

Mofidi, Reza and Marrow, Carol (2016) Effects of the NHS reforms on financial sustainability. *British Journal of Healthcare Management*, 22 (11). pp. 561-571.

Downloaded from: <https://insight.cumbria.ac.uk/id/eprint/2533/>

Usage of any items from the University of Cumbria's institutional repository 'Insight' must conform to the following fair usage guidelines.

Any item and its associated metadata held in the University of Cumbria's institutional repository Insight (unless stated otherwise on the metadata record) may be copied, displayed or performed, and stored in line with the JISC fair dealing guidelines (available [here](#)) for educational and not-for-profit activities

provided that

- the authors, title and full bibliographic details of the item are cited clearly when any part of the work is referred to verbally or in the written form
- a hyperlink/URL to the original Insight record of that item is included in any citations of the work
- the content is not changed in any way
- all files required for usage of the item are kept together with the main item file.

You may not

- sell any part of an item
- refer to any part of an item without citation
- amend any item or contextualise it in a way that will impugn the creator's reputation
- remove or alter the copyright statement on an item.

The full policy can be found [here](#).

Alternatively contact the University of Cumbria Repository Editor by emailing insight@cumbria.ac.uk.

British Journal of Healthcare Management

The Effects Health and Social Care Act of 2012 on The Financial sustainability of the Shelford Group of NHS Trusts.

--Manuscript Draft--

Manuscript Number:	bjhc.2016.0019R1
Full Title:	The Effects Health and Social Care Act of 2012 on The Financial sustainability of the Shelford Group of NHS Trusts.
Short Title:	
Article Type:	Original research
Keywords:	Key financial Indicators Shelford group NHS trusts Health and Social care act 2012 HSCA2012
Corresponding Author:	Reza Mofidi, M.B., M.Ch, M.B.A, M.Sc., F.R.C.S. South Tees Hospitals NHS Foundation Trust Middlesbrough, UNITED KINGDOM
Corresponding Author Secondary Information:	
Corresponding Author's Institution:	South Tees Hospitals NHS Foundation Trust
Corresponding Author's Secondary Institution:	
First Author:	Reza Mofidi, M.B., M.Ch, M.B.A, M.Sc., F.R.C.S.
First Author Secondary Information:	
Order of Authors:	Reza Mofidi, M.B., M.Ch, M.B.A, M.Sc., F.R.C.S. Carol E Marrow, BA (Hons), M. Phil, PhD, RGN
Order of Authors Secondary Information:	
Abstract:	<p>Abstract</p> <p>Health and Social Care Act of 2012 (HSCA2012) has transformed the operational and business environment within which NHS trusts in England operate. Shelford group are the leading multi-specialty NHS trusts in England. The aim of this study was to assess the impact of HSCA2012 on the financial position of the Shelford group of NHS trusts. Annual statement of accounts produced by each of the shelford group NHSTs for financial years (FY) 11-12, FY 12-13, FY 13-14 and FY 14-15 were reviewed and the key financial indicators (KFIs) for each organization were collected. KFIs for the period just prior to enactment of HSCA2012 (FY11-12, FY12-13) were compared with the corresponding values for the period after the enactment of HSCA2012.</p> <p>The clinical services provided by the Shelford group increased year on year by 10.6%, 7.5% and 4% respectively as did their combine annual income. In the FY14-15 Shelford group collectively provided 14,735,000 patient care episodes and reported a combined annual income of £9,672,066,000. There was no significant difference in the median operating surplus returned by the Shelford group before and after HSCA2012 despite this 5 of the 10 Shelford group members delivered an operational deficit in FY 14/15. The level of financial liabilities, total capital employed remained stable. There were significant improvements in total assets employed in the Shelford group in the 2 years after the enactment of HSCA2012 compared to before.</p> <p>The financial standing of Shelford group of NHSTs has not been adversely affected by the enactment of HSCA2012, although there was some evidence that the operational finances of these NHS trusts were less robust in FY 14/15 than previous years.</p>

