent increase in the volume of patients treated in

Edinburgh. This growth was expected across the two Edinburgh sites, which are operated and managed as a single unit.<sup>19</sup>

43. Spire indicated that it did not experience any difficulties either in obtaining planning permission for the hospital, or obtaining recognition from the PMIs, although the PMIs did not provide any advanced commitment to recognize the new facility. Spire explained that it 'was able to secure recognition, subject to quality certification, from Bupa, AXA PPP and Aviva UK Health during contract negotiations in Q1/Q2 2009'. Hence, the Shawfair hospital was recognized by the three largest insurers from opening with most PMIs accepting Shawfair as an extension of Murrayfield. In addition, Spire's Board Minutes indicate that the expansion was supported by local consultants, who demonstrated significant interest in the new facility.<sup>20</sup>

### ***Investment in Murrayfield***

44. In addition to developing the new Shawfair Park hospital, the financial information provided by Spire to the CC indicates that over this same period there was a significant programme of investment in the Murrayfield site. This included:
- (a) installation of a new modular theatre in April 2008 to increase capacity on the site, at a cost of around £1.5 million;
  - (b) acquisition of a new CT scanner in October 2008, at a cost of just under £1 million;
  - (c) refurbishment of patient bedrooms, reception and other communal areas, theatres, consulting rooms, the wellness suite, and the physiotherapy gym at a total cost of around £600,000 over FY10, FY11 and FY12; and<sup>21</sup>

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<sup>19</sup> [REDACTED]

<sup>20</sup> Edinburgh has a concentration of financial services firms, such as RBS, which have been particularly badly affected by the financial crisis.

<sup>21</sup> The bedroom refurbishment programme appears to have started in 2008/09 at Murrayfield. Only the costs for 2010 and 2011 are shown here.



(d) investment in new medical equipment, including a phaco machine, MRI coil, new camera stacks, specialised theatre, CSD and anaesthetic equipment at a total cost of around £200,000 over FY10, FY11 and FY12.

### ***Performance of Shawfair (and Murrayfield)***

45. A review of the first year of operations at Shawfair Park indicated that the hospital [REDACTED].
46. [REDACTED], Spire has increased total revenues in Edinburgh from £[REDACTED] million in 2009 to £[REDACTED] million in 2012, growth of [REDACTED] per cent. Over the same period, EBITDA increased by £[REDACTED] million, with the EBITDA margin increasing from [REDACTED] per cent to [REDACTED] per cent, compared with an average of [REDACTED] per cent for the Spire group as a whole. Volume growth has come from [REDACTED].
47. [REDACTED]<sup>22</sup>

FIGURE 7

### **Financial performance of Spire in Edinburgh**

[REDACTED]

Source: Spire.

48. Spire noted in internal documents that it believed that its construction of Shawfair Park caused Circle to withdraw from Edinburgh, maintaining Spire's solus status in the city. Furthermore, Spire's assessment was that, following this withdrawal, new entrants in Edinburgh are unlikely.

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<sup>22</sup> [www.scotsman.com/news/health/private-hospitals-needed-for-three-years-to-clear-nhs-waiting-list-1-2389187](http://www.scotsman.com/news/health/private-hospitals-needed-for-three-years-to-clear-nhs-waiting-list-1-2389187).

### ***The Edinburgh Clinic***

49. TEC was founded in 2008 by Dr Martin Errington, an Edinburgh-based consultant radiologist. Facilities include an imaging suite with MRI, CT, DEXA scanner and 4D ultrasound scanners, as well as an X-ray machine, six consulting rooms, a laminar flow operating theatre for day-case patients and a physiotherapy suite (see Figure 8 below). The clinic is located in the Morningside area of Edinburgh.
50. Dr Errington told the CC that he had been motivated to open the clinic as the result of a lack of available diagnostic facilities in the Edinburgh area. In particular, he stated that he had been unable to obtain practising privileges at the Murrayfield hospital during the early 2000s and, having spent a number of years renting diagnostic facilities from both the NHS and Alliance Medical in Edinburgh and from other private and NHS facilities elsewhere in Scotland, he decided to establish a diagnostic and consulting facility from which to develop his practice.
51. Dr Errington's strategy for TEC was to attract consultants in specialist fields that had a particular requirement for diagnostic and scanning equipment, including orthopaedics, urology, cardiology and physiotherapy, among others, in order to generate demand for the facility's imaging equipment. In addition, the clinic sought to develop its offering over time with a day-case theatre (opened early 2012) in order to capture a greater proportion of the patient journey.
52. In early 2007, Dr Errington located a suitable site for the clinic in the affluent Morningside area of Edinburgh, which was conveniently located in terms of the clinic's likely catchment area for patients and with respect to the consultants' residential addresses. The clinic did not encounter any significant planning issues as the building had previously been owned and used by NHS Lothian for healthcare

purposes. However, the building did require modernization, which took around 18 months.

53. Since opening in 2008, the clinic has attracted around 90 clinicians to practise at its facilities, from both Edinburgh and the surrounding areas, including some Glasgow-based consultants. In 2009, it entered into an agreement with the Glasgow Centre for Reproductive Medicine (GCRM), a specialist fertility (IVF) centre. GCRM already provided IVF services to patients in the Edinburgh area and was looking for a local facility to provide a range of pre- and post-treatment services, including consultations, blood tests, counselling and scanning. The strategy was to develop the business and enhance customer service by reducing travelling for Edinburgh patients.<sup>23</sup>
54. Dr Errington told the CC that his initial venture (Errington Associates) had already been recognized by all the main PMIs as a 'virtual hospital' for scanning and diagnostic tests prior to opening TEC. He stated that all the PMIs wanted the clinic to succeed and that his existing (virtual) recognition was relatively easily transferred to the new facility. The one exception to this situation was gaining recognition from AXA PPP. Dr Errington had understood from AXA PPP that it was keen to recognize the clinic but in his view a pre-existing agreement with Spire meant that it was unable to do so.

### ***Aspen's decision to invest in TEC***

55. Aspen told us that its interest in the Edinburgh market was triggered by an approach from Dr Errington, who was looking for a private healthcare group to manage and grow the business.

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<sup>23</sup> Patients would continue to travel to Glasgow for the IVF treatment itself but would no longer need to travel for the associated consultations, tests and scans.

56. Aspen carried out an evaluation of the market as part of its due diligence process and identified a number of possible challenges and risk, including:
- (a) recognition had not been obtained from all PMIs for theatre procedures (nor prices agreed), although most had provided verbal support;<sup>24</sup>
  - (b) the prevalence of 'Dear Doctor'<sup>25</sup> referrals which are distributed to consultants by hospital facilities not only 'makes it very difficult for aspiring consultants to build a strong and commercially rewarding practice' but that it also meant 'very little practice can be brought instantly to the Clinic due to the majority of referrals going straight to Spire Murrayfield'; and
  - (c) it was 'essential' to gain access to the SCI Gateway system in order to attract referrals from GPs. Dr Errington also highlighted the importance of gaining access to this system.
57. In spite of these risks, Aspen decided that Edinburgh met its criteria for investment in an ASC [§]. It noted that TEC was 'a new phenomenon' in Scotland but that the investment 'allows Aspen early entry into an attractive emerging market at a relatively low investment exposure'. In addition, although not part of Aspen's business case for the investment, it identified a further potential opportunity arising from a number of initiatives by the Scottish NHS to work with external providers with an objective of increasing capacity. Aspen's view was that capacity constraints in the local NHS would mean private provision would be required to meet their commitments.
58. Aspen's plan was to develop a broader range of services than those currently offered, including urology, cosmetic surgery, cardiology and diagnostics.

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<sup>24</sup> Aspen indicated that AXA PPP, in particular, was reluctant to commit to recognition or agree prices. However, AXA PPP's low penetration in the Edinburgh market was considered to counteract this risk.

<sup>25</sup> 'Dear Doctor' referrals are sent directly to a hospital, which then passes the referral to an appropriate consultant, rather than being addressed to a specific consultant.

59. Aspen entered into discussions regarding a joint venture with TEC in October 2009, and completed the deal in January 2011, acquiring a 50 per cent stake for £[REDACTED].

FIGURE 8

### The Edinburgh Clinic



Source: TEC website.

### **Performance of TEC**

60. Aspen initially forecasted revenues of £[REDACTED] million in 2011, rising to £[REDACTED] million by 2013. [REDACTED]. Aspen estimated that the clinic needed to undertake [REDACTED] scans and [REDACTED] minor procedures per month in order to become cash positive.
61. During 2011, TEC performed [REDACTED]. In addition, it has taken up to four years for TEC to gain access to the SCI Gateway system (effective from January 2013), although it is unclear what impact this may have had on performance.<sup>26</sup>
62. Aspen told the CC that it had taken a number of steps to improve the performance of the clinic, including:
- (a) In October 2011, Aspen increased its equity stake in the clinic to 90 per cent.
  - (b) Aspen had invested £300,000 in developing the operating theatre, with day-case procedures in ophthalmology, cosmetics, urology, orthopaedics, ENT and general surgery commencing from January 2012.

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<sup>26</sup> Aspen stated that it had taken two years to gain access to the SCI Gateway system, whilst Dr Errington told the CC that the process had taken four years.

(c) TEC had signed a 'treat' contract with a local health trust under which it was carrying out around [REDACTED] MRI scans and [REDACTED] procedures per month. Aspen indicated that this contract had been effective in raising the profile of the clinic among local GPs and consultants.

63. Aspen told the CC that these changes were starting to show results, with the clinic [REDACTED] and a number of new consultants bringing work to the clinic. [REDACTED]

64. Figure 9 shows the performance of TEC compared with Aspen's initial forecasts for the facility.

FIGURE 9

### **Financial performance of TEC**

[REDACTED]

Source: Aspen.

65. TEC is recognized by all the PMIs with Aspen indicating that obtaining this recognition had not been 'as challenging as it might have been if TEC had overnight facilities'. Dr Errington told the CC that an advantage of Aspen's involvement with the clinic was its ability to bring 'firepower' to the negotiations with the PMIs.

### **Competitive response**

66. Dr Errington stated that he believed the entry of TEC had provoked a limited competitive reaction from Spire, in part due to its relatively small scale and focus on diagnostics and minor procedures, with consultants continuing to refer their patients to the Murrayfield hospital for inpatient treatment.<sup>27</sup> For example, he stated that Spire

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<sup>27</sup> Dr Errington told the CC that Spire's decision to start offering IVF services at its Shawfair Park hospital may have been a direct response to its agreement with GCRM in 2009. However, we note that the business case prepared by Spire in April 2008 includes revenue forecasts for IVF treatments at the Shawfair hospital.

did not appear to have changed its self-pay prices for certain scanning procedures, such as MRI, despite the lower prices charged by TEC.

67. Spire told the CC that it had recently invested in new optometry equipment in order to better compete with TEC for patients.

### **BMI**

68. BMI first identified Edinburgh as a target market during a network strategy review undertaken in 2005. The city was identified as a gap in BMI's portfolio of hospitals and a key target [REDACTED]. The market was viewed as being 'worthwhile' on the basis of having a local population of more than 40,000 people with private medical insurance. BMI noted that the transfer of the activities of the Royal Infirmary to the Little France area of the city reduced the attractiveness of Murrayfield's location and that there were at least two potential sites for a new hospital which were now better located. However, this strategy review also noted that the Edinburgh area might not be sufficiently large to accommodate two hospitals.
69. In early 2007, both the Edmonstone and the Shawfair sites were reviewed by BMI as potential means of entry. The Shawfair site was initially considered attractive for a number of reasons, including its proximity to affluent populations in south-central Edinburgh and the border region, good transport links, a positive planning environment, and its location next to the ERI, which was considered to provide access to consultants.
70. However, in July 2007, BMI's board came to the conclusion that the Edinburgh area was not sufficiently attractive since 'either significant growth of the market in the area or significant cannibalization of BUPA Murrayfield's work was required to make the project viable'. [REDACTED]

71. In addition, BMI noted several features which reduced the perceived opportunity for BMI in Edinburgh at the relevant time, including:
- (a) Circle's intention to build a hospital in Edinburgh;
  - (b) the low level of PMI penetration in Scotland; and
  - (c) the recent change of Government in Edinburgh, with the SNP winning a majority.
72. On the other hand, BMI noted that the Murrayfield hospital did not have an ICU and so more complex, higher acuity work was being done by the NHS in Edinburgh rather than the private sector. This was considered an opportunity for a new entrant.
73. [REDACTED]
74. In early 2010, BMI identified a joint venture with TEC as a potential means of entry. [REDACTED] It went on to highlight the opportunity to attract consultants and their business to TEC and other BMI facilities and away from Spire's hospitals: [REDACTED]
75. BMI did not proceed with the acquisition of TEC because it was unable to agree commercial returns with the owners.

## Conclusions

76. The experience of the private hospital operators in Edinburgh provides a number of interesting insights into the dynamics of competition in the private healthcare market, both in Edinburgh itself and more generally.
77. Several operators identified Edinburgh as a desirable area in which to have a hospital due to the size of the insured population—more than 40,000 people—and the existence of a single provider [REDACTED]. Furthermore, there were at least two sites



near to the ERI that were both available and able to achieve planning permission for a hospital.

78. BMI, Circle and TEC all sought to enter Edinburgh but only the latter has done so and via a diagnostic and day-case facility rather than a full service hospital. Their experiences highlight a number of pertinent factors:
- (a) the importance of economies of scale in hospital provision (particularly inpatient services) and the limited level of demand for private healthcare in certain areas, which may make entry, at least in the format of a full-service hospital, unprofitable;
  - (b) the incumbent operator in an area may face a different calculation than a new entrant when deciding whether or not to expand, with the potential costs of losing its existing solus position being taken into account alongside the potential growth opportunity from expansion. A new entrant will only consider the potential returns from operating a hospital in competition with the incumbent;
  - (c) TEC's approach to entry—opening a diagnostic and day-case facility—appears to have circumvented the issue of economies of scale and the risks of large-scale entry by focusing on a specific part of the market. The focus on outpatient and diagnostic services may also have minimized the issues associated with obtaining PMI recognition; and
  - (d) the existence of NHS-funded work has the effect of increasing the level of demand for privately-provided healthcare services but this facilitates entry to a lesser extent where there are risks that the work will not continue in the longer run.

## Entry and expansion case study 2: The London Clinic

### Introduction

1. This paper describes the London Clinic's (TLC's) attempts to grow its share of cancer treatment provision in London through the creation of a custom-built, integrated cancer care centre and the barriers that it encountered in doing so.
2. The paper begins by describing TLC and its main competitors in cancer treatment in central London, sets out some of the distinctive characteristics of private healthcare provision in London and outlines TLC's strategy. It then describes how other participants responded to TLC's expansion plans and draws some preliminary conclusions on barriers to expansion.

### TLC and its main competitors in cancer treatment in central London

#### *TLC*

3. TLC opened in 1932 and was granted charitable status in 1935. Its current facilities are located in and around Harley Street in central London and comprise 74 consulting rooms, 13 operating theatres, a level 3 intensive care unit, 181 overnight beds and 59 daybeds. TLC, which describes itself as the largest 'independent'<sup>1</sup> private hospital in London, admitted slightly fewer than [§] patients in 2011.<sup>2</sup> It provides most of the major clinical specialties with the exception of cardiac surgery, obstetrics and psychiatry. In 2009 TLC opened its Cancer Centre whose development we describe in more detail below.

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<sup>1</sup> In the sense that it is independent of the major private hospital groups (BMI, HCA, Nuffield, Ramsay and Spire).

<sup>2</sup> Admissions figures do not include outpatient consultations. In 2011, TLC held just under [§] outpatient consultations.

4. As a charity, TLC is governed by a Chairman and Board of Trustees, with all surpluses reinvested into the hospital and, like other charities, benefits from certain tax reliefs and exemptions.<sup>3</sup>
5. The turnover of TLC grew from £74 million in 2006 to £124 million in 2011, an average annual growth rate of 10.8 per cent. Over the same period EBITDA<sup>4</sup> increased from £[ ] to just over [ ]. TLC's revenue is generated largely from insured patients, who account for around [ ] per cent of the total. The remaining [ ] per cent of its revenue is split [ ] between self-pay and international patients, with almost no revenue generated from NHS patients.

