

Private healthcare market investigation

Submission and response to
Annotated Issues Statement:

Nuffield Health

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NON-CONFIDENTIAL VERSION

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Introduction

- 0.1 Nuffield Health welcomes the opportunity to respond to the Competition Commission's (CC's) Annotated Issues Statement (AIS). Overall, we believe the AIS shows some welcome developments in the CC's thinking. We hope that our comments will prove helpful to the CC and we look forward to further engagement throughout the remainder of this investigation.
- 0.2 Nuffield Health acknowledges that some hospital operators are making supernormal profits, and believes this to be caused by a number of the theories of harm under investigation by the CC. As such, this response is structured by considering:
1. Anticompetitive behaviours that are the key drivers of supernormal profit (*which Nuffield Health believes are different in London to the rest of the UK*)
 2. Anticompetitive behaviours that are detrimental to the consumer/patients in other ways
- 0.3 In summary, we argue that the high proportion of [REDACTED] 'must-have' hospitals across key corporate markets [REDACTED] cause the greatest distortionary impacts on competition.
- 0.4 We also include a collection of appendices at the back of this submission for the CC's consideration. These cover a range of areas in support of our main response:
1. **Comparative cost base analysis**
This appendix details calculations showing high level financial analysis of the cost base of Nuffield Health and other operators
 2. **Impact of price increases in insured vs. self-pay market**
This appendix details the ROCE sensitivities to changes in pricing in the insured and self-pay segments
 3. **Strategic PMI markets identified using corporate activity**
This appendix builds on Nuffield Health's previous modelling exercise, identifying the most important geographic markets where PMIs require coverage
 4. **Methodological feedback on CC analysis to-date**
This appendix covers market definition, concentration, and regression analyses
- 0.5 To be clear, if we have not addressed a particular issue raised by the CC, or do not provide supporting evidence, this should not be taken to mean that Nuffield Health agrees with the suggestions set out in the AIS.

1. Nuffield Health response to the AIS

1.1 In this submission, we will explain how:

- [REDACTED] have captured national insurer networks through their concentration of 'must-have' facilities.
- In central London, [REDACTED] confer market power during insurer negotiations.
- Hospital operators use this leverage to negotiate higher prices for their insured volumes, to drive an increasing proportion of insured procedures through their portfolio of hospitals, and to maintain universal PMI network approval.
- These market dynamics are self-reinforcing and are resulting in an increasingly concentrated market at the national level and barriers to entry at a local level.
- [REDACTED] closed and infrequently tendered [REDACTED] network has distorted the market, resulting in high levels of concentration in some of the UK's highest PMI-penetrated regions.
- The key barriers to entry and expansion are exclusive networks and consultant incentive schemes. Were they **both** banned, [REDACTED] would be highly likely to enter these markets through investing in hospitals, increasing competition locally and nationally.
- Ultimately, these conditions result in higher prices, reduced choice, and a continual and inevitable decline in the market for private healthcare.

Drivers of supernormal profit in privately-funded healthcare

1.2 Nuffield Health agrees with the CC's assessment that the high levels of ROCE of certain private hospital operators are likely indicators of supernormal profitability.

1.3 These profits signal the erosion of consumer surplus in the form of higher PMI premiums and self-pay prices.

1.4 Furthermore, supernormal profit levels have also inflated hospital valuations, which increase the overall level of debt in the industry as certain providers look to grow by acquisition. This harms the consumer in 2 principal ways:

- Servicing these high debts leaves less capital available for hospital investment.

- Only providers making supernormal profits can justify acquiring assets with supernormal valuations (given firms' differing expectations for ROCE). This leads to further market consolidation, and reinforces the market power of leading hospital operators.