Suggested Reviewers:	
Response to Reviewers:	<p>Reviewer #1: The manuscript offers a large-scale overview of the financial consequences of HSCA2012. As such, it is interesting and valuable potential contribution to the literature. The manuscript can however be improved by following the comments below.</p> <p>Author's Reply: The authors thank reviewer 1 for his/her comments.</p> <p>Abstract:</p> <p>1) No need to report CI, P values in the abstract.</p> <p>Author's Reply: CI and P values have been removed from the manuscript.</p> <p>2) "There were significant improvements in There were significant improvements in total assets employed in the Shelford group in the 2 years after the enactment of HSCA2012 compared to before"</p> <p>=> Part of the sentence is repeated twice</p> <p>Author's Reply: The repeated sentence has been removed.</p> <p>3) The abstract should be more direct and conclusive: what is it that you found? Why does it matter? What are the conclusions that can be drawn and applied to other similar institutions?</p> <p>Authors' Reply: The conclusions of the abstract have been altered and now reads: "The financial standing of Shelford group of NHSTs has not been adversely affected by the enactment of HSCA2012, although there was some evidence that the operational finances of these NHS trusts were less robust in FY 14/15 than previous years."</p> <p>Article:</p> <p>1) The methods section needs to introduce the measurement used, especially in reference to the literature. The measurement detailed in the results section should be moved in the method section.</p> <p>Authors' Reply:</p> <p>This is a good point, the description of, Key Performance Indicators KPIs is moved from the results to the methods section.</p> <p>"Operating Surplus (deficit) is a measure of the extent to which operating revenue meets the costs of providing services. These include depreciation, salaries, staff benefits and material costs of delivering the service. An operating deficit indicates that some of costs incurred are not being met by the trusts income; conversely operating surplus allows the organization to make capital expenditure over and above the level of depreciation or reduce the level of financial liabilities (Rosko 2004). Annual surplus (deficit) includes the operating surplus/ deficit as well as impairments or adjustments caused by depreciation of the value of the assets, revaluation or sale of fixed assets such as property owned by each organization.</p> <p>Changes in the levels of financial liabilities in consecutive financial years record the level by which operational costs need to be covered by borrowings. They may also indicate significant capital expenditure over and above what is covered by the operating surplus or liquidation of assets of an organization. Net financial liabilities ratio is a measure of annual financial liabilities against one year's operating revenues. It is an indicator of the capacity of NHS trust in meeting its financial obligations. The capital employed in each NHS trust on the last day of each FY is the value of the assets of the organization less its current liabilities and indicated the capital investment required for the organization to function as a going concern. Total assets employed is all the assets less all the liabilities of the organization (sometimes called the tax payers' equity in an organization).</p> <p>Market share indicators</p> <p>Clinical activity provided by NHS trusts was classed under 3 headings; in-patient activity, accident and emergency episodes and outpatient activity. Although it is difficult to assess each organizations share of regional healthcare market directly, incomes from the 3 types of clinical activity are reliable surrogate markers of market-share of NHS trusts. These indicators also assess the ability of organizations in maintaining income by increasing clinical activity in the face of reducing tariffs. "</p> <p>2) The discussion is not connected enough to the results. It should explain what the results mean for researchers and practitioners on the topic. In addition, it should</p>