### ***Hospital Corporation of America***

6. Hospital Corporation of America (HCA) is the third-largest provider of healthcare services in the UK and the largest in London by revenue. In 2011, HCA generated turnover of £585 million and EBITDA of £142 million from its hospital operations in the UK. It admitted around [ ] patients and treated a further [ ] on an outpatient basis.
7. HCA began providing private healthcare in the UK in 1996 with its purchase of a 50 per cent share in the Harley Street Clinic, Wellington, Princess Grace and Portland hospitals, in a joint venture with PPP healthcare. HCA expanded significantly in 2000, buying out PPP's share in the joint venture and acquiring St Martin's Healthcare (comprising the London Bridge, Lister and Devonshire hospitals) from the Kuwait Investment Office.<sup>5</sup>

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<sup>3</sup> See [www.hmrc.gov.uk/charities/tax/basics.htm](http://www.hmrc.gov.uk/charities/tax/basics.htm).

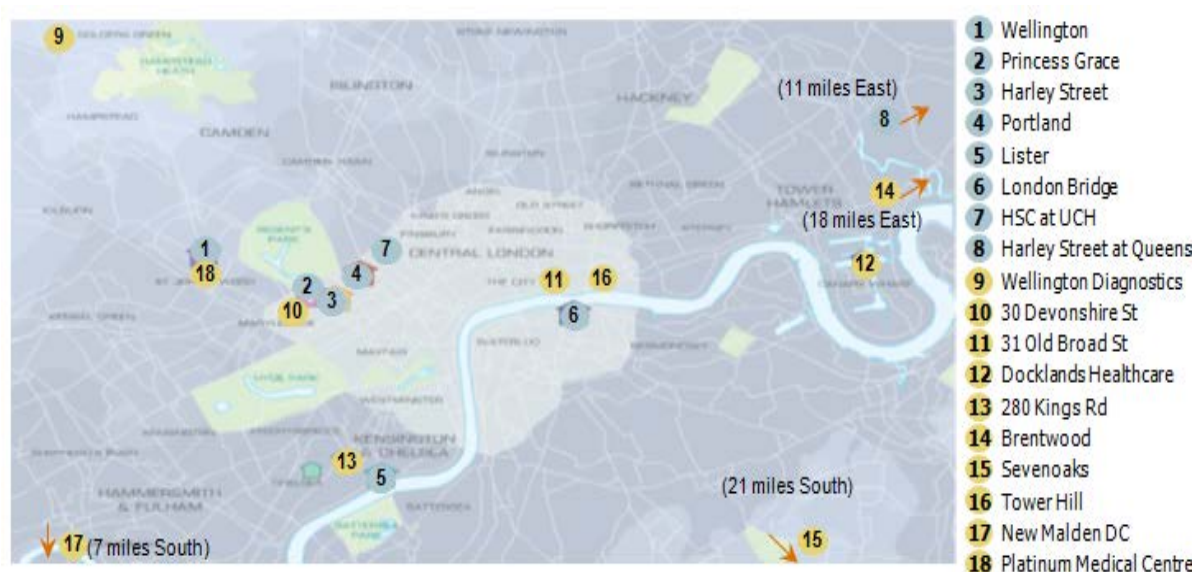
<sup>4</sup> EBITDA = earnings before interest, taxation, depreciation and amortization.

<sup>5</sup> HCA website: <http://phx.corporate-ir.net/phoenix.zhtml?c=63489&p=irol-newsArticle&ID=561221&highlight=>,  
<http://phx.corporate-ir.net/phoenix.zhtml?c=63489&p=irol-newsArticle&ID=561225&highlight=>.

8. HCA has also created or acquired a number of outpatient and diagnostic clinics (see Figure 1), as well as reaching commercial agreements with a number of NHS PPUs including, in London, UCH (incorporating Harley Street at UCH and the MacMillan Cancer Centre for outpatient and day-case treatments),<sup>6</sup> Queens Hospital (Romford) and, most recently, Guy's and St Thomas' Hospital where HCA will manage a PPU within the Trust's new Cancer Treatment Centre.<sup>7</sup>

FIGURE 1

### HCA facilities in the Greater London area



Source: HCA.

9. In 2010, HCA expanded outside the Greater London area for the first time, winning a tender to manage the Christie NHS Foundation Trust PPU in Manchester. The Christie Clinic is the UK's largest specialist cancer hospital outside of London.
10. HCA currently has a total of 416 consulting rooms, 44 theatres, 790 overnight beds and 167 daybeds across its UK hospitals. All of HCA's main hospitals have an

<sup>6</sup> [www.harleystreetatuch.co.uk/the-uch-macmillan-cancer-centre/](http://www.harleystreetatuch.co.uk/the-uch-macmillan-cancer-centre/).

<sup>7</sup> HCA outpatient clinics include the Platinum, New Malden, Chelsea, Brentwood, City of London, Old Broad Street, Docklands and Sevenoaks medical centres. OFT decision regarding HCA and Guy's and St Thomas' commercial agreement: [www.of.gov.uk/shared\\_of/mergers\\_ea02/2012/HCA.pdf](http://www.of.gov.uk/shared_of/mergers_ea02/2012/HCA.pdf).

intensive care unit and are capable of offering high dependency unit (HDU) services too. These facilities support the high-acuity work carried out at HCA hospitals.

11. In addition to its secondary care facilities, HCA has invested in the primary care sector through its acquisition of a number of private GP surgeries and occupational healthcare providers including, Blossoms Healthcare, Roodlane and General Medical Clinics.

### ***Bupa Cromwell Hospital***

12. Bupa, which had previously sold all of its hospitals, acquired the Cromwell hospital in 2008. The 131-bed hospital is located on Cromwell Road in Kensington and provides care across more than 70 sub-specialties with a particular focus on oncology, neuroscience, paediatrics, cardiac sciences and orthopaedics. [REDACTED]
13. The hospital has five operating theatres and 29 consulting rooms. In 2011, Bupa Cromwell Hospital (BCH) generated £[REDACTED] in revenues and £[REDACTED] EBITDA. Revenues were split between insured patients ([REDACTED] per cent), overseas patients ([REDACTED] per cent), self-pay patients ([REDACTED] per cent) and NHS-funded patients ([REDACTED] per cent).
14. We set out BCH's strategy in cancer care in Annex A.

### ***The Royal Marsden NHS Foundation Trust***

15. The Royal Marsden Hospital NHS Foundation Trust (The Royal Marsden) specializes in cancer treatment, care and research. It has the largest PPU in the UK with turnover in 2011/12 of £50.3 million and operates from two sites: Chelsea and Sutton in Surrey. It has 34 private overnight beds, 12 daybeds, ten operating theatres (including shared capacity with the NHS), and nine consulting rooms. It has critical

care facilities to level 3 and a wide range of advanced diagnostic and treatment equipment including PET/CT scanning and a CyberKnife.

16. [X] per cent of the Royal Marsden's private revenue is derived from UK insured patients, [X] per cent from UK self-pay patients and [X] per cent from overseas (self-pay, embassy or insured) patients.
17. The Royal Marsden is forecast to generate revenue of £[X] in 2012/13 with an expected contribution of £[X].
18. The Royal Marsden told us that when the cap on PPU earnings was lifted it hoped to double the amount of revenue that it generated from private patients but that this would require additional investment in capacity at both its Chelsea and Sutton sites. It also pointed to certain risk factors, [X]. It is currently preparing the business case for additional investment in dedicated private care capacity.

### **Private healthcare provision in London**

19. The Greater London area has a population of around 8.2 million,<sup>8</sup> 4.9 million of whom live in outer London and 3.2 million live in central London. In addition, a further 1 million people commute into London on a daily basis for work.<sup>9</sup>
20. London is the wealthiest region of the UK, with disposable income per head around 30 per cent greater than the national average as of 2010.<sup>10</sup> The next wealthiest regions are the surrounding South-East and East of England areas (see Figure 2).

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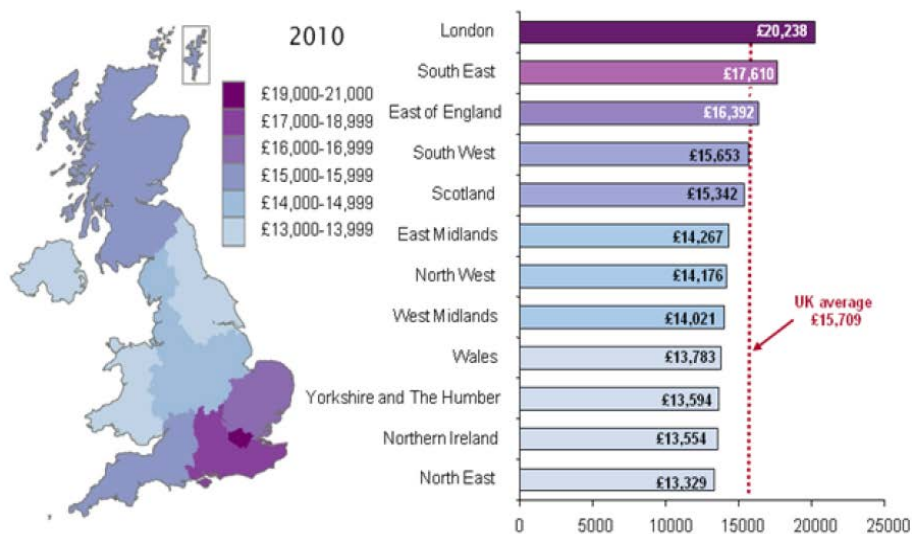
<sup>8</sup> All demographic data has been sourced from the ONS and is based on the 2011 census: [www.ons.gov.uk/ons/publications/reference-tables.html?edition=tc%3A77-284349](http://www.ons.gov.uk/ons/publications/reference-tables.html?edition=tc%3A77-284349).

<sup>9</sup> <http://londontransportdata.wordpress.com/>.

<sup>10</sup> [www.ons.gov.uk/ons/dcp171776\\_270749.pdf](http://www.ons.gov.uk/ons/dcp171776_270749.pdf).

FIGURE 2

### Disposable income per head in the UK, 2010



Source: ONS.

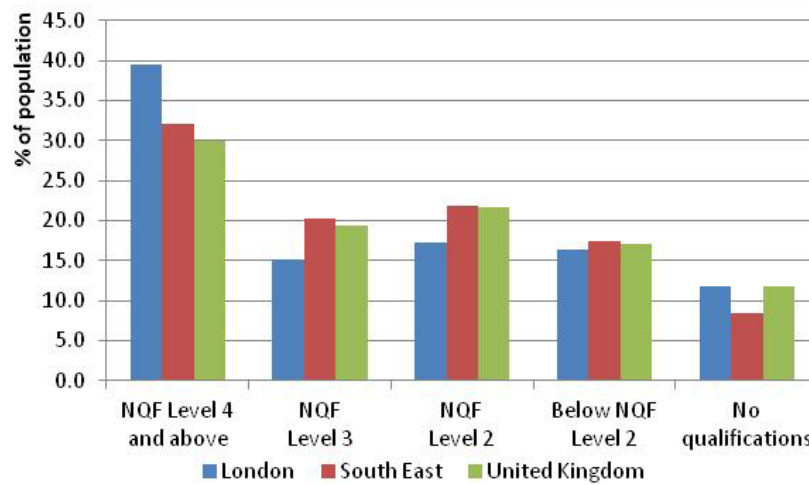
21. This affluence, together with the presence of major corporations whose employees may benefit from employer healthcare schemes, drives penetration of private medical insurance, with an estimated 17.5 to 18.5 per cent of the population being covered by a policy.<sup>11</sup>
22. As shown in Figure 3, London's population is more highly educated than the national average with almost 40 per cent having a qualification at NQF level 4 or above, compared with a national average of around 30 per cent.<sup>12</sup>

<sup>11</sup> Source: estimate taken from the Family Resources Survey 2004–2005. This is the latest available estimate by region. At this time around 12 per cent of the UK population was covered by a PMI policy, compared with 10.9 per cent as at the end of 2011.

<sup>12</sup> [www.ons.gov.uk/ons/taxonomy/index.html?nscl=Higher+Education+Skills+and+Qualifications](http://www.ons.gov.uk/ons/taxonomy/index.html?nscl=Higher+Education+Skills+and+Qualifications).

FIGURE 3

**Percentage of population by highest level of qualification (2011)**

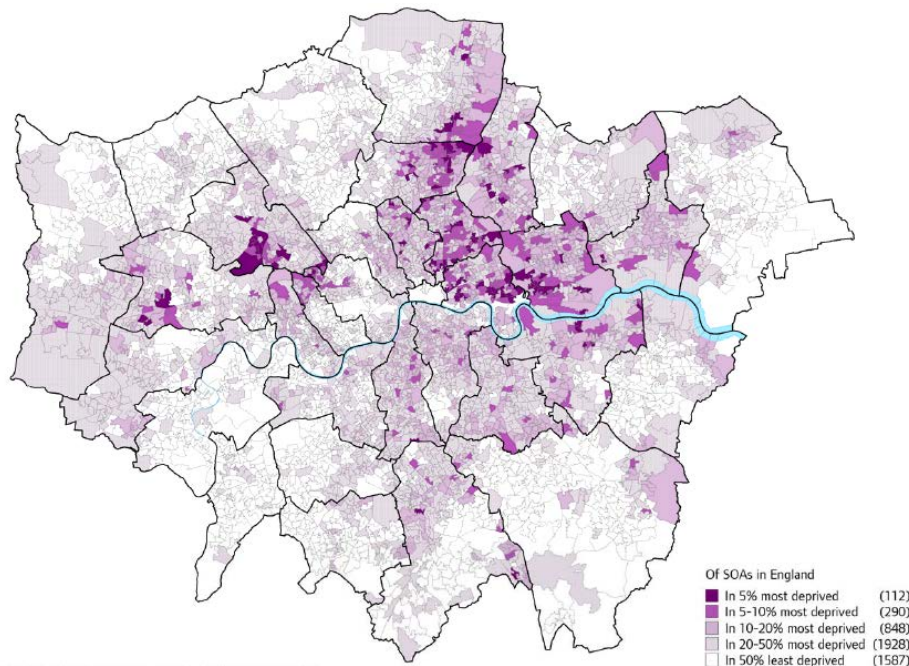


Source: ONS.

23. However, despite its overall affluence and high levels of education, London also demonstrates high levels of inequality with significant pockets of deprivation, particularly in the north and east of the city (see Figure 4).

FIGURE 4

**Index of multiple deprivation, 2010**



Source: <http://data.london.gov.uk/datastorefiles/documents/ID2010-a-london-perspective.pdf>.

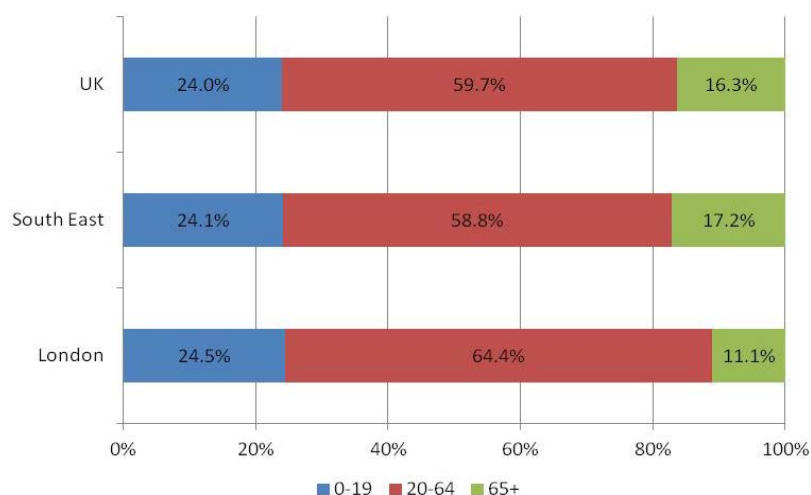
Note: The index of multiple deprivation takes into account deprivation in terms of income, employment, health and disability, education, skills and training, barriers to housing and services, crime and living environment deprivation.



24. This pattern is repeated in unemployment figures, which range from 4.3 per cent in the London Borough of Richmond to 14.3 per cent in Newham. The average for London as a whole is 8.7 per cent, which is slightly above the national average of 8.1 per cent.
25. As shown in Figure 5, London's population is significantly younger than the average for the UK, with a particular concentration of working-age people and relatively low levels of those aged 65 years and above.

FIGURE 5

**Breakdown of population by age, 2011**



Source: ONS data, based on 2011 census.

26. The CC has previously viewed conditions for private healthcare provision in the London region as differing markedly from those prevailing elsewhere in the UK and has considered that London should be regarded as a distinct market segment in itself.<sup>13</sup> Distinguishing characteristics of London it cited in this context persist and include:
- (a) the presence of the UK's main teaching hospitals;

<sup>13</sup> [http://webarchive.nationalarchives.gov.uk/+http://www.competition-commission.org.uk/rep\\_pub/reports/2000/449bupa.htm#full](http://webarchive.nationalarchives.gov.uk/+http://www.competition-commission.org.uk/rep_pub/reports/2000/449bupa.htm#full), paragraph 4.68.