1.5 Nuffield Health is concerned that these supernormal profits are only being maintained through [REDACTED].

1. Hospital operators with market power are able to negotiate higher prices, greater volumes, and near universal network approval with PMIs.
2. This generates higher levels of ROCE, which are deployed selectively by larger operators to increase the leverage of their 'must-have' hospitals during insurer negotiations.
3. Selective investment is focussed on areas of hospital spend that attract consultants and lock in volumes across strategic insurer markets. We would therefore like the CC to investigate:
 - The quantum and spread of hospital investment by operators of scale.
 - The type of investment being prioritised in 'must-haves'. Nuffield Health contends that investments made are not targeting an improvement in patient services but rather aim to create barriers to entry and expansion through direct and indirect forms of consultant incentivisation. In particular the CC should look out for:
 - Direct and indirect financial incentives (including equity, administrative support, consultant loans etc)
 - Investments in specific types of equipment demanded by consultants. Spend on these machines will often be hard to justify from the patient's perspective, as their marginal cost will exceed patients' marginal social benefit from their usage.
 - Examples might include research scanners and Da Vinci robots in certain lower volume markets.
4. These activities raise barriers to entry in strategic insurer markets and increase the leverage conferred by must-haves during future negotiations with insurers. This

makes it difficult for new entrants¹ to develop a competitive offering in strategic insurer markets.

5. Paradoxically, this has resulted in high levels of concentration across some of the UK's highest PMI-penetrated markets. If these markets could be fairly contested, they would present the most compelling business cases for market entry.

1.6 Nuffield Health also noted with interest the CC's analysis suggesting its 'profitability' is far closer to the 'normal' rate than many competing hospital groups. While we will respond to the CC's paper on profitability separately, at this juncture we would like to draw out three main observations:

1. Nuffield Health's lower ROCE is not due to cost or efficiency factors (see appendix A), but rather can be explained by the lower insured prices it negotiates with some PMIs and the increasing proportion of insured procedures that are directed through certain dominant hospital groups. This is hopefully apparent from the CC's information gathering exercise.
2. Nuffield Health is unique among rival hospital groups in investing 100% of any surplus generated back into healthcare, improving the quality of its offering to patients.
 - Over time, Nuffield Health's investment is distributed across the full range of its facilities, rather than only in those hospitals which confer leverage in insurer negotiations.
 - Nuffield Health's charitable status requires it to invest 100% of its surplus in delivering its charitable objectives. Given some of the competitive distortions outlined in this paper, Nuffield Health believes it can only compete in this market by continuing to reinvest a high percentage of its surplus in capex. Were Nuffield Health also required to pay a return to shareholders, it would become unable to compete on quality in these markets. Ultimately, these pressures will likely result in a concentration of the non-charitable operators in the market.
 - [REDACTED].
 - [REDACTED].
3. Higher levels of competitors' ROCE are likely due to a combination of [REDACTED] behaviours including: [REDACTED].

¹ Market entry encompasses both new facilities and incumbents looking to expand their specialty offering

- ROCE disparities can only be maintained longer term if [REDACTED] 'must-haves' [REDACTED] continue to be insulated from competition.
- We contend that hospitals cannot maintain financial viability without gaining approval on [REDACTED] network.
- [REDACTED].
- [REDACTED].
- [REDACTED].

1.7 [REDACTED].

- [REDACTED].
- [REDACTED].
- [REDACTED].
 - [REDACTED].
- If exclusive networks and consultant incentives were removed, a virtuous cycle would evolve over time, owing to the increasingly compelling proposition of establishing new hospitals.
- Investment in new hospitals would flow first into strategic markets, most likely containing 'must-have' hospitals. This would decrease the leverage conferred by the incumbent's facility during national insurer negotiations, whilst also increasing competition in the local market, placing downward pressure on self-pay prices and increasing the incentive to innovate.

1.8 Were the CC to disagree with Nuffield Health on its assessment of the barriers to entry and expansion generated by [REDACTED] closed [REDACTED] network, we would appreciate their antithetical explanation of why the UK's most attractive regional markets are so concentrated.

1.9 These market dynamics have some worrying implications for the private healthcare industry as a whole. The overall decline in PMI policies can be understood as the inevitable consequence of the [REDACTED]. The vicious cycle works thus:

- Premiums increase to fund and sustain the supernormal profitability of hospital groups that leverage must-haves and scale during insurer negotiations.
- Demand contracts, particularly for individual consumers of PMI.
- The volume of insured patients declines leaving overcapacity in an operationally leveraged fixed-cost market.
- Those providers making only normal levels of profit are the first to drop out of the market.
- Concentration in the provision of the remaining hospitals increases, which enables hospitals to extract even higher prices in future negotiations with insurers and the cycle repeats.
- This may go some way to explaining why from 2007-2010:
 - The average PMI policy price increased by 4% per annum
 - The number of insured individuals dropped by 3% per annum
(Note: this is likely to also have been driven by improvements to NHS services and the prevailing macroeconomic climate)
 - The revenue share of the largest 3 hospital operators increased from 46% to 51%
 - The average EBITDAR of the largest 3 hospital operators increased from 21% to 26%²