	<p>highlight the limitation of the study</p> <p>Authors' Reply:</p> <p>The authors' have examined the discussion chapter and feel that there is little they can do to improve on it. The fact is that there is little material beyond opinion about the effects of HSCA 2012. This manuscript's results illustrate that the Shelford group had to accommodate significant increases in capacity in 4 years (32%) with a similar increase in income (29%).</p> <p>The discussion section goes through the background to HSCA2012 and discusses the findings of the study in the context of the limited evidence collected by other authors. The following paragraph has been added to the discussion section: "A study such as this one whilst useful provides only a limited view of the health economy in England following the enactment of HSCA 2012. It will take many years for the full effects of HSCA 2012 on the regional health economies to become apparent. The involvement of private sector in the provision of NHS services will take time. Many other factors such as the economic turmoil caused by the United Kingdom's withdrawal from the European Union, chronic shortage of trained staff will impact the financial sustainability of NHS organizations in England for some time to come."</p> <p>Reviewer #2:</p> <p>1. Data show that total income has risen 29% while clinical services rose 22.1%. This needs some explanation. Does this imply that costs per unit of activity have risen or has pattern of activity changed? It seems a large increase to be explained by short term changes in type of case?</p> <p>Authors' Reply:</p> <p>"The Shelford group collectively provided 11,149,175 patient care episodes in the FY2011/12; 13,197,281 in FY2012/13 and 14,188,708 in FY2013/14, and 14,735,000 in FY14/15 representing annual increases of 10.6%, 7.5% and 4% in levels of clinical activity respectively." (This represents a 32.2% increase in clinical activity 4 years). "Combined annual income of these organizations was £7,494,646,000 in FY11/12, £8,472,132,000 in FY12/13 £9,084,857,000 in FY13/14 and £9,672,066,000 in FY14/15 (Figure-2), representing annual increases of 6.6%, 7.2% and 6.4%." (or a 29% increase over 4 years). The increase in income matches the increase in the levels of clinical activity. The difference of over 3 percent in 4 years is the effect of tariff efficiency caused by QIPP.</p> <p>2. There will be questions that the new system has favoured the Shelford Trusts--- their total spend is about the same as the national spend on primary care. Why the large increase in income over these three years?</p> <p>Authors' Reply: There has always been the suspicion that the NHS trusts which form the Shelford group occupy a dominant place in the health economy of the regions they serve due to their size. This is a double edged sword as it means that they have to deal with complex tertiary services which are often not profitable. I do not work for any of these organisations therefore I have no bias towards the Shelford group. Certainly the new system is designed to be more accurate at reimbursing the providers by paying them for clinical services delivered rather than a block contract. The accrual method of accounting which the PbR contracts are based on credits the provider with the payment when the activity is performed rather than when the actual payments are made. It is important to remember that the levels of increases in clinical activity were higher than the increases in income for each of the Trust for every FY studies apart from FY14/15. This is illustrated in Figure 5, 6 and 7 where income per 1000 in-patient, outpatient and emergency cases has remained relatively unchanged.</p> <p>3. How many of the Shelford Group Trusts---if any -- are now in deficit?</p> <p>Authors' Reply: Table-1 lists the annual surplus / deficit from operational activities for each FY from FY11/12 through to FY 14/15. In FY14/15 5 of the 10 Shelford group returned an operational deficit. Table 2 lists the annual surplus / deficit for each FY from FY11/12 through to FY 14/15. This includes adjustments, depreciation, revaluation and sales of property owned by the FTs in addition to the surplus / deficit from operational activities. 4 out of 10 trust returned a deficit in FY14/15.</p>
Additional Information:	
Question	Response
Please enter the word count of your	3013

The Effects Health and Social Care Act of 2012 on The Financial sustainability of the Shelford Group of NHS Trusts.

Reza Mofidi

Carol Marrow

Correspondence: Mr Reza Mofidi MB MCh MSc MBA FRCS

Department of Vascular Surgery

James Cook University Hospital

Middlesbrough, United Kingdom

TS4 3BW

Email: reza.mofidi@nhs.net



The Effects Health and Social Care Act of 2012 on The Financial sustainability of the Shelford Group of NHS Trusts.

Formatted: Different first page header

Abstract

Health and Social Care Act of 2012 (HSCA2012) has transformed the operational and business environment within which NHS trusts in England operate. Shelford group are the leading multi-specialty NHS trusts in England. The aim of this study was to assess the impact of HSCA2012 on the financial position of the Shelford group of NHS trusts.

Annual statement of accounts produced by each of the shelford group NHSTs for financial years (FY) 11-12, FY 12-13, FY 13-14 and FY 14-15 were reviewed and the key financial indicators (KFIs) for each organization were collected. KFIs for the period just prior to enactment of HSCA2012 (FY11-12, FY12-13) were compared with the corresponding values for the period after the enactment of HSCA2012.

The clinical services provided by the Shelford group increased year on year by 10.6%, 7.5% and 4% respectively as did their combine annual income. In the FY14-15 Shelford group collectively provided 14,735,000 patient care episodes and reported a combined annual income of £9,672,066,000. There was no significant difference in the median operating surplus returned by the Shelford group before and after HSCA2012 despite this 5 of the 10 Shelford group members delivered an operational deficit in FY 14/15. The level of financial liabilities, total capital employed remained stable. There were significant improvements in total assets employed in the Shelford group in the 2 years after the enactment of HSCA2012 compared to before.

The financial standing of Shelford group of NHSTs ~~collectively does not appear to have~~ has not been adversely affected by the enactment of HSCA2012, although there ~~may be~~ was some evidence that the operational finances of these NHS trusts were less robust in FY 14/15 than previous years.

Introduction

The National Health Service NHS in the United Kingdom has been facing the simultaneous challenges of meeting growing demands in the presence of constrained resources (Jones 2010). Consequently, it is estimated that the NHS in England needs to make annual efficiencies of 4% in order to sustainably provide the current level of services and cope with projected increase in demand (Roberts 2012).