- (b) the availability of eminent, including world-ranking, consultants;
- (c) the fact that PPUs appeared to be a more effective competitors than in other parts of the country;
- (d) a large number of self-pay patients, including from overseas;
- (e) in many cases prices were well above the average for the UK;
- (f) different travel patterns in London and higher disposable income; and
- (g) the four main national hospital operators at the time having their hospitals located almost exclusively outside of London.

27. Private hospitals in central London generate revenue of around £1 billion: almost one-third of UK private hospital revenue annually.<sup>14</sup> Private hospital revenue in London has been growing at around 8 per cent a year since 2009.

28. Below in Figure 6 we show the share of total admissions and revenue of the private hospital groups and PPUs in London.

FIGURE 6

**Hospital operators' shares of supply by total admissions and total revenue—central London, 2011**

[✂]

Source: CC analysis.

29. HCA as a group generates the most hospital revenue in London with a total market share of approximately [✂] per cent across all specialties or around four times its biggest rival, TLC.

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<sup>14</sup> Laing and Buisson Market Review 2011–2012 estimates UK independent hospital revenue at £3,844 million in 2010–11.

## **TLC's expansion plans and the importance of cancer treatment to it**

### ***The Quantum Leap project***

30. In the early 2000s, the trustees of TLC embarked on a fundamental review of its services and facilities which it called the 'Quantum Leap' project. As part of this it commissioned a study from consultants Finnamore<sup>15</sup> to help it prioritize its investments. In the spring of 2002 Finnamore presented a report to the Executive Management Team of TLC making a number of recommendations covering both services already provided by the clinic as well as services it should look to provide in the medium to long term. One of the areas in the latter category was a recommendation to consider investing in radiotherapy treatment facilities at the clinic and in September 2002 Finnamore presented its assessment of the business case for doing so.

### ***The Finnamore proposals***

31. Finnamore began by noting that the ability of TLC to provide a radiotherapy service to complement its existing oncology services was considered vital if it was to maintain and enhance its reputation as a leading private sector provider in the treatment of cancer. It said that the treatment of cancer had become a core business of TLC in recent years but that the inability to provide a comprehensive range of treatments, ie the lack of radiotherapy facilities, represented a considerable threat to TLC's position in the future.
32. Finnamore's reasoning was based on the fact that the cancer 'patient journey' may be somewhat different from that associated with other conditions. A patient may be referred by a GP to a surgeon who, before or after surgery, may refer the patient to a medical or a clinical oncologist for radiotherapy or chemotherapy.<sup>16</sup> It is also common

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<sup>15</sup> [www.finnamore.co.uk/](http://www.finnamore.co.uk/).

<sup>16</sup> A clinical oncologist will be trained in the use of radiotherapy and the use of cytotoxic drugs. Medical oncologists may use chemotherapy, hormone therapy or, increasingly, new molecular targeted therapy.

for the patient's treatment to be managed by a multi-disciplinary team (MDT) including surgeons and oncologists.

33. However, TLC had no radiotherapy facilities, unlike HCA's Harley Street Clinic which had two Linear Accelerators on stream at that time with a third being introduced in 2003 or The Cromwell (two Tomotherapy machines). Other private radiotherapy facilities in or close to London were the Parkside Hospital in Wimbledon and King Edward VII in Midhurst as well as NHS PPUs such as the Royal Marsden.
34. The Finnermore report noted that radiotherapy was an effective treatment in the management and cure of cancer, set out the different types of radiotherapy available, referred to forecasts suggesting that the incidence of cancer was increasing at between 1 and 2 per cent a year and noted that the waiting lists at NHS radiotherapy facilities would be likely to encourage patients to use private facilities.
35. The report recognized the importance of consultant referrals to the business case and that a small number of consultants might be responsible for a large number of patient referrals (and thus hospital revenue). It included in its report the results of a survey of consultants with admitting rights to TLC. It said that roughly half of the consultants that it had approached expressed support for the project. Whilst acknowledging that this should be considered a very strong level of initial support the report said that a key factor would be the number of patients that would be referred by specialist oncologists.
36. Finnermore suggested building in annual patient volumes of [REDACTED] a year to the business case. From this it derived a base case for a two Linear Accelerator facility the costs of which would amount to capital investment of £22 million together with annual occupancy costs of £[REDACTED]. The profit and loss account produced by Finnermore

assumed annual income generated by the radiotherapy facility [REDACTED] with an operating margin of [REDACTED] per cent in year 1.

***TLC's response to the Fিন্নamore proposals***

37. TLC's trustees and management, partly as a result of exposure to integrated cancer treatment facilities in the USA and with the encouragement of leading oncologists, eventually decided to invest in a much larger scheme: an integrated cancer treatment facility offering radiotherapy (including a CyberKnife<sup>17</sup>), chemotherapy, and robotic surgical facilities for cancer patients under one roof.
38. In 2003, TLC began the process of planning, financing the project as initially conceived and acquiring the premises in which to house its Cancer Centre. TLC told us that the process of acquiring the land and obtaining planning permission took [REDACTED] years and that the land acquisition costs were over £[REDACTED]. It told us that the process was facilitated by its existing presence in the Harley Street vicinity and its relationships with landlords. Further, because of the potential safety and environmental hazards associated with the radiotherapy equipment TLC planned to install, consents had to be obtained from a number of agencies and regulatory bodies.
39. The Cancer Centre admitted its first patients in December 2009. It had cost £90 million to build and equip.

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<sup>17</sup> [REDACTED]

FIGURE 7

**TLC's Cancer Centre**



Source: TLC.

40. The Finnamore report had emphasized the importance of consultant referrals to the success of the Cancer Centre from the outset. Certain oncologists had been identified as a significant source of patient referrals by TLC, in particular those associated with what was to become the LOC. We discuss the LOC in more detail below, in paragraph 62.
41. In December 2004, five months before the LOC began trading, the TLC trustees discussed investing in it. The proposal was that TLC should make an interest-free loan of £[§] to the LOC business to be invested in growing the practice. Under the terms of the loan the Oncology Clinic Partners would be required to refer their new patients to TLC. At the time only two of the four partners had consulting rooms at TLC: the other partners conducted their outpatient sessions elsewhere. These arrangements were formalized in the Collaboration Agreement approved by the TLC Trustees in March 2005.

42. The Collaboration Agreement obliged the members, subject to the patient's clinical interests and in particular in compliance with the GMC's Good Medical Practice, to refer to TLC, and use their best endeavours to cause all oncologists working at the LOC to refer there, all new patients requiring inpatient admission and all outpatient and day-case chemotherapy patients who could not be treated at the LOC premises. In addition, the same referral obligations applied to patients requiring radiology and with scanning requirements and, when TLC was able to provide it, PET scanning, all radiotherapy and nuclear medicine imaging including gamma camera and isotope bone scanning. For this, LOC would receive £[REDACTED] for each MRI or CT scan at TLC arising from referrals from LOC. In addition, the Agreement extended the referral obligations to invasive and non-invasive cardiology investigations and such pathology testing that was not undertaken at the LOC premises. [REDACTED]

### **Response of private medical insurers to TLC's expansion plans**

43. In our first case study, on Circle's entry into Bath, we identified PMI recognition as a potential barrier to entry and expansion. We therefore examined the response of PMIs to TLC's expansion plans.
44. TLC was already operating its hospital in London, the additional radiotherapy treatment facilities it was introducing were adjacent to and connected with those facilities rather than on a new or remote site and were to be used in an area of treatment in which it already offered services. Consequently, recognition did not appear to present a problem to most of the PMIs. AXA PPP, however, told us that it did consider whether or not to recognize the radiotherapy facilities at the cancer centre. We therefore looked at the factors that AXA PPP took into account in coming to a decision on recognition, and in particular its relationship with other hospital groups, including HCA.

## **AXA PPP**

45. The relationship between AXA PPP and HCA at this time could be broadly characterized as reflecting AXA PPP's desire to maintain or lower the prices it paid for radiotherapy treatment in London and by HCA's to maintain and grow the volume of patients using its London radiotherapy facilities, in which it had invested heavily. AXA PPP therefore had an incentive to recognize TLC's additional facilities in London, to create rivalry between these and those of HCA and HCA had an incentive to encourage AXA PPP not to do so.
46. As we show below, discussions over AXA PPP's recognition of TLC's radiotherapy facilities took place in the context of, and became linked to, a serious dispute between the two companies which, similarly, raised the prospect of HCA losing business from AXA PPP. This dispute related to AXA PPP's proposed Corporate Pathways product. This product, whose importance to AXA PPP we refer to in our Bath case study, used BMI as its major hospital partner and did not provide clients' employees with routine access to HCA's central London hospitals.<sup>18</sup>
47. The parties engaged in discussions to avoid litigation and the eventual settlement included elements relating to both issues, including a term which entitled HCA to [X] if the number of Corporate Pathways subscribers in greater London reached [X].
48. AXA PPP told us that HCA had sought contractual arrangements which would have had the effect of 'locking out' new provision in London and that HCA wanted AXA PPP to 'guarantee not to recognize' the new cancer facilities being developed by TLC. AXA PPP submitted email exchanges between HCA's then Commercial Director and AXA PPP's Head of Provider Management in 2006 in which, on 13

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<sup>18</sup> Subsequently, AXA PPP included access to TLC in its Corporate Pathways product but not, routinely, HCA's London hospitals.



October, HCA set out how it saw the goals of the two parties: 'We [HCA] are looking to have new facilities recognized and have network integrity within central London in tertiary services, and you [AXA PPP] are looking for an ability to offer wider access to your members.' AXA PPP told us that 'network integrity' referred to a situation in which AXA PPP should not add further radiotherapy facilities to its current network in London.

49. HCA told us that in the negotiations with AXA PPP which led to the revised 2010 contract there was discussion of a pricing formula based on whether AXA PPP was proposing to recognize TLC's newly opened Cancer Centre and the impact that this would have on the volume of cancer referrals to HCA hospitals. HCA told us that its position reflected its concern that the forecast volume of patients through its radiotherapy facilities, in which it had invested very heavily, might be impacted. As the economics of capital-intensive facilities such as these are very sensitive to volume, additional radiotherapy capacity could therefore undermine their profitability. HCA indicated that, more generally, a hospital operator or a PMI may put forward for negotiation a volume/pricing proposition. Either, for example, may propose exclusive arrangements in order to secure a better price.
50. Negotiations between the two parties over a new contract, [REDACTED].
51. A letter from the CEO of HCA to the CEO of AXA PPP in October 2009 set out the main issues and HCA's proposals [REDACTED].
52. [REDACTED]
53. An internal AXA PPP document described the course of negotiations following this letter. It said that in response, AXA PPP had qualified the restriction as applying to

new providers only, 'not extensions, specifically referring to the London Clinic'. It went on to say that: 'At the meeting on 7 November HCA made clear that they were specifically talking about LC [London Clinic] and we agreed to consider whether we could (legally) restrict recognition of additional services provided by an existing network hospital (LC) and then whether we would want to.'

54. AXA PPP's note of a meeting with HCA to take discussions further, [REDACTED].
55. The new agreement between AXA PPP and HCA was signed in 2010. It committed AXA PPP to recognizing new HCA facilities, subject to agreement over charges, but left AXA PPP free to include new network provision at its absolute discretion. If AXA PPP did add or remove providers then either side would have the right to seek to negotiate an adjustment of prices if and only if it could be demonstrated that doing so had had a material impact on payments made to HCA. 'Material' was defined as [REDACTED] per cent.
56. We asked AXA PPP whether, in practice, this had proved a constraint on its ability to vary the provision of its network. It said that the [REDACTED] per cent hurdle was sufficiently high to make it unlikely to trigger price negotiations. Despite the apparent relaxation in constraints on AXA PPP as regards recognizing new facilities in London, the contract contained an obligation on AXA PPP to 'use its best endeavours to ensure that no additional radiotherapy providers located in Central London are included in the Directory of Hospitals until after June 2010'. We asked the parties what the origin of this clause was and whether it had affected its recognition of the TLC radiotherapy facilities.
57. AXA PPP told us that the provision, without the cut-off date, had been included by HCA at draft contract stage but that the time limitation had been inserted during

negotiations. It told us that since it only reached agreement with TLC on radiotherapy prices in late March 2010 the restriction had little effect in practice since it lasted only around two months, following commencement of the contract.

58. HCA also pointed out that the scope of the restriction was limited to two months and that the provision was added to reflect significant investments made by HCA in its radiotherapy services.

### **HCA's growth strategy and the place of cancer treatment within it**

59. HCA, like TLC/Finamore, had identified the attractiveness and importance of cancer treatment to its business strategy given the likely growth in demand and the value and profitability of cancer treatment services.
60. HCA's Cancer Strategy document noted that cancer was a top-of-mind health issue for consumers: 76 per cent of people ranked it as their foremost health concern and 91 per cent gave cancer as their main reason for taking out PMI. It said that demographic data indicated that cancer would be the fastest growing health sector, +26 per cent by 2025. The same document pointed out that cancer treatments accounted for a significant proportion of HCA's activities ([REDACTED] per cent of HCA's net revenue and [REDACTED] per cent of EBITDA).
61. HCA's cancer strategy was based around investment in leading-edge technology and services not generally available privately or in the NHS, recruitment of top consultants and the creation of a cancer treatment network whereby a number of diagnostic and examination facilities would feed referrals to its treatment centres in London and beyond. Again, like TLC, HCA identified the potential benefits to it of closer collaboration with the London Oncology Clinic and set up 'Project Bosun' which would eventually lead to it acquiring a majority stake in the business from its founding partners.

We examine in more detail below how relations between TLC, HCA and LOC evolved.

### ***The London Oncology Clinic***

62. The LOC was established in 2005 by four founding partners: Peter Harper, Maurice Slevin, Paul Ellis and David Landau. By 2008 it had attracted over 20 leading oncologists to work at its clinic at 95 Harley Street. As noted earlier, in 2005 TLC and LOC signed a Collaboration Agreement the main feature of which was that, in return for an interest-free £[REDACTED] loan to the LOC business, clinicians at LOC were required, subject to the medical interests of their patients, to refer patients to TLC.<sup>19</sup>
63. The importance that TLC attached to this arrangement was underlined by the degree of scrutiny of LOC's adherence to its obligations. [REDACTED]
64. It is clear from the minutes of senior management meetings that TLC assumed that it would continue to work closely with LOC and its consultants and this assumption was factored into TLC's plan projections. It was also clear how important this was to TLC in revenue terms: [REDACTED].
65. The Collaboration Agreement with LOC was due to expire in February 2010 but TLC wished to retain the relationship and make it even closer with a plan to acquire the LOC business. However, it gradually became apparent to the TLC management that the LOC partners were developing a closer relationship with HCA.
66. Discussions about a possible purchase by TLC of a majority stake in LOC were reported to the TLC trustees in June 2008. These continued through the summer and autumn of 2008 [REDACTED].

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<sup>19</sup> [REDACTED]

67. Following the June 2008 meeting of the trustees an offer of £[REDACTED] was put to the Chief Executive of LOC, [REDACTED].
68. LOC told us that it wished to retain managerial and clinical autonomy in order to run the LOC in the way it would best serve the interests of its patients, including the freedom to decide which hospitals to refer patients to for treatment. It told us that this was an aspect on which the LOC partners did not wish to compromise. Accordingly, nothing further was heard from LOC and the TLC offer lapsed.
69. In May 2010 the minutes of the TLC Executive Board confirmed that HCA had entered into a strategic partnership with and acquired a stake in LOC. [REDACTED] LOC told us that a substantial volume of patients were still admitted by the LOC to TLC for treatment and that it believed that the majority of inpatient referrals generated by the LOC were to TLC. HCA told us that two of the LOC founder members took virtually all of their inpatients to TLC in 2012.
70. In July 2010 the TLC Executive Board minutes recorded that further details of the deal between HCA and LOC had emerged. The two organizations had established a joint venture company with Dr Harper as its Chair and which would include the CEO of HCA on its board. [REDACTED]
71. TLC told us that it was concerned that HCA would target TLC consultants to transfer their practice to HCA hospitals. TLC provided an example of this targeting which was reported to the TLC Board in April 2011, ie after the Cancer Clinic had opened. A special meeting of the Board of Trustees was convened to discuss a situation concerning two surgeons. They had informed TLC that they had received an offer, which TLC believed to be from HCA, to transfer their practice to another facility, which TLC believed to be the Platinum Centre at the Wellington. [REDACTED] The trustees

agreed that, exceptionally, management should negotiate a deal to retain these two doctors.