1.10 Building on 1.6.3, Nuffield Health believes that whilst a number of theories of harm combine to contribute to supernormal profits, the most important factors will be different in London to the rest of the UK:

- Across the rest of the UK, hospital group leverage in insurer negotiations (theory of harm 3) is the most material factor influencing high competitor ROCE's.
- In London, barriers to entry and expansion (theory of harm 5) is the most important factor causing the generation of supernormal profit.

² Laing's Healthcare Market Review 2011-2012

- To substantiate these assertions, Nuffield Health has laid out a summary of how the CC's theories of harm contribute to supernormal profits by region below:

Drivers of supernormal profit in the 'Rest of the UK'

- 1.11 The key driver of supernormal profit in the rest of the UK is the way in which hospital groups of scale leverage their must-have facilities during national insurer negotiations.
- 1.12 As the CC has correctly observed, theories of harm 1 and 3 are intrinsically intertwined, in that hospital operators derive some of their leverage in insurer negotiations from the local market power of their portfolio of hospitals.
- 1.13 Anticompetitive behaviours distorting competition in the insured market segment have a far more material impact on hospital groups' supernormal profit than those distorting the self-pay market for the following reasons:
- The self-pay segment is far smaller, comprising 20% of total UK patient volumes. Of that 20%, one third³ is cosmetic, making the in-scope market share of self-pay closer to 14%.
 - In the self-pay segment, market power can only be leveraged across a small number of 'solus' hospitals. These hospitals are typically smaller and address PMI markets that cannot support an additional hospital.
 - Conversely, in the insured market segment, negotiating higher prices impacts all group hospitals, and addresses a higher proportion of patients in each hospital (c.80%).
 - To illustrate this point, we suggest the CC consider the impact of an equivalent percentage increase in price for addressable volumes in insured and self-pay markets. For insured patients this would impact pricing across a hospital group's entire portfolio, and for self-pay patients this would only affect pricing in 'solus' hospitals. Nuffield estimates that insured price increases would cause a **ROCE uplift that is 8-to-21 times more pronounced** than an equivalent increase in self-pay pricing (see appendix B for calculations).
- 1.14 For that reason we urge the CC to reflect on Nuffield Health's belief that outside of London, [REDACTED]influencing national insurer negotiations are **the central issue** of this investigation. Theory of harm 3 addresses the larger insured segment (80%), and market failure during national insurer negotiations is causing the most widespread harm to consumers through higher PMI premiums and/or lower quality treatment.

³ Ibid.

- 1.15 Nuffield Health welcomes the CC's acknowledgement that local market power does not necessarily translate directly into hospital operator leverage in national negotiations with insurers. While Nuffield Health strongly agrees that scale plays a material role, we also refer back to our initial response to the CC's statement of issues (points 3.7 - 3.9).
- 1.16 Scale and local market concentration must be considered alongside the importance of a geographic market to insurers. Only then can you assess the credibility of an insurer's threat to exclude a hospital from its network. These delisting threats carry no weight whatsoever in instances where the market is both strategic and concentrated.
- 1.17 Unfortunately, the CC's analysis to date has not paid sufficient attention to **the varying importance of different geographic markets**. As Nuffield Health laid out in its initial response to the Statement of Issues, PMIs require coverage across all of the UK's corporate hotspots in order to have a credible offering to large businesses. This coverage is all the more important in light of the fact that corporates purchase 74% of all PMI policies in the UK⁴.
- Nuffield Health could not see evidence from the CC's employer survey that corporates have a strong preference for the hospitals of one group over another. It appeared that corporates' primary concern in this area was for sufficient geographic coverage. We were therefore surprised that PMIs had not been asked in greater depth how or why they construct networks and what drives the importance of a given hospital to an insurer.
- 1.18 Nuffield Health maintains that 'must-have' hospitals are those that insurers have little or no choice but to recognise on their network if they are to have a credible offering to large corporates. For a hospital to be must-have it must:
- Be located in a geography with high corporate or PMI policy penetration
 - Have a high local market share
- AND/OR
- Uniquely provide the market with a wide variety of specialties or a particular given specialty⁵
- 1.19 Therefore hospital operators with a stronghold in these strategic markets have the greatest leverage in insurer negotiations. While this has been acknowledged to some extent in appendix D, we don't believe this **has been methodologically incorporated into the CC's quantitative analysis**.
- Our approach to identifying markets with high corporate / PMI penetration is set out in our previous submission. We believe the CC needs to carry out a similar