For over 25 years hospital care has been delivered as an internal quasi-market through which the primary care organizations purchase hospital services from NHS trusts (Raftery 1996). Quazi-markets are institutional structures designed for delivery of public services. The aims of creating market like structures for delivery of healthcare services are to promote efficiency, quality and customer choice, whilst maintaining equity of access to services (Le Grand 1991). Creation and fostering of quazi-markets differ from other forms of microeconomic reform (Le Grand 2007, Nicoletti 2003), Market like structures in healthcare require strong oversight and robust regulation, failure of which could lead to adverse patient outcomes and experience (Francis 2013). Opinions regarding efficacy of quazi-markets as an instrument of public policy remains divided broadly along ideological lines. The experience with previous reforms in the NHS (often disputed) is that once established, they are associated with potential for expanding capacity to match the size of the market without adversely impacting equity of access (Cooper 2009).

Efficiency in healthcare is measured by comparing the output of the healthcare organization against the costs of delivering care (Marshall 2014). Output measurements include assessing

quality, as well as volume of services delivered by an organization during a specified duration of time (Donabedian 2005). Incomes and costs of delivering healthcare are important contributors to value of services provided. In addition to determining the output of organizations by defining the volume and quality of services it is also the numerator in the value equation (Porter 2009):

Value provided by services=Output (volume, quality)/Cost of delivery of services

Financial sustainability of NHS trusts which deliver hospital services is a key variable in determining ability of the system as a whole to deliver quality healthcare services.

Health and Social Care Act of 2012 (HSCA2012) represents the most recent package of healthcare reform in England. In addition to structural changes such as abolition of primary care trusts, and strategic health authorities and replacing them with Clinical Commissioning Groups CCG, HSCA2012 has expanded the market like structure which already exists to the private sector and in return allows NHSTs to utilize up to 50% of their capacity for delivering private services.

A year after enactment of HSCA2012 there was evidence to suggest that NHS trusts in England have been adversely affected (Lacobucci 2014). This may in part be related to inertia in adapting to the new operational environment, including the mode of reimbursement for their services. The new contracts demand that the organizations operate much closer to their productivity frontier (Porter 2010), with the new funding system, lack of efficiency, operational issues such as seasonal demand, bed closures and cancelled sessions would be costly to NHSTs

as they would lose the income and may have to incur further financial penalties(Chalkey 2008). In addition, 6 years of austerity have left the hospital services chronically under-resourced. NHSTs need to compete with private sector providers for delivery of some of the clinical activity which was previously allocated to them. In order to achieve the required business model NHSTs require significant changes to the way they operate. HSCA2012 came to force on 4th of April 2013. NHS trusts had over one year to understand its implications and change their operational strategy. Shelford group of NHS trusts are the leading multi-specialty NHS trusts in England (Hawkes 2013). They have an annual collective turnover which equates to 6% of NHS budget and together employ over 83,000 people. The quality of care and financial health of the Shelford group is a reflection on the conditions in the NHS in England. The aim of this study was to assess the impact of HSCA2012 on the financial position of the Shelford group of NHS trusts.

Methods

NHS trusts are obliged to produce an annual statement of accounts which is collated and authorized by an organization known as the Monitor (DOH 2013). The comprehensive versions of these reports are submitted to the house of parliament in accordance with the National Health Service act of 2006. These statutory documents provide the following information:

- Financial position of NHS FTs
- Levels of clinical activity

Changes in the level of clinical activity in Shelford Group NHS Trusts

Organizational capacity to provide services is an important attribute of any business model for delivery of hospital services. Annual levels of inpatient, outpatient and emergency activity are reliable surrogate markers of organizational capacity and market-share. Examining elective, emergency, inpatient and outpatient services ensured that the study was able to identify if there were any trade-offs in delivering clinical care. An example of such a trade-off would be delivering less elective clinical activity to free capacity for higher levels of emergency admissions.

Examination of Financial Positions of the Shelford Group

Financial position of each organization was assessed through examining annual balance sheets and statements of financial position for FYs 11/12, 12/13 (before enactment of the HSCA2012), FY 2013-14 and FY 14-15 (after enactment of the HSCA2012). These were obtained from the unabridged version of the annual reports of each of the 10 NHSTs which are members of the

Shelford group. Accrual based accounting methods were used to assess the financial position of each trust (Hodges 2003). Accrual based accounting is a process which recognizes economic events at the time the activity is undertaken (Hodges 2003). The significance of accrual based accounting to the operations of an NHST relates to its direct relationship with the levels of clinical activity (remunerated using PbR contracts) as well as the treatment of fixed assets (property owned by the organization and depreciation of medical equipment) and provisions for long-term liabilities such as PFI arrangements (Private Finance Initiatives) (Rausser, 2009).