72. Since concluding the original LOC partnership agreement, HCA has applied the LOC 'brand' to other facilities including LOC at the London Bridge, LOC at the Wellington Hospital (Platinum Centre) and LOC at the Christie in Manchester, indicating the value of the LOC association to and the synergy with HCA.

73. Oncology was HCA's fastest growing [REDACTED] areas of care in 2011.

FIGURE 8

**HCA revenue growth and gross margin by speciality**

[REDACTED]

Source: HCA.

**The TLC Cancer Centre: performance since launch**

74. Any restrictions on expansion encountered by TLC in developing its Cancer Centre have not prevented it from operating profitably.

75. FIGURE Figure 9 shows a forecast turnover and operating profit for the Cancer Centre in its first two years of operations and actual turnover and operating profit for its first two years of operation. [REDACTED]<sup>20</sup>

FIGURE 9

**TLC Cancer Centre financial performance**

[REDACTED]

Source: TLC.

76. [REDACTED]

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<sup>20</sup> The other services offered by the Cancer Centre, including surgical and chemo treatments, were an established part of TLC's service offering.

77. [X]

TABLE 1 Revenue and profitability of TLC's radiotherapy department, 2012

[X]

Source: TLC.

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### **Preliminary conclusions on barriers to entry and expansion**

78. In our Bath case study we found that AXA PPP's decision not to recognize the Circle hospital, because of its broader, national relationship with BMI, restricted Circle Bath's ability to grow profitably. In this case it is less clear that a hospital group was able to similarly influence a PMI.
79. HCA may have tried to persuade AXA PPP not to recognize TLC's radiotherapy facilities in London but, in the event, AXA PPP did recognize them. This may be considered as evidence that AXA PPP had more bargaining power than HCA but the situation was complicated by the negotiations over Corporate Pathways which were taking place at the same time. The launch of AXA PPP's new product raised the prospect of more significant loss of business to HCA, from AXA PPP's corporate clients, since, under this scheme, their employees would not routinely be treated at or referred to HCA hospitals. HCA could, therefore, have conceded AXA PPP's recognition of TLC in order to win the safeguards it did regarding loss of business arising from the launch of Corporate Pathways.
80. There is evidence from the internal papers of hospital groups in London to suggest that the ability of hospital groups to identify consultants who are likely to be significant sources of admissions (and thus revenue) and to then adopt measures which encourage them to bring patients to their hospitals, may enable an incumbent to restrict or deter entry or expansion.

81. In this case such a strategy was open to, and was adopted by, both TLC and HCA, each of whom had established relationships with leading oncologists in London. We do not know, however, whether TLC, despite its longstanding relationships with consultants, would have proceeded with the development of the Cancer Centre had HCA acquired LOC earlier in the life of the project. In other situations, where a potential entrant did not have the benefit of such relationships, it would be harder still to adopt such a strategy successfully, particularly given the lead time required to open a new hospital. This suggests to us that, in some circumstances, adopting such schemes may afford a hospital a form of ‘first mover advantage.’
82. We note that, in contrast to Circle in Bath, TLC did encounter quite significant problems in acquiring the necessary land and planning permissions for its Cancer Centre and that the project took over five years to complete. We are not clear whether similar problems would be encountered by a new entrant outside of central London but we do consider that the ability of an entrant, other than an existing hospital operator with established relations with local landlords, to find, acquire and build on a site in the immediate vicinity of Harley Street may represent a barrier to entry or expansion.



## Other hospitals' cancer strategies

### Bupa Cromwell Hospital

1. Bupa acquired the Cromwell Hospital in 2008 intending to reverse 'years of underinvestment' with a £[REDACTED] redevelopment programme. Delays to this project held up progress to the extent that tenders for the construction work were only issued in 2012 and BCH acknowledged that retaining the loyalty of consultants during the disruption of the ensuing building work would be a challenge. Nonetheless, BCH had identified which services it intended to try and develop, which included oncology, and the strengths on which it intended to build. These included its ownership by Bupa though BCH has, in fact, [REDACTED].
2. BCH's 2012 Business Plan noted that with the direction of open referrals it would increasingly be in a position to provide more patients to consultants which would allow it to attract new consultant users and 'evolve the nature of our relationships with existing ones'. It noted that its top [REDACTED] consultants [REDACTED] but conducted [REDACTED] private practice work at BCH. It said that it intended [REDACTED].
3. BCH also intended to develop its referral network. It said that it was building up the numbers of its GP liaison staff, was developing GP practices in the mews adjacent to the hospital,<sup>1</sup> and would be creating satellite outpatient clinics at Bupa Wellness Centres, the first of which would be at the Barbican.<sup>2</sup>
4. BCH identified oncology as one key area to develop following much the same analysis as both TLC and HCA: the likely continued growth in the incidence of cancer; the importance of cancer treatment as a revenue stream; the high margins it

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<sup>1</sup> Bupa Cromwell provided accommodation for GPs on its premises with attractive rental terms being made available to the higher referring ones.

<sup>2</sup> Bupa has since confirmed that the outpatient clinics pilot has been discontinued.

attracted. In addition, its analysis of Bupa claims [REDACTED], excepting cardiology. Patients could therefore be drawn to London from [REDACTED] than they could for other forms of treatment. It estimated the value of the London oncology market as around £[REDACTED] million and BCH's share of this as [REDACTED] per cent.

5. BCH thus already generated quite significant revenue from cancer care, particularly from [REDACTED].

FIGURE A1

**BCH Oncology net revenue (£m) by payor, 2000 to 2010**

[REDACTED]

*Source:* Bupa.

6. [REDACTED] In this context it noted that the 'patient journey' in cancer treatment was somewhat different from other conditions in that surgeons would tend to refer patients on to clinical or medical oncologists who would deal with them on an MDT basis, particularly in the NHS. Although it had begun using MDTs it said that it [REDACTED] was more prone to lose referrals to outside facilities. BCH has since confirmed that it has addressed this issue and now treats all patients with an MDT approach.

## Measuring local concentration using the LOCI measure

### Introduction

1. This appendix provides a detailed explanation of the LOCI measure of market concentration. This is one of two concentration measures that we have used in this inquiry to help assess hospitals' local market power—see Appendix 6.5 for our initial filtering exercise (where the concentration measures have been used to exclude certain hospitals from our detailed local assessments) and Appendix 6.9 for our price-concentration analysis (where the relationship between the concentration measures and self-pay prices has been tested).
  
2. Concentration measures are commonly used as part of an assessment of firms' unilateral market power.<sup>1</sup> Such measures are typically market-share-based, and common examples include fascia counts (the number of rivals in a local area) and the HHI indices (the summation of market shares squared). The former can be thought of as a market share-based measure that treats all competitors as equally sized, while the latter as a market share-based measure that assigns more weight to firms that have high market shares compared with those that have low market shares. These measures are ideally based on a well-defined market (in the product and geographic dimensions), but catchment areas are at times used to inform and proxy the relevant geographic market.<sup>2</sup> The OFT and CC has used these concentration measures and catchment area techniques in a number of previous inquiries.<sup>3</sup>

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<sup>1</sup> CC *Guidelines for Market Investigations*, paragraph 101.

<sup>2</sup> CC *Guidelines for Market Investigations*, paragraph 148.

<sup>3</sup> For example, the CC Aggregates Market Investigation, CC Groceries Market Investigation, and the recent aggregates merger (Anglo American PLC/Lafarge SA), and the recent travel agency merger inquiry (Thomas Cook Group plc/Co-operative Group Limited/Midlands Co-operative Society Limited).

3. In this appendix, we explain that the LOCI measure is also a market share-based measure, and in this respect is related to the concentration measures noted above. The appendix is structured as follows. First, we provide some background to the LOCI measure. Second, we set out our reasons for using the LOCI measure in this inquiry. Third, the LOCI methodology is explained. Fourth, empirical issues with LOCI that are specific to this inquiry are considered. The final section of this appendix summarizes our results.

### **Background to the LOCI measure**

4. The LOCI measure originated in the health economics literature. In a working paper by Akoso Antwi, Gaynor and Vogt (2006),<sup>4</sup> the authors derive a ‘competition index’ that reflects pricing power in a particular underlying economic model.<sup>5</sup> This measure is referred to as the ‘Logit Competition Index’ (LOCI). After deriving the measure, the authors apply the technique to assess the potential impact on prices of healthcare mergers in California.
5. Following that initial paper, the LOCI measure has been used by the Dutch healthcare regulator, NZa, in a number of cases.<sup>6</sup> The LOCI measure is also referred to in the Handbook of Health Economics, in a chapter written by Professor Martin Gaynor and Dr Robert Town.<sup>7</sup> In that chapter the authors present estimates of the LOCI measure for hospitals in the Netherlands. In other work that is currently unpublished, the LOCI measure has also been used in relation to the Irish healthcare market,<sup>8</sup> and the USA.<sup>9</sup>

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<sup>4</sup> Y Akosa Antwi, M Gaynor & W B Vogt, ‘A competition index for differentiated products oligopoly with an application to hospital markets’, unpublished manuscript, 2006.

<sup>5</sup> The model assumes logit demand, a differentiated products oligopoly and Bertrand pricing.

<sup>6</sup> See, for example: NZa (2011), Monitor Medisch Specialistische zorg, April; NZa, Marktscan Keten zorg weergave van de markt 2007–2010; and, RS Halbersma, Dutch Healthcare Authority, Market Definition in Healthcare, February 2, 2011.

<sup>7</sup> M Gaynor and R Town (2012), ‘Competition in Health Care Markets’, *Handbook of Health Economics: Volume two*, edited by Mark V Pauly, Thomas G McGuire, Pedro Pita Barros.

<sup>8</sup> MC Mikkers and P Ryan (2011), ‘Managed Competition’ for Ireland?, TILC Discussion Paper No 2011-023, 30 March.

6. While the LOCI measure has received some use, as noted above, it has not been applied as extensively as other concentration measures used by academics and competition authorities. The parties to this inquiry have expressed concerns in this regard. In our view, the fact alone that the LOCI measure has not been widely used to date does not lead us to consider it inappropriate for the purposes of this inquiry. We explain in more detail below (see paragraphs 11 to 19) our reasons for using LOCI in this case. However, in response to the parties concerns, we note several factors that may explain the current level of precedent. First, the LOCI measure has significant data requirements and this is likely to prevent its use in many situations. Second, certain merits of the LOCI measure are healthcare-specific, and the application of competition policy to healthcare markets is relatively new in Europe.
7. A third reason for is that the paper by Akoso Antwi, Gaynor and Vogt (2006) justifies the use of LOCI on the basis of a particular economic model, and this may not be seen as an appropriate economic model in certain applications. The parties have raised several specific concerns in this regard.<sup>10</sup> We would emphasize that our interpretation of LOCI, explained in the paragraph below, does not rely on the assumptions of any particular economic model holding. This is consistent with how other concentration measures, such as fascia count and HHI, are routinely applied by the OFT, CC and other competition authorities. This point is noted in the Handbook of Health Economics.<sup>11</sup>
8. Reformulating the equation for the LOCI, we see that it is in fact equal to one minus a weighted-average market share. Annex A shows this formula explicitly. Interpreted in

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<sup>9</sup> YA Antwi, MS Gaynor. and WB Vogt (2007), 'Evaluating the Performance of Merger Simulation: Evidence from the Hospital Market in California', iHEA 2007 6<sup>th</sup> World Congress: Explorations in Health Economics Paper.

<sup>10</sup> For example, the parties have argued: the underlying logit model is not aligned with certain characteristics of the UK healthcare market (eg it assumes price-sensitive patients, which is unlikely for those with PMI coverage), the underlying logit model assumes restrictions on patient substitution patterns, and that the LOCI measure is not a reasonable indicator of market power when compared to the Hotelling (1929) model.

<sup>11</sup> Regarding HHI, the authors note '... in most applied settings it is difficult to square a strict functional relationship between price and the HHI with economic theory. Basic oligopoly theory posits a functional relationship between HHI and prices only with Cournot behavior—quantity setting with homogenous products. Homogenous product, quantity setting models are inconsistent with the institutional facts of hospital markets, as we have previously indicated.'

this way, rather than as the result of a particular economic model, we consider the LOCI measure to have intuitive and economic appeal. It also shows that the LOCI measure is closely related to other more commonly employed concentration measures, such as fascia counts and HHI. This second point—ie its relation to other measures—is explicitly discussed in the *Handbook of Health Economics*.<sup>12</sup> The authors note that:

Some alternative models [to those that underpin HHI] generate pricing power as a function of market shares, and are thus related to the HHI. [Akoso Antwi, Gaynor and Vogt (2006)] develop a competition index for differentiated product oligopoly with logit demand and Bertrand pricing. They call the index 'LOCI' for Logit Competition Index.<sup>13</sup>

9. The authors go on to note an alternative to the traditional HHI calculation:

A common approach [in the health economics literature] to calculating the HHIs is to construct a HHI at the ZIP code level and then aggregate up to the hospital level [weighted using the hospital's share of its patients it culls from each zip code].

One might more broadly think of the HHI as a proxy for the expected toughness of competition based on market structure. The HHI isn't explicitly derived from an underlying theoretical framework, but is intended to capture the potential for competition. This has some appeal, but it is important to realize that while the HHI can be constructed to imperfectly capture geographic and product differentiation, nonetheless it likely contains meaningful measurement error.<sup>14</sup>

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<sup>12</sup> M Gaynor and R Town (2012), 'Competition in Health Care Markets', *Handbook of Health Economics: Volume two*, edited by Mark V Pauly, Thomas G McGuire, Pedro Pita Barros.

<sup>13</sup> M Gaynor and R Town (2012), 'Competition in Health Care Markets', *Handbook of Health Economics: Volume two*, edited by Mark V Pauly, Thomas G McGuire, Pedro Pita Barros, p28.

<sup>14</sup> M Gaynor and R Town (2012), 'Competition in Health Care Markets', *Handbook of Health Economics: Volume two*, edited by Mark V Pauly, Thomas G McGuire, Pedro Pita Barros, p28.

10. The weighted-HHI procedure outlined in the paragraph immediately above is almost identical to the LOCI measure.<sup>15</sup> The weighted-HHI measure calculates, for each local area (zip code in the quoted text), the sum of market shares squared; the LOCI measure would do the same, but use the market shares directly (ie do not square them, and do not sum them). Both the weighted-HHI measure and the LOCI measure then aggregate these area-specific results to a hospital-level using the same weighting scheme. In the second quoted paragraph above, the authors justify the use of this weighted-HHI procedure.<sup>16</sup> This same justification applies to the LOCI measure—ie it is simply a reasonable and intuitive way to measure differences in local concentration. In the next section of this appendix we explain why we consider the LOCI measure to be reasonable and also preferable to other concentration measures in the context of this inquiry.

### **Our reasons for using the LOCI measure**

11. We have used two concentration measures in this inquiry, the fascia count measure (based on catchment areas) and the LOCI measure. In this section we explain our reasons for adopting the LOCI approach, and explain its merits relative to the fascia count measure and other measures that we also considered using in this inquiry.
12. Our starting point for measuring local concentration was the fascia count measure. This is the simplest measure of concentration available, and requires few details other than hospital locations (and a catchment area to be chosen). It is therefore a useful initial indicator of concentration that can be constructed relatively easily and quickly. This is also the measure that several parties have adopted, and it fits with the 'solus hospital' definition used by the OFT.<sup>17</sup> However, this measure has some

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<sup>15</sup> Examples of studies that take the 'common approach' referred to by Gaynor and Town include Kessler and McClellan (2000), Cooper et al (2011) and Gaynor et al (2012).

<sup>16</sup> The authors also note measurement error, and we discuss this issue later in this appendix.

<sup>17</sup> OFT (2012), [Private Healthcare Market Study](#), April.

limitations, that are particularly acute in this industry, and this led us to consider whether additional or alternative measures would be beneficial to our analysis.