⁴ Laing's Healthcare Market Review 2011-2012

⁵ For further information on 'must-have' classification, see the Nuffield's model explanation presentation submitted in August 2012

analysis **to identify those markets that are of strategic importance to insurers**, and have set out our view on identifying those markets in appendix C.

- [REDACTED].

1.20 [REDACTED]. Such legislation presumes a defined product market with a reasonable degree of supply-side substitutability. The requirement of PMI's to offer coverage across most or all of the above markets means that insurers are not presented with a viable substitute when contracting with must-haves. As the CC's conversations with insurers will no doubt have elucidated, it is [REDACTED] concentrated presence in the above local markets that confers market power, and conflating that with [REDACTED] national market share is misleading.

1.21 Due to [REDACTED] concentrated presence in strategic insurer markets, PMIs are unable to extract 'competitive' market prices for their consumers [REDACTED].

1.22 This leverage causes long-term harm to the industry by attributing price-making power to [REDACTED]:

- Larger hospital groups develop a pricing proposition to PMIs that can only be managed downwards through volume related discounts.
- [REDACTED] in the long term they increase levels of market concentration.
- This is due to the disproportionate effect that network exclusion has on insured patient volumes (consultant drag) and the resultant decline in the economic feasibility of excluded hospitals.
- This long-term trend of increasing market concentration is placing ever greater leverage in the hands of the largest hospital operators. Nuffield Health contends that even if volume related discounts are achieved, prices still remain above levels expected of a competitive market.

1.23 Leverage in national insurer negotiations is also maintained by hospital groups through barriers to entry and expansion. Outside of central London, the most material barriers to expansion are **consultant incentive schemes** and **closed PMI networks**. [REDACTED]:

- [REDACTED].

– [REDACTED].

– [REDACTED].

– [REDACTED].

▪ [REDACTED].

▪ [REDACTED].

▪ [REDACTED].

1.24 These [REDACTED] behaviours not only contribute to the supernormal profit of hospital operators today, but also ensure the continuing competitive distortions in the market moving forward. The aforementioned divergence in profitability is utilised by dominant operators to fund a consultant proposition specifically designed to induce consultant drag, severely limiting the ability of local rivals to continue to compete in the market (see 1.4).

1.25 Any remedies considered by the CC need to address the following distortions:

- Hospital groups leveraging their facilities in important and relatively concentrated PMI markets.
- Concentration increases brought about by large, closed and infrequently tendered PMI networks.
- Barriers to entry brought about by monetary and non-monetary consultant incentivisation.
- All three of these distortions need to be addressed together if the CC is to effectively foster competition at the local and national level.

Drivers of supernormal profit in London

1.26 Nuffield Health welcomes the CC's comments around the distinctiveness of the London market. As the region with both the highest concentration of corporates and the highest PMI policy penetration, you would expect it to be the most fiercely contested market.

1.27 However, despite London being the UK's most sizeable demand hotspot, and the one market in which all PMIs require comprehensive coverage, only HCA (of the big 5 hospital groups) have a credible offering in central London.

1.28 Furthermore, Nuffield Health fully anticipates that the CC's profitability analysis demonstrated that HCA are making relatively high supernormal profits. This characteristic contradicts the equilibrium anticipated were London free from competitive distortions.

1.29 Economic theory dictates that supernormal profits signal an incentive for new players to enter the market. Nuffield Health therefore contends that [REDACTED] persistently high ROCE figures can only be understood in the context of **atypically high barriers to entry**.

1.30 Despite the attempts of many hospital groups to gain a foothold in this market, two factors have repeatedly stood in their way: **consultant incentivisation schemes** and **vertical integration**.

- [REDACTED].
 - [REDACTED].

- [REDACTED].
 - [REDACTED].

- [REDACTED]

- [REDACTED].
 - [REDACTED].