The Key financial indicators examined included the operating surplus/ deficit as well as the annual surplus/ deficit, financial liabilities and financial liabilities ratios returned by each organization for financial years 11/12 through to FY14/15. Financial liabilities and financial liabilities ratios. In addition, the total capital employed as well as the total assets employed in each of the NHS trust in the last day of each FY from FY 11/12 through to FY 14/15 were also examined. -

Operating Surplus (deficit) is a measure of the extent to which operating revenue meets the costs of providing services. These include depreciation, salaries, staff benefits and material costs of delivering the service. An operating deficit indicates that some of costs incurred are not being met by the trusts income; conversely operating surplus allows the organization to make capital expenditure over and above the level of depreciation or reduce the level of financial liabilities (Rosko 2004). Annual surplus (deficit) includes the operating surplus/ deficit as well as impairments or adjustments caused by depreciation of the value of the assets, revaluation or sale of fixed assets such as property owned by each organization.

Formatted: Font: Italic

Changes in the levels of financial liabilities in consecutive financial years record the level by which operational costs need to be covered by borrowings. They may also indicate significant capital expenditure over and above what ~~can-be~~ covered by the operating surplus or liquidation of assets of an organization. Net financial liabilities ratio is a measure of annual financial liabilities against one year's operating revenues. It is an indicator of the capacity of NHS trust in meeting its financial obligations. The capital employed in each NHS trust on the last day of each FY is the value of the assets of the organization less its current liabilities and indicated the capital investment required for the organization to function as a going concern. Total assets employed is all the assets less all the liabilities of the organization (sometimes called the tax payers' equity in an organization).

Market share indicators

Clinical activity provided by NHS trusts was classed under 3 headings; in-patient activity, accident and emergency episodes and outpatient activity. Although it is difficult to assess each organizations share of regional healthcare market directly, incomes from the 3 types of clinical activity are reliable surrogate markers of market-share of NHS trusts. These indicators also assess the ability of organizations in maintaining income by increasing clinical activity in the face of reducing tariffs.

Statistical Analysis

Statistical analysis was performed using the Statistical Package for Social Sciences, version 23 (SPSS, Inc., Chicago, IL). Matched sets of key financial indicators were treated as the primary units for analysis and compared before and after enactment of HSCA2012. Each key financial indicator was considered continuous variables the values of which were compared using a

paired student t-test, except where due to significant variance between the NHSTs normal distribution could not be assumed in which case non-parametric statistics and Mann-Whitney U test was used.

Results

The Shelford group collectively provided 11,149,175 patient care episodes in the FY2011/12; 13,197,281 in FY2012/13 and 14,188,708 in FY2013/14, and 14,735,000 in FY14/15 representing annual increases of 10.6%, 7.5% and 4% in levels of clinical activity respectively (Figure-1). Combined annual income of these organizations was £7,494,646,000 in FY11/12, £8,472,132,000 in FY12/13 £9,084,857,000 in FY13/14 and £9,672,066,000 in FY14/15 (Figure-2), representing annual increases of 6.6%, 7.2% and 6.4%. Figure-3 illustrates annual operational surplus (deficit) for FYs 2011-12 through to 2014-15.

Assessment of Financial position of Shelford group of NHS Foundation trusts.

Median (inter quartile range) operating surplus returned by The Shelford group of NHS trust prior to enactment of HSCA2012 was £19,794,000 (£11,366,000 - £27,491,000), and £34,820,000 (£20,179,000 - £50,605,000) after enactment of HSCA2012, ($Z=0.126$, $P=0.9$), revealing no significant difference in the value of this indicator after HSCA2012, if the two years following HSCA2012 (FY13-14 and FY14-15) are compared with the two preceding financial years (FY11-12 and 12-13). It is noteworthy that FY14-15, 5 of the 10 members of the Shelford group returned operational deficits despite increasing operational revenues (Table-1). The median operating surplus of the Shelford group of NHSTs in the FY2014-15 was £9,621,500 (£-15,000,000 - £20,000,000). Similar observations were made with respect to the annual surplus (deficit), in the financial years studied (Table-2).