13. There are two main limitations to the fascia count measure in this inquiry. First, the fascia count measure does not take account of any heterogeneity between hospitals (in terms, for example, of size, range of treatments and specialties offered, and relative location). It therefore treats as equal competitors a small PPU located towards the boundary of a catchment area and a large hospital located more closely, although these two hospitals are unlikely to act as equally effective competitive constraints. Second, the fascia count measure relies on the predefined catchment area, and is therefore subject to the typical concerns when catchment areas are applied.<sup>18</sup> As with the first limitation, the heterogeneity between providers and patients make this second limitation more acute than may be the case in other industries.
14. The LOCI measure, as we explain below, addresses both of the limitations of the fascia count measure. We therefore considered it as a useful addition to our analysis of local concentration. Given the merits of the LOCI measure, we did not pursue alternative concentration measures such as HHI (which, like fascia count, also relies on predefined catchment areas) or, as suggested by one party, demand-centred fascia count (which, like fascia count, does not reflect the heterogeneity between providers).
15. There are three specific aspects of the LOCI measure that we find particularly attractive. First, the LOCI measure takes advantage of the detailed data that we have

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<sup>18</sup> Examples include: catchment areas may be of different sizes and overlap potentially indicating asymmetric constraints between providers, yet the fascia count measure would not reflect this overlap; a hospital may be located just outside the boundary of the fascia count and thus be discounted as a potential constraint; and, a catchment area may be inaccurately measured due to differences in local geography. In our local competitive assessment, we acknowledge and take into account these limitations of the fascia count measure.



available in this inquiry, in particular on patient home postcodes. This allows the measure to account for the heterogeneity between providers and patients, by taking into account: (a) exactly where demand is originating from; and (b) the relative strength of competitors in each local area. Catchment area approaches will likely be less accurate with regard to point (a), and fascia count measures do not take into account point (b).

16. Second, the LOCI measure does not rely on establishing geographic market boundaries. In the healthcare industry, where both patients and hospitals are very heterogeneous, it may be difficult to determine precisely the geographic boundaries of each local market, and thus avoiding a sharp geographic delineation is an appealing aspect of the LOCI measure. This point has also been made in the *Handbook of Health Economics*.<sup>19</sup> The parties have argued that by not taking into account the exact geographic market for each hospital, and by relying on disaggregated submarket calculations (explained later), LOCI may not be an accurate or meaningful measure of local concentration. We note, however, that when the ability to precisely define the geographic boundaries of each local market is limited, other concentration measures may also be subject to similar criticisms.
17. As a result of this second aspect, the LOCI measure also does not rely on as many subjective decisions as other concentration measures. For example, to calculate a fascia count measure requires specific rules regarding: the competitor set, the measure of distance (eg travel time or distance), the percentile of patients that will define the catchment boundary (eg 80 per cent), and, in a price-concentration

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<sup>19</sup> The authors note that ‘... reduced form approaches generally require specifying a geographic market. This often relies on geo-political boundaries (eg counties or Primary Metropolitan Statistical Areas (PMSAs)) to define the market. Geopolitical boundaries are unlikely to correspond to market definitions, and thus this approach will generate measurement error. As mentioned above, many recent SCP approaches construct a hospital-specific measure of the HHI by measuring the HHI at the ZIP code level and taking a share weighted average across ZIP codes to construct the hospital’s HHI. This approach to calculating the HHI mitigates, at least to some degree, the third and fourth criticisms listed above.’ The third criticism that the authors refer to relates to the geographic differentiation between hospitals that a traditional HHI calculation would not reflect, and the fourth criticism is that noted in the quote regarding market definition.

analysis, the different distance bands for each variable. The LOCI measure, in contrast, relies only on a submarket definition (discussed later).

18. Third, research in the health literature has consistently shown distance to be an important element of patients' preferences and thus a driver of hospital choice.<sup>20</sup> Given that hospitals are differentiated by geographic location, hospitals that are nearer are likely to represent a stronger constraint than hospitals that are further away. The weighting scheme implicit in the LOCI measure typically assigns more weight to a hospital's share of patients in local areas that are nearby—as a result, the preferences of patients with regard to geographic differentiation are directly reflected in the concentration measure. This is not the case for other concentration measures such as the fascia count and HHI.
19. In summary, we consider that the LOCI measure, interpreted as a weighted-average market share, has intuitive and economic appeal. We also consider it to have certain aspects that make it preferable to the fascia count measure, as well as other concentration measures such as HHI. We would also like to emphasize that we use both LOCI and fascia count measures in parallel throughout our analyses, and in a cautious manner—in the local competitive assessment they are used as an initial filter, and in the price-concentration analysis the estimated relationship is tested and not assumed.

## **Methodology and interpretation**

20. We now turn to the methodology for calculating the LOCI measure. Calculating LOCI involves two basic steps. First, in all submarkets, the submarket share is calculated for each hospital. Second, these submarket shares are aggregated to the hospital

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<sup>20</sup> In response to the [CC patient survey](#), 48 per cent of private patients indicated that 'geographic location' was an important reason for their choice of private hospital. This is over ten percentage points higher than the second most commonly indicated reason ('previous experience'). See summary of responses to question D5, slide 42 of the survey report.

level under a particular weighting scheme. The details of this methodology are at first illustrated with a worked example. A more general step-by-step description of the methodology is then given, followed by a description of how to interpret the LOCI measure.

### ***A worked example***

21. The following example illustrates the steps taken to calculate the LOCI measure, and the details of the calculation. An anonymized hospital from our data is taken as the example, with the number of submarkets reduced to simplify the calculations. We use outward postcode areas for the submarkets—this is the area that corresponds to the first part of the postcode (eg EC1N, LE12). We discuss this choice in more detail later.
22. The example focuses on a single ‘focal’ hospital. This focal hospital draws patients from around 450 submarkets. For the purposes of this example only four (anonymized) submarkets are considered, denoted: SM1, SM2, SM3 and SM4. The four submarkets were chosen for this example as each includes a substantial number of patients, and the four are roughly equally sized. Table 1 below shows the total number of patients in each submarket (column B), and how many of these patients attended the focal hospital (column C).

TABLE 1 **Worked example—LOCI with four submarkets**

<i>Submarket (A)</i>	<i>Number of patients (B)</i>	<i>Number of patients attending focal hospital (C)</i>	<i>Market share of focal hospital (D) %</i>	<i>Proportion of all patients attending focal hospital (E) %</i>
SM1	2,020	889	44	60
SM2	2,009	557	28	37
SM3	2,420	29	1	2
SM4	2,519	19	1	1
All areas	8,968	1,494	17	100

Source: CC analysis.

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Note: Numbers may not sum due to rounding.

23. As shown in the table above, the focal hospital has a different market share in each of the four submarkets (column D), ranging from 1 per cent (SM3 and SM4) to 44 per cent (SM1). The patients from each of these four submarkets also account for a different proportion of the total patients attending the focal hospital (column E), with SM1 representing the largest proportion of the hospital's patients (60 per cent) and SM4 representing the lowest proportion. LOCI is calculated as: one minus the average market shares for each submarket, weighted according to the proportion of total patients attending the focal hospital. That is:

$$\begin{aligned}\text{LOCI} &= 1 - [(0.44 \times 0.60) + (0.28 \times 0.37) + (0.01 \times 0.02) + (0.01 \times 0.01)] \\ &= 0.63\end{aligned}$$

24. In this example, the LOCI equals 0.63. This is equal to one minus the weighted average market share of 37 per cent. Underlying the calculation are four separate market shares (1 per cent, 1 per cent, 28 per cent and 44 per cent). The weight given to each submarket represents the proportion of the total patients attending the focal hospital—one interpretation of this weighting scheme is that it reflects the importance of each submarket to the focal hospital. The area SM1, which the focal hospital draws most of its patients from, has the highest weighting, and SM4 has the lowest weighting.
25. In practice, we find that the submarkets attracting the highest weights are typically those nearest the focal hospital. This likely arises from patients' preference for receiving treatment in the local area.<sup>21</sup> The weighting scheme can therefore often be interpreted as giving more weight to submarkets in close proximity to the focal hospital. In the worked example, this point is not immediately clear because we have simplified the calculation to only four submarkets. This type of weighting scheme

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<sup>21</sup> In our survey, 'geographic location' was the most commonly given answer by patients when asked what were the most important reasons for choosing the private hospital that they attended (48 per cent). See [CC patient survey](#), slide 42, question D5.

does not feature in traditional concentration measures but does feature in concentration measures used in the health economics literature (as cited earlier).<sup>22</sup>

26. The LOCI calculation as described above is referred to as the hospital's 'individual LOCI', since it ignores any common ownership that the focal hospital has with other hospitals. It reflects the average market share (across submarkets) of a hospital assuming the patients that do not attend the focal hospital attend rival hospitals, each of which acts as a competitive constraint.
27. If, however, the focal hospital is part of a hospital group that owns other hospitals, then not all other hospitals may be rivals that act as potential competitive constraints. If hospitals owned by the same hospital operator draw patients from one or more of the four submarkets then a hospital's individual LOCI may understate the degree of local concentration. This is indeed the case with the example. Table 2 below extends the previous table by showing the total number of patients in each submarket that attend all hospitals owned by the same hospital group as the focal hospital (column C2).

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<sup>22</sup> To draw the analogy with traditional concentration measures, suppose that these were based on a catchment area that contained all four areas (SM1, SM2, SM3 and SM4). In this case, a traditional market share calculation would not distinguish between the submarkets, but would implicitly assign the largest weight to SM4, as it is the largest area, and the smallest weight to SM2, as the smallest area. This would lead to a market share figure of 17 per cent ( $= 1,494/8,968$ ), which is very different to the weighted market share of 37 per cent that underlies the LOCI measure. The difference occurs because of the difference in weighting schemes. The LOCI measure assigns weights according to importance of each area to the focal hospital, which in practice typically coincides with the areas closest to the focal hospital, whereas the traditional market share calculation weights according to the relative size of each area. The traditional market share approach does not reflect the strong heterogeneity in concentration across the four submarkets, or incorporate any additional information about the location of patients.

TABLE 2 **Worked example—LOCI with four submarkets, accounting for common ownership**

<i>Submarket (A)</i>	<i>Number of patients (B)</i>	<i>Number of patients attending focal hospital (C)</i>	<i>Number of patients attending focal hospital and other hospitals owned by the same group (C2)</i>	<i>Market share of hospitals of group that owns focal hospital (D2) %</i>	<i>Proportion of all patients attending focal hospital (E) %</i>
SM1	2,020	889	1,030	51	60
SM2	2,009	557	893	44	37
SM3	2,420	29	1,397	58	2
SM4	2,519	19	101	4	1
All areas	8,968	1,494	3,421	38	100

Source: CC analysis.

Note: Numbers may not sum due to rounding.

28. As the table above shows, within each submarket there are a substantial number of patients that do not attend the focal hospital, but do attend other hospitals owned by the same hospital group (ie the difference between columns C2 and C). Thus, the market share of the hospital group in each submarket (column D2 in Table 2) substantially exceeds the market share of the focal hospital (column D in Table 1)—at the extreme, in SM3, the focal hospital has a market share of only 1 per cent while the hospital group in total has a market share of 58 per cent. Individual LOCI does not reflect the higher submarket shares that are expected to come about through the hospital group's ownership of a hospital network. We now modify the previous LOCI calculations to reflect this 'network effect'.

29. The LOCI, modified to reflect the network effect, is obtained by calculating the market share of the hospital group in each submarket rather than the market share of the individual hospital in each submarket. This modification is in line with how standard approaches to measuring concentration would treat multiple sites under common ownership (eg fascia count and HHI).<sup>23,24</sup> In the example given:

<sup>23</sup> The modification is a departure from the LOCI methodology in the academic paper. In that paper, the authors apply an adjustment based on the underlying demand model. Since we do not rely on the assumptions of that demand model, we therefore do not pursue that specific adjustment.

<sup>24</sup> We do not modify the LOCI weightings.

$$\begin{aligned}\text{LOCI} &= 1 - [(0.51 \times 0.60) + (0.44 \times 0.37) + (0.58 \times 0.02) + (0.04 \times 0.01)] \\ &= 0.52\end{aligned}$$

30. We refer to this LOCI measure as the ‘network LOCI’ measure. This measure is equal to, or lower than the individual LOCI measure, reflecting that the hospital is expected to have at least as high market share once commonly owned hospitals are taken into account. It is the network LOCI measure that we use for the majority of our analysis, and when referring to ‘LOCI’, unless otherwise stated, we mean the network LOCI.

### ***General methodology***

31. The worked example given above is a simplified example with only four submarkets. To generalize the example, the same methodology is followed but takes into account all of the submarkets that the hospital draws patients from. The same calculation is then performed separately for all other individual hospitals. This produces two LOCI numbers for each hospital, an individual LOCI and a network LOCI. The difference between the two measures reflects the increase in local concentration that results from the common ownership of hospitals by hospital operators—we refer to this as the ‘network effect’.
32. The LOCI can also be calculated using different measures of market shares. In addition to the method described above which is based on patient numbers (ie volume shares), we have also calculated LOCI using revenue shares. Revenue is calculated as the summation of the prices charged for hospital services to insured patients.<sup>25</sup> In this note we present results based on patient shares.
33. A step-by-step process for calculating LOCI is set out below:

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<sup>25</sup> See Appendix 6.9 for a discussion of how these prices are constructed.

- (a) define the submarkets that will be dealt with. In our case, these are the outward postcode areas;
  - (b) for each hospital site, calculate the market share of the hospital site in each submarket. In our case, this has been done on the basis of volumes (ie patient numbers) and revenues (ie episode prices for hospital services) for inpatient visits relating to any of the set of 17 specialties;
  - (c) for each hospital site, calculate the weightings for each submarket that will be applied when averaging the market shares. In our case, this is the proportion of a hospital site's total volume (or revenue) stemming from that submarket;
  - (d) for each hospital site, calculate a weighted average market share, using the market shares and weights computed above. Individual LOCI is then equal to one minus this weighted average market share; and
  - (e) for network LOCI, repeat the above steps, but in step (b), replace the market share of the hospital site in each submarket with the summation of the market shares for all hospitals owned by the same hospital group in each submarket.
34. For the purposes of the local competitive assessment, we have calculated a LOCI measure based on insured patients. This measure has been used as an initial filter (see Appendix 6.5 for further details). The calculations were performed using data on insured patient visits in the Healthcode data.<sup>26</sup> The limitations of that data mean that we have calculated LOCI for 173 hospitals (discussed later in this appendix). The LOCI calculation has been performed once for the period 2009 to 2012; this period has been taken as a reference period, and the use of multiple years has the benefit of increasing the number of observations per submarket for the submarket share calculations. There are around 2,500 submarkets, and the median number of observations per submarket is around 250.

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<sup>26</sup> Healthcode is an intermediary between private hospitals and insurers. It is used by the majority of providers, including the large private hospitals and insurers, but does not include all providers.



35. We have also calculated a LOCI measure based on self-pay patients for the purposes of the price-concentration analysis. This is described in more detail in Appendix 6.9.

### ***Interpretation***

36. LOCI always lies between zero and one, and can be interpreted in a similar way to (one minus) market shares. A higher LOCI corresponds to a lower market share, and therefore a 'low LOCI' hospital faces a higher degree of local concentration than a 'high LOCI' hospital.
37. A LOCI of zero (or close to zero) can be thought of as the monopoly benchmark. In practice, this means that a hospital draws its patients from a collection of submarkets, and for each submarket there are no patients who visit any other hospital. A LOCI of one (or close to one) can therefore be thought of the perfectly competitive benchmark. In practice, this will never occur as all hospitals will have at least one patient and therefore, by definition, a market share of above zero in at least one submarket.
38. The difference between the individual LOCI and the network LOCI reflects the difference in local concentration that arises as a result of the common ownership of hospitals. The two LOCI terms will only be equal if either the hospital in question is an independent and has no other hospital sites under its control; or, the hospital in question is under common ownership, but the group's other hospitals do not draw any patients from common submarkets (ie the focal hospital and the other commonly-owned hospitals are operating in geographically distinct areas).

## **Empirical issues**

39. Three empirical issues have come to our attention when calculating the LOCI measure in this inquiry. These issues are as follows: first, a choice must be made regarding the submarkets; second, our data is incomplete which may lead to errors in measurement; and third, LOCI performs less well when hospitals are highly heterogeneous. Each issue is taken in turn below.
40. The first issue relates to the choice of submarket. This involves a trade-off between accurate measurement of shares in each submarket (which benefits from bigger submarkets with more observations per submarket), and a weighting scheme that reflects the level of heterogeneity between submarkets (which benefits from smaller submarkets that reflect heterogeneity more richly).
41. The parties have noted that, at the extreme, if submarkets each contained only one individual then the submarket shares would all equal either zero or one and, as a result of the weighting scheme, the LOCI measure would also be equal to either zero or one. We would note two points in relation to this. First, taking that extreme approach would also make the weighting scheme redundant—all submarkets that a hospital draws patients from would get the same weight and geographic differentiation would not be reflected at all. Second, in the other extreme case with no submarket disaggregation (ie there being only one single submarket) the weighting scheme again is redundant and the measure does not reflect any geographic differentiation. Both of these extremes do not achieve the objective that we have in mind when using the LOCI measure. The choice of submarket size is clearly an empirical issue and must be chosen in a sensible manner.
42. We have chosen outward postcode areas as the submarkets as we consider these to adequately reflect geographic differentiation. This splits the UK into around 2,500

regions, and the median number of observations per submarket is around 250. Our view is that this approach takes into account accurately the local differences in distance that are important to patients, but does not lead to such small submarkets that the shares are inaccurately calculated.