1.31 [REDACTED]:

1.32 While theory of harm 3 is clearly relevant in the central London market, national bargaining relations are not the underlying cause of [REDACTED] market power, [REDACTED].

- This market power imposes a cost on PMIs that is spread across all consumers with policies offering national coverage. Such costs are therefore borne nationwide, and are not contained to the London area.
- The difficulties in entering this market can be further understood given the self-reinforcing cycle of market power laid out in 1.5. Without intervention, Nuffield Health believes upward pressure on prices for PMIs will continue.

1.33 [REDACTED].

Other comments

Theory of harm 1 findings

1.34 We acknowledge the CC's findings around theory of harm 1, but would like to raise the following points:

- Nuffield Health's self-pay pricing differs from competitors in that we offer an all-inclusive treatment price to the patient. This guarantees the cost of treatment for patients, and includes the following (often excluded) areas of spend:
 - Preadmission diagnostic tests
 - Prosthesis charges
 - High value drugs and consumables
 - All post discharge outpatient treatment (e.g. physiotherapy)
 - Any readmission to hospital within 30 days due to medical complications⁶
 - Paediatric supplements
 - Extended length of stay
 - Multiple procedures during the same operation
 - 6 further areas of cost explored in more detail in appendix D

- We are concerned that these differences have not been sufficiently incorporated into the CC's calculations for 'episode prices' (see appendix D). We would therefore appreciate the opportunity to verify the CC's adjusted pricing data for its hospitals.

- Nuffield Health also prices differently to competitors for certain insured-patient volumes, again taking on more revenue risk. Our pricing proposition to insurers has the same all-inclusive provisions detailed in the previous self-pay pricing section. This is likely to influence Healthcode data, and will potentially have impacted the CC's revenue-based concentration metrics.

- These aforementioned pricing differences are not negotiating tactics, but rather attempts by Nuffield Health to align its interests with the consumer. Nuffield Health is surprised that the CC has not looked into the moral hazard induced by hospital group charging structures. Incremental fees that are not visible to the patient / PMI

⁶ Arising from original procedure

at the beginning of treatment potentially expose consumers to unnecessarily lengthy or expensive episodes.

Consultant groups

- 1.35 We believe all consultant group specialties are an issue – not just anaesthetist groups. Indeed surgeons have far greater leverage than anaesthetists in hospital operator negotiations given their control over where the patient is treated. [REDACTED]:

Information availability

- 1.36 The proposed solutions for information asymmetries should go further. The project Hellenic initiative is insufficient for patients and GPs to make an informed choice about treatment. Nuffield Health believes information provision should focus on the factors affecting a patient's choice of consultant and hospital. These would include patient-reported outcome measures and consultant-based data.
- 1.37 Were sufficient information available, this could place downward pressure on high self-pay prices observed in relatively concentrated local markets (ToH 1).

NHS competitive neutrality

- 1.38 Nuffield Health was disappointed that the CC has not pursued a line of inquiry around the NHS's competitive neutrality. For a full exploration of these issues, we refer back to section 5 of our original response to the Statement of Issues.
- 1.39 Nuffield Health is concerned that two key factors will start to alter the composition of the market:
- The lifting of the private revenue cap for publically owned providers to 49%.
 - The material cross-subsidisation of private NHS services.
- 1.40 Nuffield Health believes PPUs are cross-subsidised for financing costs (e.g. pensions), capital costs, equipment costs, and ancillary service costs.
- 1.41 These two prevailing competitive distortions will give PPUs the capacity and the incentive to price below the level of a fully efficient private hospital operator, which would constitute de facto predatory pricing if revised upwards after gaining market share.
- 1.42 We are already beginning to see the effects of cross subsidisation on the composition of the market for privately funded healthcare. Since the lifting of the private revenue cap,

PPUs have grown far more quickly than the wider market, implying a material increase in market share.

Conclusion

1.43 Nuffield Health appreciates that the AIS is a work in progress, and that the CC is only part way through its investigation. We anticipate that some of the key points in this submission will be addressed by the CC during the next stages of this inquiry.