43. The parties have also argued that the LOCI measure is sensitive to the choice of submarket, with smaller submarkets leading to lower LOCI estimates. We recognize that different size submarkets can lead to different LOCI results, but consider our choice of outward postcode to be reasonable, and also preferable to the alternative submarket choices considered by the parties when testing our LOCI results.<sup>27</sup> We also note that similar issues arise with other measures of concentration being dependent on the specific geographic approximation to the market definition that is adopted. In addition we would again emphasize that we use the LOCI measure in the context of many other pieces of information and we test rather than assume any relationship that LOCI may have with market outcomes.
44. The second issue relates to our data. While we have extensive and very detailed data available, our data is not fully comprehensive. A number of patient episodes are not recorded in the Healthcode data and this is primarily because certain hospitals do not use Healthcode as an intermediary with insurers. We have also been told that some of the smaller insurers do not use Healthcode, and that one of the medium sized insurers began using Healthcode only part-way through 2009–2012. Invoices are also missing because a small proportion of data was excluded as being erroneous or having missing information. We refer to the patient episodes not recorded in Healthcode as ‘missing invoices’. These invoices may result in the

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<sup>27</sup> The parties have recalculated the LOCI measure using larger submarkets to demonstrate that the LOCI estimates are sensitive to the choice of submarket. We consider using submarkets larger than outward postcode to be a disadvantage—it removes the heterogeneity in patient locations and their distances to local hospitals.

submarket shares being misstated. This may happen if the missing invoices are missing systematically for particular hospitals.

45. Missing invoices as a result of our data exclusions are not thought to materially affect our results. This is because we do not consider the exclusions more likely to have affected some submarkets more than others. For the same reason, we do not think that missing invoices due to omissions from the data of certain insurers is likely to have a material impact on our results. We do consider, however, that the missing invoices as a result of hospitals not using Healthcode may bias the LOCI calculations to a degree. There omissions are likely to involve more missing invoices than the two previous categories (data exclusions and insurers), and these omissions are unlikely to affect submarkets in a similar way. Parties have also raised concerns in this regard. We have assessed this issue using the aggregated data on inpatient admissions that was sent to us in response to the Market Questionnaire. This is the most complete information on patient numbers that is available. Table 3 below shows, for each region of the UK, the estimated proportion of missing invoices associated with hospitals that do not have Healthcode invoices.

TABLE 3 **Estimated proportion of missing invoices, by region**

<i>Region</i>	<i>Inpatient admissions at hospitals not included in the Healthcode dataset</i>	<i>Inpatient admissions at all hospitals</i>	<i>Estimated proportion of missing inpatient invoices, %</i>
East Midlands	0	13,954	0
East of England	711	33,087	2
London	15,461	89,478	17
North-East	463	7,591	6
North-West	0	31,232	0
Northern Ireland	2,003	2,003	100
Scotland	647	12,980	5
South-East	505	57,878	1
South-West	1,247	25,008	5
Wales	1,889	5,343	35
West Midlands	0	20,529	0
Yorkshire and The Humber	0	22,992	0
All regions	22,926	322,075	7

Source: CC analysis.

*Note:* Numbers may not sum due to rounding. Data on inpatient admissions not available for 23 of 219 hospitals and this may mean some of the estimated proportions are understated. However, since 7 of these 23 hospitals are located in London, Northern Ireland or Wales, and 11 of these 23 hospitals are PPU's (which typically have lower levels of admissions than private hospitals), these omissions are not expected to materially change the estimated proportions of missing invoices in most regions. Data on inpatient admissions has been used rather than insured admissions as the available data for inpatient admissions was more comprehensive. Regions are defined according to the NUTS1 classification.

46. Table 3 shows that the estimated proportion of missing invoices is around 7 per cent in total across the UK. This proportion varies significantly between region, with London, Northern Ireland and Wales being the regions with the highest proportion of missing invoices. Excluding London (missing invoices for around 17 per cent of inpatient admissions), Northern Ireland (100 per cent) and Wales (35 per cent), all regions have an estimated proportion of missing invoices that is no higher than 6 per cent of inpatient admissions in the region. While this indicates the LOCI measure will be less accurate in the regions with a larger proportion of missing invoices, we expect the impact to be limited for the majority of regions.<sup>28</sup> However, when

<sup>28</sup> There are two factors that lead us to this conclusion. First, most hospitals draw patients from many submarkets and if the missing invoices only affect a relatively small number of these then any impact on the hospitals' overall LOCI measure may be limited. Second, changes in the shares for submarkets located at distance from the focal hospital will only have a small impact on the focal hospital's overall LOCI measure because of the weighting scheme. It is therefore unlikely that small proportions of missing invoices will have a large impact on a hospital's LOCI.

interpreting and using our LOCI measure, we take into account that there may be errors in measurement for particular hospitals and regions.<sup>29</sup>

47. The third issue relates to the performance of LOCI in certain circumstances, and is an issue that also affects catchment area approaches. The issue arises when comparing hospitals that are of a very different nature—for example, consider a very large hospital with a strong reputation that draws patients from a very wide geographic area, as compared with a very small hospital that primarily serves local patients. In such circumstances, the large hospital's LOCI may be relatively high (ie towards one, indicating a less concentrated area) and the small hospital's LOCI may be relatively low (ie towards zero, indicating a more concentrated area). However, the difference between the two hospitals' LOCI is in part driven by the large hospital's competitive success. The same issue occurs with a catchment area approach, where wide catchment areas would result for the large hospital and narrow catchment areas for the small hospital. These different sized catchment areas would also affect the concentration measures that rely on the catchment areas. We note that the effect of this issue is less of a concern for LOCI than for the catchment area approaches.<sup>30</sup> As with the missing invoices, we take these considerations into account when interpreting the filters based on LOCI (and fascia count).

## Results

48. All results presented in this section are based on the insured patient data, and individual or network LOCI calculated using patient shares (ie volumes). Table 4 below summarizes the individual LOCI results by region. The table shows the

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<sup>29</sup> For example, in the assessment of local competition (Appendix 6.5) LOCI is used as an initial filter followed by a more detailed competitive assessment and in the price-concentration analysis (Appendix 6.9), we consider whether the results are sensitive to the inclusion of the regions where there are a larger proportion of missing invoices. Both appendices provide more details.

<sup>30</sup> This is because the concentration measures based on catchment areas will not directly take into account any overlap in catchment areas (and related asymmetric constraints), while the LOCI measure will take this into account.

number of hospital sites that fall into one of five categories of LOCI (up to 0.2, 0.2–0.4, 0.4–0.6, 0.6–0.8, above 0.8).

TABLE 4 Results of individual LOCI by region (number of hospital sites)

<i>Region</i>	<i>Individual LOCI = 0.0–0.2</i>	<i>Individual LOCI = 0.2–0.4</i>	<i>Individual LOCI = 0.4–0.6</i>	<i>Individual LOCI = 0.6–0.8</i>	<i>Individual LOCI = 0.8–1.0</i>	<i>Total</i>
East Midlands	0	3	3	0	2	8
East of England	1	5	7	4	1	18
London	0	0	2	7	20	29
North-East	0	3	1	0	0	4
North-West	0	3	9	3	5	20
Northern Ireland	0	0	0	0	1	1
Scotland	2	2	2	1	0	7
South-East	0	2	14	15	8	39
South-West	0	9	5	0	2	16
Wales	1	1	2	0	0	4
West Midlands	0	1	7	5	1	14
Yorkshire and The Humber	1	2	5	2	3	13
Total	5	31	57	37	43	173

Source: CC analysis.

Note: LOCI calculated based on insured patient volumes. Regions defined by NUTS1 categories.

49. Table 4 above shows that five hospitals have an individual LOCI of less than 0.2—this corresponds to a weighted average market share of 80 per cent or more. In total, there are 93 hospital sites that have an individual LOCI of less than 0.6—this corresponds to a weighted average market share of 40 per cent or more. The LOCI results in Table 4 do not account for any network ownership and therefore may understate the level of local concentration for hospitals that are owned by hospital groups.

50. Table 5 below summarizes the network LOCI results (which account for the common ownership of hospital sites by hospital groups) by region. As with Table 4, these results are based on patient volumes.

TABLE 5 Results of network LOCI by region (number of hospital sites)

Region	Network LOCI = 0.0–0.2	Network LOCI = 0.2–0.4	Network LOCI = 0.4–0.6	Network LOCI = 0.6–0.8	Network LOCI = 0.8–1.0	Total
East Midlands	1	3	2	1	1	8
East of England	1	8	5	3	1	18
London	0	3	5	13	8	29
North-East	0	3	1	0	0	4
North-West	2	9	4	3	2	20
Northern Ireland	0	0	0	0	1	1
Scotland	4	2	0	1	0	7
South-East	0	11	13	10	5	39
South-West	1	8	5	0	2	16
Wales	1	1	2	0	0	4
West Midlands	0	6	6	2	0	14
Yorkshire and The Humber	2	4	3	1	3	13
Total	12	58	46	34	23	173

Source: CC analysis.

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Note: LOCI calculated based on insured patient volumes. Regions defined by NUTS1 categories.

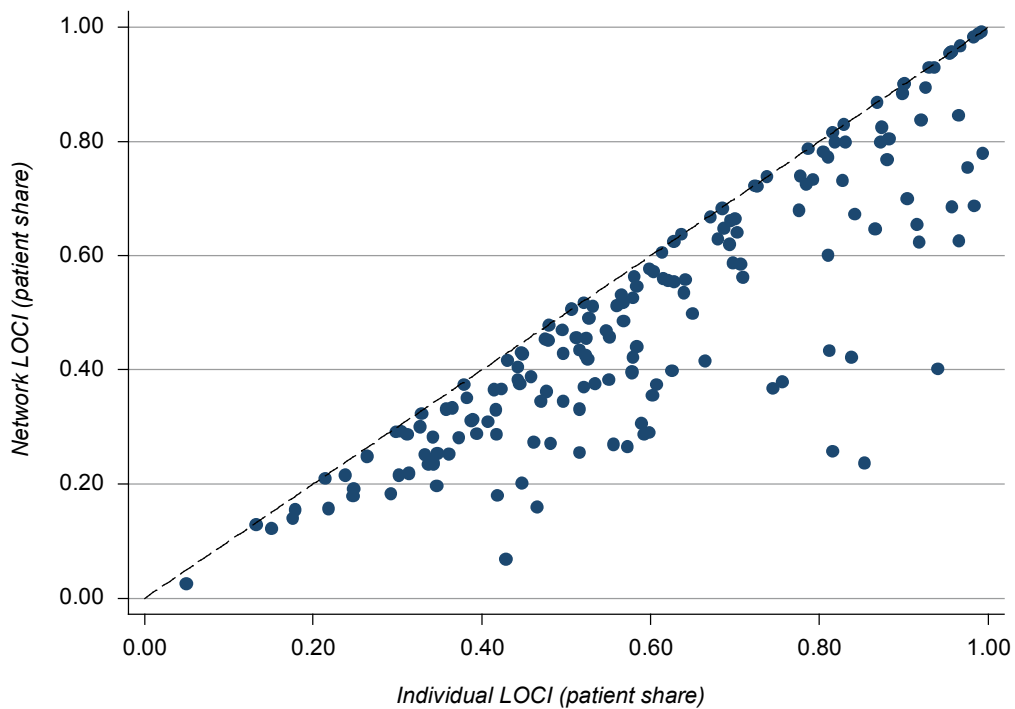
51. The comparison between Tables 4 and 5 indicates that levels of local concentration appear significantly higher once network ownership is accounted for. Table 5 above shows that 12 hospitals have a network LOCI of less than 0.2, as opposed to five using the individual LOCI. In total, there are 116 hospital sites that have a network LOCI of less than 0.6, as opposed to 95 based on the individual LOCI.

52. Figure 1 below compares individual LOCI with network LOCI.



FIGURE 1

**Comparison of individual and network LOCI (patient shares)**



Source: CC analysis.

Notes:

1. One dot corresponds to one hospital site.

2. Overlapping dots may mean multiple hospital sites are represented by a single dot.

53. Figure 1 shows network LOCI on the vertical axis and individual LOCI on the horizontal axis. If all hospitals were independently owned, the figure would show all points lying on the 45 degree line (ie network LOCI would equal individual LOCI). Points that lie below the 45 degree line are those hospitals that have a lower network LOCI than their individual LOCI—these hospitals are part of a network of hospitals that draw patients from some common areas.

### Expressing LOCI as a weighted-average market share

54. Akosa Antwi, Gaynor and Vogt (2006) derive the LOCI as:<sup>31</sup>

$$LOCI_j = \sum_{t=1}^T \frac{N_t \Pr_{(t \rightarrow j)}}{\sum_{t=1}^T N_t \Pr_{(t \rightarrow j)}} (1 - \Pr_{(t \rightarrow j)})$$

where  $\Pr_{(t \rightarrow j)}$  is the probability that a patient of type  $t$  attends hospital  $j$ , and  $N_t$  is the total number of patients of type  $t$ . If the patient types are specified according to geographic submarkets, then the probability that a patient of type  $t$  attends hospital  $j$  is, by definition, equal to hospital  $j$ 's market share in submarket  $t$ .

55. Noting that the denominator of the above equation for LOCI can be rewritten as the total number of patients at hospital  $j$ ,  $N_j = \sum_{t=1}^T N_t \Pr_{(t \rightarrow j)}$ , LOCI can be rewritten as:

$$LOCI_j = 1 - \sum_{t=1}^T w_{tj} \Pr_{(t \rightarrow j)}$$

where  $w_{tj} = \frac{N_t \Pr_{(t \rightarrow j)}}{N_j}$ .

56. In this rewritten formula, LOCI can be seen as a weighted average of hospital  $j$ 's market shares for each patient type  $t$ , where the weights,  $w_{tj}$ , correspond to the proportion of total patients attending hospital  $j$  that are type  $t$ .

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<sup>31</sup> Y O D Akosa Antwi, M Gaynor & W B Vogt, 'A competition index for differentiated products oligopoly with an application to hospital markets', unpublished manuscript, 2006, p6, equation (6).

## Initial filtering of hospitals

### Introduction

1. This appendix presents the methodology and results of the first stage of our local competitive assessment of hospitals. This first stage consisted of an initial filtering exercise. The aim of this exercise was to identify and exclude from further analysis those hospitals where we could, by a systematic method, form a view that there were unlikely to be competition problems. The remaining hospitals were identified as 'hospitals of potential concern' and evaluated in more detail as described in Section 6).<sup>1</sup>
2. The filtering exercise involved an analysis of hospitals' catchment areas and the two measures of local concentration: fascia count (within hospitals' catchment areas) and LOCI. Our assessment, as described in Section 5, focuses on 219 private hospitals and PPU's (215 general private hospitals/PPUs, plus four specialized private hospitals/PPUs).
3. We first discuss the methodology that we have used, and then present the results for our analysis. See Appendix 6.6 for a complete list of the 219 hospitals that we have taken into account in our analysis.

### Methodology

4. Here we describe our methodology for calculating hospitals' catchment areas, the two concentration measures, and our approach to filtering.

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<sup>1</sup> We note that the fact that a hospital was not identified by the filters did not preclude the possibility of it being further evaluated on the basis of further evidence and a more detailed analysis.