1.44 However, given the magnitude of these market distortions, Nuffield Health still thinks it important to highlight areas still requiring the CC's attention, notably:

- The importance of key geographic markets for corporates in assessing a hospital's market power and 'must-have' status
- The dominance of [REDACTED] in London

1.45 As highlighted in this submission, Nuffield Health believes that these factors not only need to be recognised and further investigated by the CC, but that any potential remedies should consider:

- Stopping larger hospital groups presenting a pricing proposition to PMIs (through leveraging their must-haves), that gives insurers little choice but to direct the highest feasible proportion of their volumes through those providers.
 - This remedy will need to consider the pricing penalties imposed on PMIs for just contracting with a subset of a hospital group's facilities, or an insurer's choice to spread volumes more evenly between providers in particular markets. These pricing propositions constitute an indirect form of tying and are to the consumer's detriment. These prevailing market dynamics meant that competition at the local level is no longer stimulating pricing competition, differentiation through improved quality, and/or increasing levels of innovation.
- Stopping consultants engaging in rent-seeking behaviour through collective bargaining with hospitals. Nuffield Health believes hospitals should compete for consultants on the quality of service they provide to patients, not the quantum of (direct or indirect) incentives offered to their doctors.
- Stopping all factors contributing to further market consolidation. This will likely require:
 - [REDACTED].

– [REDACTED].

1.46 Without intervention, Nuffield Health believes that the private healthcare market will continue to decline. However, we are also hopeful that a vicious cycle can be transformed into a virtuous cycle if the CC intervenes appropriately.

1.47 Were hospital groups encouraged to compete for patients solely on the quality and pricing of their facilities, Nuffield Health believes the private-healthcare sector would flourish:

- Without the barriers to entry caused by exclusive networks, hospital operators will be incentivised to enter strategic markets where incumbents are making supernormal profit.

– [REDACTED].

- This will place downward pressure on pricing in self-pay markets and reduce the leverage of large hospital groups in insurer negotiations. The latter will enable PMIs to secure better prices, and premiums should reduce accordingly. This should cause an extension in demand for PMI policies, growing the overall market.
- In turn, market growth makes building hospitals in certain regions more compelling economically, incentivising further investment and innovation. The cycle then repeats, with the patient being placed back at the centre of private hospitals' proposition.

1.48 Having said that, the CC should beware that the longer the market goes without intervention, the more concentrated the market becomes, making this virtuous cycle less attainable. The CC will also have to be careful not to place too much power back into the hands of leading PMI's [REDACTED]; to avoid producer surplus merely shifting from hospital groups to PMIs.

2. Appendix A: Comparative cost base analysis

2.1 [REDACTED].

2.2 [REDACTED].

2.3 [REDACTED].

Analysis of cost base

2.4 [REDACTED]:

- [REDACTED].

- [REDACTED].

2.5 [REDACTED].

Figure B

2.6 [REDACTED].

Figure C: [REDACTED].

3. **Appendix B: Impact of price increases in insured vs. self-pay market**

3.1 Nuffield Health has estimated the relative difference in impact on EBIT and hence ROCE of a 10% increase in insured prices vs. a 10% increase in self-pay prices within solus hospitals by considering:

- The relative volumes of insured vs. self-pay procedures impacted
- The applicable hospitals where prices raises can be made

3.2 Nuffield Health calculates the relative difference in price increase as follows:

	Insured prices	Self-pay prices
Applicable volumes of procedures <i>(based on 2010 data taken from the Laing's Healthcare Market Review 2011-12)</i>	• 58.5%	• 13.9%
Applicable hospitals	• 100% (national pricing agreements)	• 20-50% (only in solus hospitals)
Impact on revenue/ EBIT	• 10% x 58.5% x 100% = 5.9%	• 10% x 13.9% x 20-50% = 0.3% - 0.7%
<i>The same increase in insured prices is likely to have a 8-21x larger impact on ROCE</i>		