## **Catchment areas**

5. Catchment areas, the areas where most of a hospital's patients live, have been used for two purposes. First, they were used to inform our understanding of the local geographic market for each hospital. We take a hospital's catchment area to be indicative of the relevant geographic market for that hospital, although this approach may result in geographic markets being defined too narrowly in some instances (see paragraphs 5.62–5.69). Second, we have used the catchment areas to calculate fascia counts.
6. We defined a hospital's catchment area as the radius within which a given percentage of the hospital's patients originate from. We have used 80 per cent as the proportion of patients, and have measured the radius based on road distances (in miles) between patient home postcodes and hospital postcodes.<sup>2</sup> We use road distance rather than drive-time in this investigation as we found road distances to be the more conservative and less subjective measure.<sup>3</sup>
7. Data on insured patient visits was used to calculate the catchment areas. We have used the Healthcode data set for this purpose.<sup>4</sup> For the purpose of defining catchment areas, we consider the data on patient visits to be superior to the information gained in response to our patient survey because the data reports actual journeys (rather than stated journeys) and the data includes more patients than the survey (in total, and for each individual hospital). Following our cleaning of the data (see

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<sup>2</sup> The CC and OFT have used catchment areas based on an 80 per cent distribution in a number of their inquiries. See CC/OFT 'Commentary on retail mergers', March 2011; Aggregates, cement and ready-mix concrete market investigation: [www.competition-commission.org.uk/our-work/directory-of-all-inquiries/aggregates-cement-ready-mix-concrete/provisional-final-report](http://www.competition-commission.org.uk/our-work/directory-of-all-inquiries/aggregates-cement-ready-mix-concrete/provisional-final-report); Thomas Cook Group plc/Co-operative Group Limited/Midlands Co-operative Society Limited merger inquiry: [www.competition-commission.org.uk/our-work/directory-of-all-inquiries/thomas-cook-co-op-midlands](http://www.competition-commission.org.uk/our-work/directory-of-all-inquiries/thomas-cook-co-op-midlands); Completed acquisition by General Healthcare Group of control of four Abbey hospitals and de facto control over Transform Holdings Limited, previously part of the Covenant Healthcare Group: [www.ofc.gov.uk/shared\\_ofc/mergers\\_ea02/2010/GHG-Abbey.pdf](http://www.ofc.gov.uk/shared_ofc/mergers_ea02/2010/GHG-Abbey.pdf); Completed acquisition by General Healthcare Group of assets of Nuffield Hospitals: [www.ofc.gov.uk/shared\\_ofc/mergers\\_ea02/2008/GHG.pdf](http://www.ofc.gov.uk/shared_ofc/mergers_ea02/2008/GHG.pdf).

<sup>3</sup> With regard to the latter point, we found significant discrepancies between estimated journey times when using different mapping software. Given the scale of this investigation, we were concerned that this may affect some estimates (and thus some hospitals) more than others, and that it was most important to have a measure that is accurate and consistent. We acknowledge that there are, of course, differences between road distance and drive-time, but when using catchment areas only as a guide, as we do, we do not think any differences would materially affect our overall analysis.

<sup>4</sup> Healthcode is an intermediary between hospitals and PMIs. It records line-by-line invoice data for each patient episode. The majority of hospitals and PMIs use Healthcode.

Appendix 6.9, Annex A for details), we have information available on over 500,000 inpatient visits over the period 2009 to 2012 (part year), when a treatment was performed by a consultant with a primary specialty in our set of 16 specialties,<sup>5</sup> plus oncology. This set of specialties is the same as identified in our product market definition (see paragraphs 5.49–5.51). From our total of 219 private hospitals/PPUs, the cleaned Healthcode data includes patient visits in relation to 173 private hospitals/PPUs (172 private general hospitals/PPUs and one specialized PPU).

8. Catchment areas have been calculated for the 173 hospitals included in the cleaned Healthcode data. We have not distinguished between specialties or years when calculating catchment areas.<sup>6</sup> There are two reasons for aggregating over the specialties. The first reason is that, as set out in Section 5, there is a reasonable degree of supply-side substitutability between specialties. Thus, at least in the medium term, we would expect competitive pressure to be exerted across these specialties, even if certain providers do not currently offer a certain specialty. The second reason is pragmatic: the number of patients receiving treatment for a particular specialty can be low, and aggregating across specialties avoids catchment areas being unduly influenced by the journeys of individual patients.
9. For the 46 hospitals not included in the Healthcode data, we have made assumptions to identify an indicative catchment area.<sup>7</sup> We have assumed that a hospital's catchment area is equal to the median catchment area of other hospitals in the same region, except for hospitals in Northern Ireland. We also used this approach for four hospitals of the 173 hospitals that do have Healthcode data, but for which the

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<sup>5</sup> These specialties are obstetrics and gynaecology, general surgery, trauma and orthopaedics, anaesthetics, urology, gastroenterology, ophthalmology, otolaryngology, dermatology, plastic surgery, cardiology, general medicine, neurology, oral and maxillofacial surgery, rheumatology and clinical radiology.

<sup>6</sup> As a result, the catchment areas are (implicitly) weighted by patient numbers in each specialty over the period 2009–2012.

<sup>7</sup> Of the 219 hospitals that are included in our assessment, 173 hospitals are included in our cleaned Healthcode data. This leaves 46 hospitals that are not included in our cleaned Healthcode data.

number of observations is low (less than 100).<sup>8</sup> For hospitals in Northern Ireland, which is a region that has no hospitals included in the Healthcode data,<sup>9</sup> we have assumed that a hospital's catchment area is equal to the median catchment area of all hospitals in Great Britain (17 miles). These indicative catchment areas are subject to a degree of error relative to the true catchment area. However, we do not consider that this will affect our analysis because in our competitive assessment of individual hospitals, regardless of the precise boundaries of each hospital's catchment area, we have considered competitive constraints provided by hospitals located inside and outside the hospital's catchment area.

10. Parties have argued that our methodology results in catchment areas that are likely to understate the true geographic market (ie they are too small). We have received suggestions for alternative definitions of the catchment areas, including using a threshold of more than 80 per cent of patients, considering also self-pay patients (who on average travel further than insured patients) and using journey time (rather than road distance). Many (if not all) of these modifications would result in larger catchment areas. However, we considered that a conservative approach to the catchment area delineation was appropriate because it decreases the risk of overlooking hospitals that may be a potential concern. By using smaller catchment areas, our analysis has only resulted in some additional hospitals being selected for more detailed competitive assessment. As noted in the preceding paragraph, we do not consider this a concern because of our approach to the competitive assessment, which takes into account competitive constraints provided by hospitals located inside and outside the hospital's catchment area.

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<sup>8</sup> These hospitals are Circle Bath, Ulster Independent Clinic, St Hugh's Hospital, and BMI Fitzroy Square.

<sup>9</sup> With the exception of Ulster Independent Clinic. See footnote 8.

### ***Fascia count***

11. The first measure of concentration that we have used is the fascia count. We have defined the fascia count concentration measure as the total number of competitors that lie within a hospital's catchment area; a competitor is defined as one or more private hospitals/PPUs that are owned or managed by the same rival operator.
12. We have used two fascia count measures: (a) a fascia count that includes as competitors all general private hospitals and general PPUs providing inpatient care and offering one or more of our set of 16 specialties (215 general private hospitals and general PPUs in total); and (b) a fascia count that includes as competitors only those general and specialized private hospitals and PPUs providing inpatient care and also offering oncology services (139 oncology providers in total, comprised of private general hospitals, general PPUs and specialized private hospitals and PPUs). We have considered a separate fascia count for oncology because the number of providers that offer oncology is substantially below those offering the set of 16 specialties (see Section 5 for more details). The same catchment area is used for both fascia count measures for the two reasons noted above, namely the degree of supply-side substitution between specialties, and the practical advantages of calculating catchment areas for the specialties as a group.
13. We note two limitations of the fascia count measure. First, the fascia count measure does not take account of any heterogeneity between providers (in terms, for example, of size, range of treatments and specialties offered and type of area where the hospital is located). It therefore treats a small general PPU located towards the boundary of a catchment area with the same weight as a large private general hospital located nearby. Second, the fascia count measure relies on the predefined catchment area, and is therefore subject to the typical concerns when catchment

areas are applied.<sup>10</sup> We take these limitations into account when interpreting the results of the fascia count measure in the detailed competitive assessment (eg by considering constraints from inside and also outside the catchment areas).

## **LOCI**

14. The second concentration measure that we have used is the LOCI measure. Appendix 6.4 provides full details of the LOCI measure, and explains how this measure overcomes some of the limitations of the fascia count measure. The LOCI measure we have used is defined as ‘one minus a hospital’s weighted-average market share’ and is therefore a market-share-based concentration measure. Market shares are adjusted to take into account the common ownership of other hospitals located in any area where the hospital draws its patients (in Appendix 6.4 we refer to this LOCI measure as ‘network LOCI’). The weighting scheme assigns more weight to those areas where a hospital draws a large proportion of its total patients—in practice this means that more weight is typically given to those areas near a hospital. LOCI always lies between zero and 1; zero can be thought of as a monopoly benchmark and 1 as a perfectly competitive benchmark. A higher LOCI corresponds to a lower weighted average market share, and therefore a ‘low LOCI’ hospital is expected to face a higher level of local concentration than a ‘high LOCI’ hospital.
15. To calculate the LOCI measures for the purpose of the filtering exercise, we have used the same data on insured patient visits as for catchment areas (Healthcode). This means that we were able to calculate LOCI for the 173 hospitals referred to above. We have computed two LOCI measures: one based on patient visits (ie volume shares) and one based on revenue shares. In what follows, unless otherwise

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<sup>10</sup> Typical concerns when using catchment-area-based measures include: catchment areas may overlap but the count of rival fascias within each catchment area would not reflect this overlapping area; catchment areas may be of different sizes meaning that one hospital is counted as a competitor of another but not vice versa; or a hospital may be located just outside the boundary of the fascia count and thus be discounted as a potential constraint.



specified, for simplicity we use the term 'LOCI' to refer to the network LOCI calculated by patient shares (ie volume shares).

16. We consider the LOCI measure to have several benefits in the context of this investigation, in particular if compared with the fascia count measure. As described in more detail in Appendix 6.4, the LOCI measure takes into account the geographic differentiation between hospitals, accurately reflects where the patient demand originates from, and does not rely on a fixed catchment area or other geographic market definition. Therefore it is our view that the LOCI measure, compared with fascia count, is likely to provide a more accurate reflection of local competitive constraints facing a hospital.
17. The LOCI measure, however, has two limitations prompted by the shortage of data in some cases. First, as noted above, we were only able to calculate LOCI for 173 hospitals (out of 219) because the Healthcode data does not contain information for patient visits to all hospitals. We therefore cannot compute the measure for all hospitals, although this is not a serious concern as we do have fascia count results for the hospitals without Healthcode data. Second, because the Healthcode data does not include information for 46 hospitals, there are likely to be errors in the measurement of LOCI for the 173 hospitals that it does contain data for. This is because some of the submarket shares in the LOCI calculations will be overstated, as a result of the shares for hospitals without data being under-represented. The issue, referred to as the 'missing invoices', is discussed in Appendix 6.4, and in our view it is not a serious concern for the majority of hospitals and regions.<sup>11</sup> As we have only used the LOCI measure as an initial filter, which is then followed by a more detailed assessment that

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<sup>11</sup> Regions where the missing invoices may have had more of an effect on LOCI calculations are London, Northern Ireland and Wales.

does not rely on the specific LOCI results, errors in measurement will not affect our competitive assessment of each individual hospital of potential concern.

18. Parties have raised several objections to our use of the LOCI, and these are addressed in Appendix 6.4.

### ***Filters***

19. We have used the two concentration measures, LOCI and fascia count, to identify the hospitals of potential concern. To this end we have defined thresholds for each concentration measure. Hospitals that have a concentration measure below the threshold were identified as a potential concern, and have then been subjected to a more detailed local competitive assessment.
20. We have identified a hospital as being of potential concern if either of the following conditions are met:
  - (a) LOCI (patient share) and/or LOCI (revenue share) is below 0.6; and
  - (b) fascia count (set of 16 specialties) and/or fascia count (oncology) is equal to or below 1.
21. We considered it important that this initial filtering exercise was conservative so that we did not overlook any hospitals that may be a potential concern. We took this into account when selecting the above thresholds. To determine the LOCI threshold, we considered the market share thresholds that have often been used by the OFT, the CC and the European Commission to exclude cause of concern, namely less than 40 per cent in undifferentiated product markets.<sup>12</sup> This level corresponds to a level of LOCI of 0.6. We selected the fascia count threshold on a similar basis: a fascia count

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<sup>12</sup> CC/OFT *Merger Assessment Guidelines*, CC2, paragraph 5.3.5. European Commission, [Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings](#), 2004/C 31/03.

of one corresponds to a local area with two competitors, which if evenly sized would imply market shares of 50 per cent.

22. The parties argued that our thresholds were determined on an ad hoc basis and were too conservative. As explained above, we determined the thresholds on the basis of commonly used thresholds, and consider it appropriate to take a conservative approach. Moreover, as explained in Section 6, these thresholds do not determine the outcome of our competitive analysis in any mechanistic way. Ramsay also noted that the filters were used in an additive manner, such that certain hospitals were highlighted by one filter but not by another filter. They argued that because of this our filtering approach was inconsistent. We do not consider this to be an inconsistency; in our view this is a benefit of using more than one filter—it ensures that we do not overlook hospitals that the use of only one filter might otherwise do. As explained above, there are strengths and weaknesses of the different concentration measures, and while we see significant advantages of the LOCI measure, it cannot be computed for all hospitals due to the data limitations.

## **Results**

23. We present below the results of our analysis of the catchment areas, concentration measures and hospitals of potential concern.

### ***Catchment areas***

24. Table 1 shows results of our catchment area calculations, by region and in aggregate for the UK.

TABLE 1 **Hospital catchment areas, by region**

<i>Region</i>	<i>Minimum catchment area miles</i>	<i>Median catchment area miles</i>	<i>Maximum catchment area miles</i>	<i>Total private hospitals/PPUs</i>
East Midlands	14	18	25	8
East of England	7	17	37	22
London	5	15	41	44
North-East	16	22	24	6
North-West	6	15	45	21
Northern Ireland	17	17	17	7
Scotland	17	23	34	8
South-East	9	16	37	49
South-West	11	22	29	20
Wales	14	28	43	7
West Midlands	8	15	51	14
Yorkshire and the Humber	8	19	24	13
All regions	5	17	51	219

Source: CC analysis.

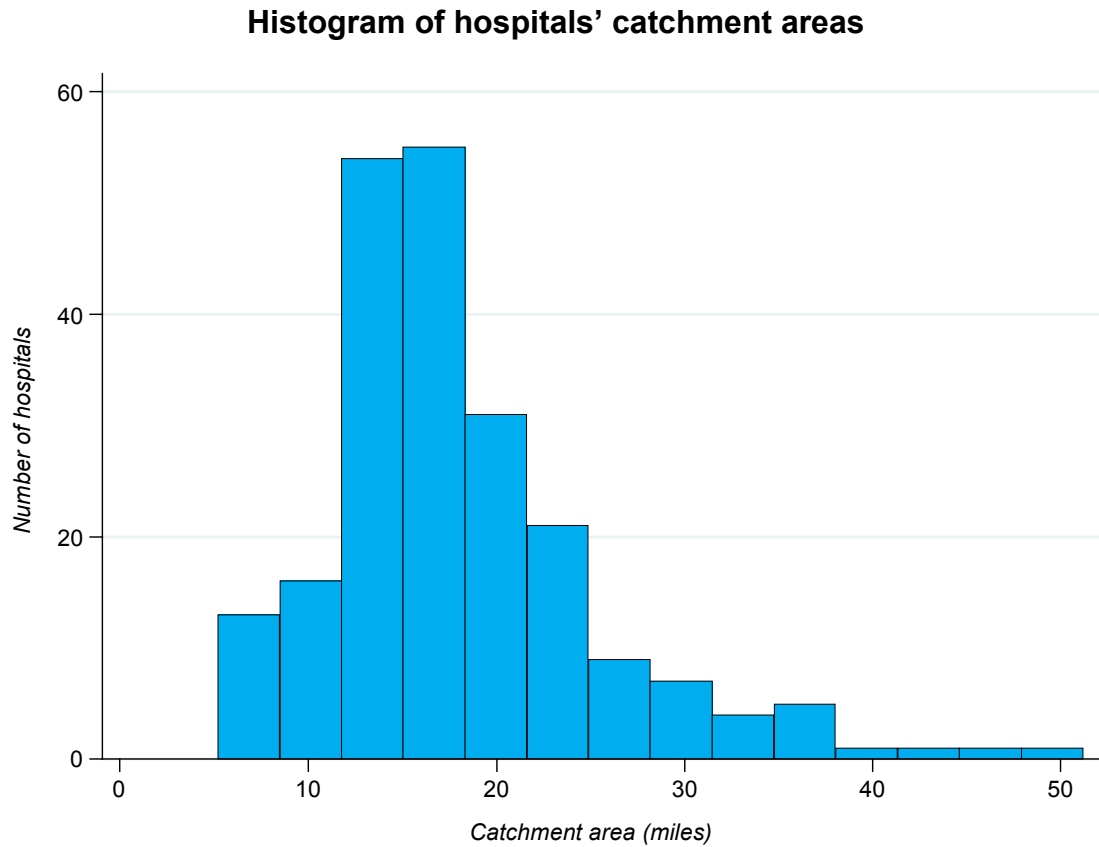
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*Notes:*

1. Numbers may not sum due to rounding.
2. Regions defined by NUTS1 categories.

25. Table 1 shows that the median catchment for the UK is 17 miles, and that there is significant variation in the catchment areas which range from 5 to 51 miles. Most hospitals have a catchment area between 10 and 25 miles. Figure 1 shows the distribution of catchment areas.

FIGURE 1



Source: CC analysis.

### ***Fascia count***

26. Table 2 shows the fascia count results for the set of 16 specialties. The table shows the number of hospitals that face a certain number of competing fascias in their catchment area (indicated in the first row).

TABLE 2 **Fascia counts (set of 16 specialties), by region**

<i>Region</i>	<i>Number of hospitals facing no competing fascias</i>	<i>Number of hospitals facing 1 competing fascia</i>	<i>Number of hospitals facing 2 competing fascias</i>	<i>Number of hospitals facing 3 or more competing fascias</i>	<i>Total private hospitals</i>
East Midlands	4	4	0	0	8
East of England	9	2	6	5	22
London	3	2	2	34	41
North-East	0	2	4	0	6
North-West	8	4	7	1	20
Northern Ireland	1	0	6	0	7
Scotland	4	4	0	0	8
South-East	4	16	9	20	49
South-West	4	7	4	5	20
Wales	2	0	2	3	7
West Midlands	6	4	2	2	14
Yorkshire and the Humber	3	7	1	2	13
All regions	48	52	43	72	215

Source: CC analysis.

**Notes:**

1. Numbers may not sum due to rounding.
2. Regions defined by NUTS1 categories.

27. Table 2 shows that 100 (48 + 52) hospitals face one or fewer competing fascias in their catchment area, and that 43 hospitals face two competing fascias in their catchment area. The remaining 72 hospitals face at least three competing fascias in their catchment area.

28. Table 3 shows the fascia count results for oncology only.

TABLE 3 **Fascia counts (oncology), by region**

<i>Region</i>	<i>Number of hospitals facing no competing fascias</i>	<i>Number of hospitals facing 1 competing fascia</i>	<i>Number of hospitals facing 2 competing fascias</i>	<i>Number of hospitals facing 3 or more competing fascias</i>	<i>Total private hospitals providing oncology</i>
East Midlands	5	2	0	0	7
East of England	9	1	4	3	17
London	3	2	1	20	26
North-East	1	0	3	0	4
North-West	9	2	1	0	12
Northern Ireland	0	0	0	0	0
Scotland	2	2	0	0	4
South-East	9	12	6	2	29
South-West	5	6	0	5	16
Wales	0	2	1	0	3
West Midlands	6	4	2	0	12
Yorkshire and the Humber	3	3	1	2	9
All regions	52	36	19	32	139

Source: CC analysis.

**Notes:**

1. Numbers may not sum due to rounding.
2. Regions defined by NUTS1 categories.

## LOCI

29. Tables 4 and 5 show the results of our LOCI analysis for patient share and revenue share respectively. The tables show the total number of hospitals that have a LOCI measure within a certain range (indicated in the first row).

TABLE 4 LOCI (patient share), by region

Region	LOCI: 0.0–0.2	LOCI: 0.2–0.4	LOCI: 0.4–0.6	LOCI: 0.6–0.8	LOCI: 0.8–1.0	Total private hospitals
East Midlands	1	3	2	1	1	8
East of England	1	8	5	3	1	18
London	0	3	5	13	8	29
North-East	0	3	1	0	0	4
North-West	2	9	4	3	2	20
Northern Ireland	0	0	0	0	1	1
Scotland	4	2	0	1	0	7
South-East	0	11	13	10	5	39
South-West	1	8	5	0	2	16
Wales	1	1	2	0	0	4
West Midlands	0	6	6	2	0	14
Yorkshire and the Humber	2	4	3	1	3	13
All regions	12	58	46	34	23	173

Source: CC analysis.

### Notes:

1. Numbers may not sum due to rounding.
2. Regions defined by NUTS1 categories.

TABLE 5 LOCI (revenue share), by region

Region	LOCI: 0.0–0.2	LOCI: 0.2–0.4	LOCI: 0.4–0.6	LOCI: 0.6–0.8	LOCI: 0.8–1.0	Total private hospitals
East Midlands	1	3	2	1	1	8
East of England	1	4	7	4	2	18
London	0	0	11	9	9	29
North-East	0	3	0	1	0	4
North-West	2	7	5	4	2	20
Northern Ireland	0	0	0	0	1	1
Scotland	4	2	0	1	0	7
South-East	0	5	16	12	6	39
South-West	1	7	5	1	2	16
Wales	1	0	2	1	0	4
West Midlands	0	5	7	2	0	14
Yorkshire and the Humber	1	4	3	3	2	13
All regions	11	40	58	39	25	173

Source: CC analysis.

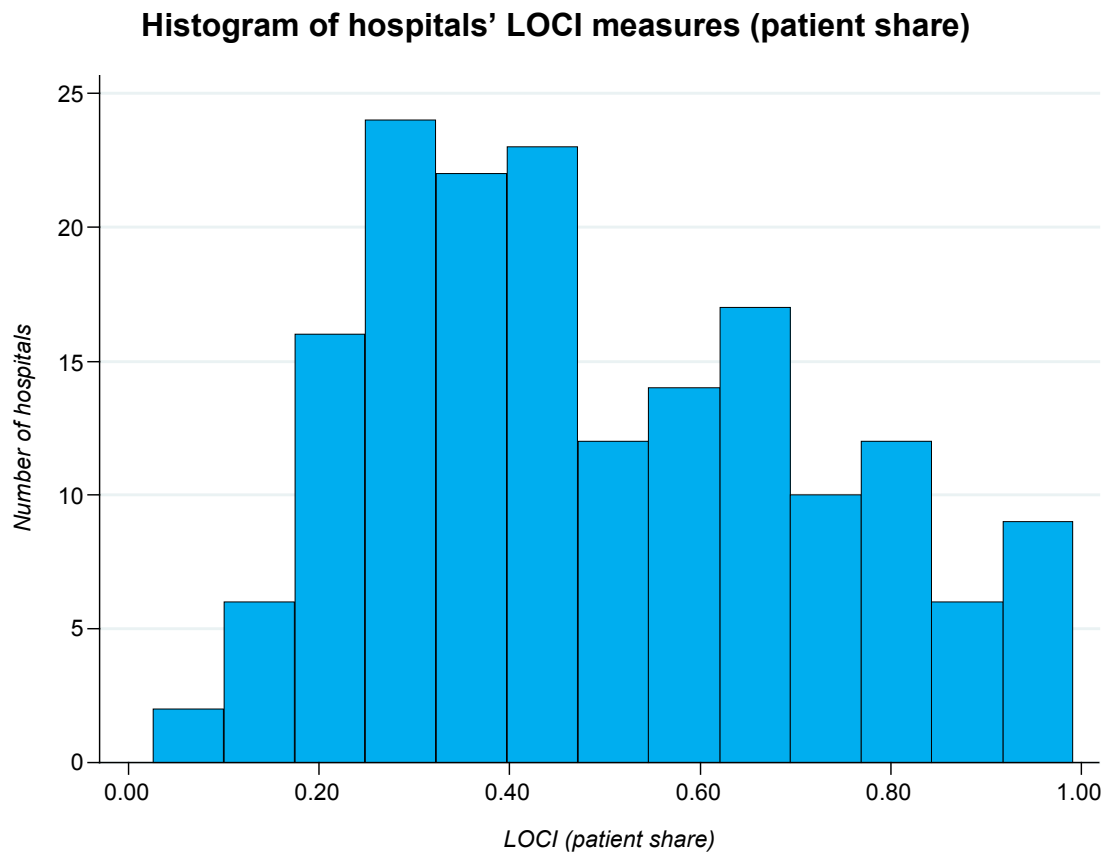
### Notes:

1. Numbers may not sum due to rounding.
2. Regions defined by NUTS1 categories.

30. Table 4 shows that 116 hospitals (12 + 58 + 46) have a LOCI (patient share) of less than 0.6. This corresponds to a weighted average market share of 40 per cent or higher. Table 5 shows the analogous results but calculated with revenue shares, and shows that 109 private hospitals have a LOCI (revenue share) of less than 0.6.

Figure 2 shows the distribution of LOCI (patient share) results for the 173 private hospitals.

FIGURE 2



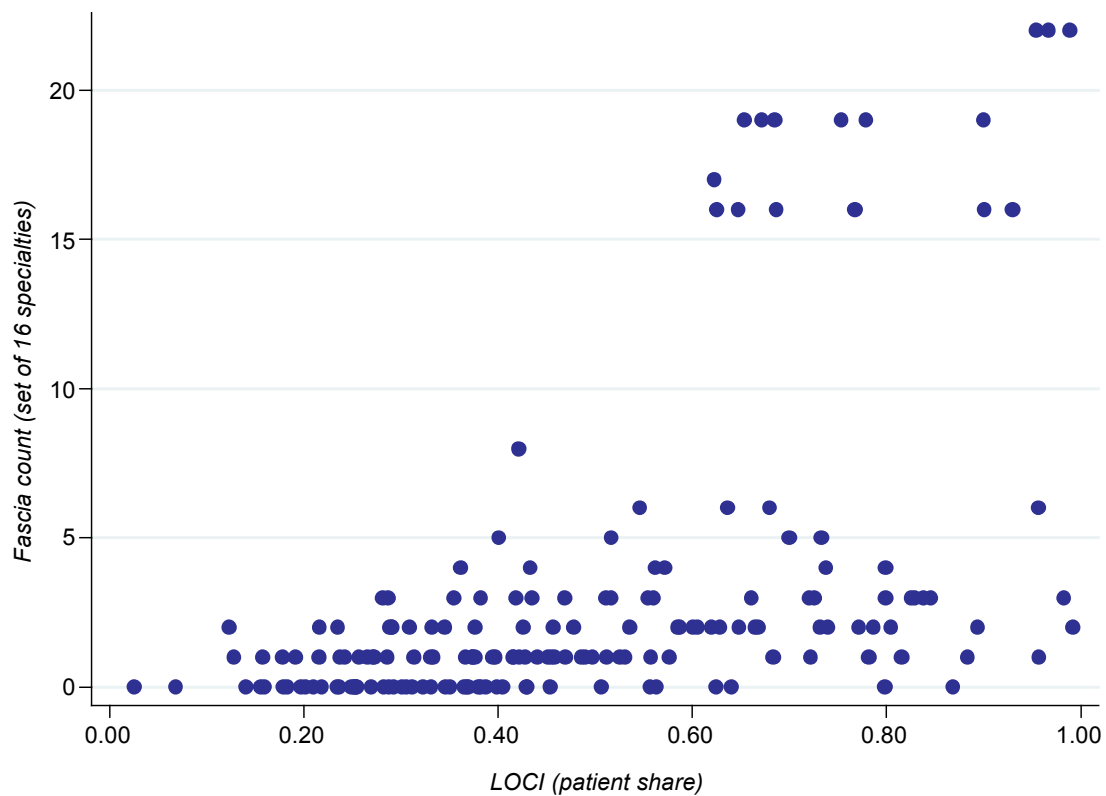
Source: CC analysis.

31. Figure 3 shows a comparison between the LOCI (patient share) measure and the fascia count (set of 16 specialties) measure.



FIGURE 3

### Comparison of fascia count and LOCI



Source: CC analysis.

Notes:

1. One dot corresponds to one hospital site.
2. Overlapping dots may mean that multiple hospital sites appear to be represented by a single dot.

32. Figure 3 shows that the LOCI measure and fascia count measure are positively related.<sup>13</sup> This is expected since hospitals facing fewer nearby competitors (lower fascia count) are expected to have a higher weighted average market share (lower LOCI).

### Hospitals of potential concern

33. We now present the results of applying the filters and thresholds to identify the hospitals of potential concern. Table 6 sets out, for each region and in aggregate for the UK, the number of hospitals identified as of potential concern according to each concentration measure and its associated threshold.

<sup>13</sup> The correlation coefficient is 0.51.

TABLE 6 Hospitals of potential concern, as identified by each filter individually

<i>Region</i>	<i>LOCI (patient share) <math>\leq 0.6</math></i>	<i>LOCI (revenue share) <math>\leq 0.6</math></i>	<i>Fascia count (set of 16 specialties) <math>\leq 1</math></i>	<i>Fascia count (oncology) <math>\leq 1</math></i>
East Midlands	6	6	8	7
East of England	14	12	11	10
London	8	11	5	5
North-East	4	3	2	1
North-West	15	14	12	11
Northern Ireland	0	0	1	0
Scotland	6	6	8	4
South-East	24	21	20	21
South-West	14	13	11	11
Wales	4	3	2	2
West Midlands	12	12	10	10
Yorkshire and the Humber	9	8	10	6
All regions	116	109	100	88

Source: CC analysis.

*Notes:*

1. Numbers may not sum due to rounding.
2. Regions defined by NUTS1 categories.

34. Table 6 shows that, of the four filters, the LOCI (patient share) measure identifies the most hospitals of potential concern (116 of the 173 hospitals for which LOCI calculations are available), and the oncology fascia count identifies the least number of hospitals (88 of the 139 hospitals for which the oncology fascia count was calculated).

35. We now show the results of the filtering exercise when the filters are applied sequentially. Table 7 shows the number of hospitals of potential concern identified by the LOCI (patient share) filter, and then the additional hospitals identified by the other three filters, applied in the order shown from left (LOCI revenue) to right (fascia count, oncology).

TABLE 7 Hospitals of potential concern, as identified by filters applied sequentially

Region	LOCI (patient share) $\leq 0.6$	Additional hospitals identified by: LOCI (revenue share) $\leq 0.6$	Additional hospitals identified by: Fascia count (set of 16 specialties) $\leq 1$	Additional hospitals identified by: Fascia count (oncology) $\leq 1$	Total hospitals of potential concern
East Midlands	6	0	2	0	8
East of England	14	0	1	0	15
London	8	3	0	0	11
North-East	4	0	0	0	4
North-West	15	0	1	0	16
Northern Ireland	0	0	1	0	1
Scotland	6	0	2	0	8
South-East	24	0	6	4	34
South-West	14	0	2	0	16
Wales	4	0	0	1	5
West Midlands	12	0	2	0	14
Yorkshire and the Humber	9	0	2	0	11
All regions	116	3	19	5	143

Source: CC analysis.

Notes:

1. Numbers may not sum due to rounding.
2. Regions defined by NUTS1 categories.

36. Table 7 shows that the total number of hospitals of potential concern is 143 of the 219 hospitals considered.<sup>14</sup> It also shows that 116 hospitals are identified by the LOCI (patient share) measure, and that there are an additional 27 hospitals (3 + 19 + 5) identified the other three filters. Of the 11 hospitals of potential concern in London, four of these are located in central London.

37. Tables 8 and 9 show the breakdown of the 143 hospitals of potential concern by type of hospital (private general hospital, general PPU, private specialized hospital and specialized PPU), and by operator.

<sup>14</sup> In our AIS we noted that our filters had identified 147 hospitals of potential concern. The reduction from 147 to 143 hospitals of potential concern has been caused by two data updates: (a) a correction to the Healthcode revenue data; and (b) an update to the list of PPUs providing oncology services. Update (a) led to three hospitals being removed from the list of hospitals of potential concern. Update (b) led to a number of hospitals being reclassified as oncology providers (when previously they had not been) and this led to a net decrease of one hospital of potential concern.

TABLE 8 Hospitals of potential concern, split by hospital type

<i>Hospital type</i>	<i>Total hospitals</i>	<i>Hospitals of potential concern</i>
General private hospitals	164	126
General PPUs	51	17
Specialized oncology private hospitals and PPUs	4	0
Total	219	143

Source: CC analysis.

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Note: Numbers may not sum due to rounding.

TABLE 9 Hospitals of potential concern, split by operator

<i>Operator</i>	<i>Total hospitals</i>	<i>Hospitals of potential concern</i>
BMI	60	[REDACTED]
HCA	10	[REDACTED]
Nuffield	31	[REDACTED]
Ramsay	22	[REDACTED]
Spire	36	[REDACTED]
Other—general private hospitals	19	[REDACTED]
Other—general PPUs	40	[REDACTED]
Other—specialized oncology hospitals	1	[REDACTED]
Total	219	[REDACTED]

Source: CC analysis.

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Note: Numbers may not sum due to rounding.