4. Appendix C: Strategic PMI markets identified using corporate activity

- 4.1 Nuffield Health believes that the CC should investigate the relative importance of each hospital/ hospital market to a PMI with regards to building a network.
- This should be done through gaining feedback from PMIs, and understanding the basis on which they negotiate with hospital operators and construct networks.
- 4.2 Nuffield Health maintains that the level of corporate activity in a given hospital market is an important factor in determining the relative importance of that hospital market to a PMI provider.
- This is because corporates account for 74% of the PMI market (and hence 60% of the overall PMI and Self-pay market).
- 4.3 As such, Nuffield Health believes the CC needs to consider this in order to understand which of its identified ‘hospitals of potential concern’ award market power to their operator.
- Nuffield Health’s analysis of insurer markets and ‘must-have’ hospitals presented during the Leeds site visit and contained in our response to the CC’s Statement of Issues incorporated level of corporate activity and attempted to identify those hospitals that award market power.
- 4.4 In carrying out this analysis, Nuffield considered a number of approaches to identifying markets with high levels of corporate activity, including:
- Registered addresses of employers with over 1000 employees
 - Number of big 4 audit companies with a local office (PWC, KPMG, Deloitte, E&Y)
 - Population
- 4.5 Individually, all of these methods have the potential to throw up anomalies, but do serve the general purpose of identifying and ranking markets with high levels of corporate activity.
- We refer you to slides 12 – 15 of our model annex presentation sent across as part of our previous submission.
 - We also include data for the number of registered addresses of employers with over 1,000 employees in figure D. This is for illustrative purposes.

- Whilst this is a useful proxy, it is no substitute for understanding the relative importance of the different hospital markets directly from PMIs.

Figure D: Proxy for corporate activity

City/Town	No. registered offices
London	815
Leeds	54
Manchester	47
Birmingham	47
Bristol	41
Glasgow	40
Reading	40
Edinburgh	37
Uxbridge	31
Newcastle	30
Warrington	27
Leicester	27
Nottingham	26
Hemel Hempstead	23
Liverpool	23
Milton Keynes	22
Aberdeen	21
Crawley	20
Coventry	19
Watford	19

5. Appendix D: Methodological feedback on CC analysis to-date

This appendix covers Nuffield Health's comments on:

- Market definition
- Measuring local market concentration
- Regression analyses linking concentration and self-pay price
- Findings of the CC's regression analysis

Market definition

- 5.1 Nuffield Health is aligned with the CC on their methodology for choosing 'in-scope' hospitals, and considers the 215 inpatient facilities under investigation to be a credible total when aiming to delimit the UK market.
- 5.2 Nuffield Health also understands the CC's reasons for narrowing its focus to inpatient only services, but presents 2 challenges for the CC's consideration:
- Day and outpatient procedures will comprise an increasing proportion of hospital operators' revenue moving forwards.
 - When analysing procedures that are predominantly performed in a day or outpatient setting (e.g. cataracts), be aware of statistical bias caused by:
 - a. Only reviewing inpatient volumes and revenues for these procedures.
 - b. Only considering inpatient facilities when linking prices for these procedures to local market concentration.
- 5.3 Nuffield Health agrees with the CC's decision to analyse the London market separately. As we laid out in our previous response to the Statement of issues, the London hospital market has a number of distinct features that must be taken into account and incorporated into the CC's methodology when assessing the market :
- **Patient travel dynamics**, which differ due to London's extensive urban area, reliance on public transport and levels of congestion.
 - **The level of corporate activity in London**, acting as a daily hub of privately insured consumers in the central London area.

- **The importance of the central London market** driven by the concentration in value of the London market within the central London area.
- **The different product mix vs. the rest of the UK**, which includes much higher levels of self-pay, international and tertiary work than the rest of the UK.

Measuring local concentration

Fascia count

- 5.4 Nuffield Health agrees with the CC's view that fascia counts are a simplistic and limited analytical tool for identifying competitive intensity in local markets. We would argue that after 'hospitals of potential concern' have been filtered, the metric should be dropped all together.
- 5.5 We were unclear whether postcode data for our patients was taken exclusively from the insured segment via Healthcode, or if distances travelled by self-pay patients have also been factored into this analysis. If the former, Nuffield Health points to one further deficiency with the fascia count metric. While we appreciate the aim was to construct 'a conservative catchment area' by looking at the distances travelled by the 80th percentile of insured patients, Nuffield Health's catchments are likely to be more conservative and less representative than competitors.
- The CC acknowledges that 'insured patients generally travel shorter distances than self-pay patients' for treatment. Given that self-pay patients comprise a greater proportion of Nuffield's overall volumes than competitors, when compared to the true catchment that 80% of patients are drawn from, estimates for Nuffield are likely to be atypically conservative, especially in markets where its hospitals are excluded from the AXA network.

LOCI

- 5.6 Nuffield thinks the network ownership LOCI metric is a sensible way of approaching local market concentration. Indeed the comparability of patient volume data (as opposed to revenue data) suggests that using this as the primary filter for hospitals of potential concern is a sensible approach.
- 5.7 This metric may however overstate Nuffield Health's market share given its lower revenue per patient than its main competitors.
- 5.8 Nuffield Health does have concerns that network ownership revenue LOCI figures may downplay the market shares of some of our competitors in our local markets. This is due to the difficulty in adjusting Nuffield Health's Healthcode data to make direct comparisons with competitors across the CC's 17 chosen specialties.

- Nuffield Health's procedure invoices as contained in Healthcode include a broad set of services. Nuffield Health is concerned that for other operators the equivalent set of services will be spread across multiple line items in Healthcode, and therefore if these multiple line items are not factored in, Nuffield Health's revenue per procedure will be artificially inflated.
- We would appreciate the opportunity to sense check the cleaned Healthcode revenue data for our hospitals, along with a detailed explanation of what procedures and services of each of the 17 chosen specialities those revenue figures are supposed to account for.

5.9 As a final point on LOCI, Nuffield Health notes that 215 hospitals have been used to calculate fascia counts, however when LOCI is calculated, 8 further 'specialized hospitals' have been included (as detailed in AIS appendix B).

- Nuffield Health would appreciate a little more clarity around why this is the case.

Thresholds for identifying hospitals of concern

5.10 It is difficult for Nuffield Health to understand the appropriateness of the threshold level without knowledge of the hospitals identified, but we would raise the following as considerations for the CC.

- We suggest that the best way to gain feedback on thresholds for 'hospitals of concern' is to sense-check output against feedback from PMIs.
- Providing all of those hospitals Nuffield Health identified in its work carried out for the previous submission as conferring leverage in insurer negotiations have been flagged as hospitals of concern, we are satisfied with this initial filtering exercise.
- A key part of that work was identifying hospitals located in geographic areas of high corporate concentration/ PMI demand. As outlined in the main submission and appendix 3 we would expect corporate concentration/ PMI demand to be an important consideration in the more nuanced assessment carried out on the hospitals of concern.

Local market concentration and self-pay markets

5.11 When the CC has looked at 'invoice-by-invoice' pricing for self-pay patients, Nuffield Health want to ascertain exactly how the appropriate deductions have been made to calculate 'episode price'.

5.12 Unlike other hospital providers, Nuffield Health offers the patient a transparent all inclusive price for the cost of their treatment, taking on all the risk were the patient to require an extended period of post-procedural treatment. Nuffield Health's self-pay prices include the following cost elements:

- Prosthesis charges
- High value drugs and consumables
- All hospital services
- All additional costs incurred by the hospital (e.g. hire of equipment or special mattress)
- Multiple procedures (the most expensive procedure performed will be invoiced)
- All additional costs associated with medical complications whilst the patient is at the hospital
- All post discharge outpatient treatment (e.g. physiotherapy, removal of sutures, removal / application of plaster cast)
- Any re-admission to the hospital within 14 days for medical complications arising from the original procedure
- Pre-admission screening tests and any other service necessary to assess the patient's clinical risk prior to admission

5.13 Given this all inclusive package, there is a material risk that without making the appropriate deductions, Nuffield Health's pricing would be artificially inflated vis-à-vis competitors. Having said that, Nuffield Health appreciates that this will not affect analysis run on our data independently.

5.14 While Nuffield Health appreciates the following considerations should not materially impact on the correlation between self-pay pricing and concentration, in the interest of rigour, the CC should also be aware of the following:

- It is unusual to consider only inpatients for cataracts procedures, given that episodes are typically provided in a day-patient or outpatient setting.
- Rhinoplasty following trauma has the same CCSD as elective nose-jobs, so the CC has most probably included out-of-scope procedures in this analysis.

Findings of the CC's regression analysis

5.15 [REDACTED].

5.16 [REDACTED].

- [REDACTED].
- [REDACTED].

5.17 [REDACTED].

Figure E
[REDACTED]

5.18 [REDACTED].

5.19 To improve the robustness of the CC's analysis in this area, we urge an exploration of the reasons why prices of 3 of the 8 treatments chosen showed no correlation with concentration. Surely if concentration was causally related to self-pay pricing levels, that local market power would be levied across all treatments equally.