Financial Liabilities

Annual financial liabilities of Shelford group NHS trusts remained stable in the financial years studied (Table-3). Mean (Standard deviation) annual financial liabilities of the Shelford group was £24,357,550 (£9,006,890) prior to the enactment of HSCA2012 and 25,006,250 (£9,139,985) after the enactment of HSCA2012 ($P=0.95$). ~~Net financial liabilities ratio is a measure of annual financial liabilities against one year's operating revenues. It is an indicator of the capacity of NHS trust in meeting its financial obligations.~~ Figure-3 illustrates net financial liabilities ratios of the Shelford group for FY11-12, 12-13 and 13-14. There was no significant difference in Median (interquartile range) net financial liabilities ratios in the years before enactment of HSCA2012 was 0.8 (0.2-1.4) compare with after 0.53 (0.21-0.85), ($P=0.15$).

The capital [employed in](#) each of the Shelford group NHS foundation trust on the last day of FYs 11-12, 12-13 and 13-14 are listed in table-3. This value remained stable for all of the 10 NHS foundation trusts with a modest increase in median value for the total assets employed after HSCA2012 compared to before [Pre HSCA2012 £503,451,000 (IQR: £370,973,000-£635,929,000) versus £570,083,500 (IQR: £410,026,500-£730,140,500)], $Z=-0.7295$, ($P=0.4654$). There were significant improvements in total assets employed in the Shelford group in the 2 years after the enactment of HSCA2012 compared to before [Pre: Median:

£239,63,4000 (IQR: £171,480,000-£307,788,000 versus Post: Median: £346,300,000 (IQR: £315072000-£377528000)], Z=149, (P=0.002), (Table-4).

Market share indicators

Clinical activity provided by NHS trusts was classed under 3 headings; in-patient activity, accident and emergency episodes and outpatient activity. Although it is difficult to assess each organizations share of regional healthcare market directly, incomes from the 3 types of clinical activity are reliable surrogate markers of market share of NHS trusts. These indicators also assess the ability of organizations in maintaining income by increasing clinical activity in the face of reducing tariffs.

Figure-4 illustrates the Shelford groups' income from inpatient clinical activity for each of the 12 annual quarters studied. Enactment of HSCA2012 had no significant impact on Shelford groups' income from inpatient activity [mean pre HSCA2012=£59,963,349 (std dev: £13,118,706) versus mean post HSCA2012 £62,275,021 (std. dev.:£12,871,211), P=0.36]. However there was a significant reduction in income per 1,000 inpatient episodes (Figure-4), [mean pre HSCA2012=£1,348,718 (std. dev.: £272,946) versus mean post HSCA2012 value of £1,197,497 (std. dev.: £249,437), P=0.003].

Formatted: Left

Figure-5 illustrates the quarterly income from accident and emergency services provided by the Shelford group NHS trusts. No difference was observed in quarterly income from providing emergency services prior to HSCA2012 £3,738,206 (std dev: £120,018) compared with after HSCA2012 £4,218,966 (std. dev.: £139,960), (P=0.07). A slight but significant increase in income per 1000 accident and emergency episodes of care was observed after enactment of HSCA2012 [Pre HCA2012=£100,309 (Std. dev.: £14,766), post HSCA2012 =£107,089 (Std. dev.: £18,436), (P=0.046)].

Figure-6 illustrates Shelford group NHS trusts' quarterly income from outpatient activity. There was no significant difference between the Shelford groups' quarterly income from outpatient activity before and after HSCA2012 [pre HSCA2012 mean=£18,385,870 (Std. dev.: £4,285,441), post HSCA2012 mean=£19,501,102 (Std. dev.: £4,285,475), (P=0.18)]. No difference was observed in group's quarterly activity per 1000 outpatient episodes [pre HSCA2012 mean=£70,775 (std dev. £10,248), post HSCA2012 mean=£67,517 (std. dev. £10,813), (P=0.11)].

Discussion

HSCA2012 has been arguably the most controversial legislation involving the NHS in recent memory. HSCA2012 involved significant shifts in power and accountability in delivery of healthcare, redesigned the commissioning superstructure of NHS, created an economic regulator and introduced competition with voluntary and private sector providers in NHS England (DOH 2012).

Formatted: Justified, Space After: 6 pt, Line spacing: Double

The new public and financial management system (NPFMS) which emerged in 1980s involved significant changes in the state sector. NPFMS involves separation of planning, purchasing and provision of public services into different operational entities (Olson 1998). Some of these services would be provided by private or voluntary sector in a competitive environment. The state became a regulator and purchaser, rather than provider of services (Hodges 1999). NPFMS represents the cumulative flow of public policy the developed countries for the last 3 decades, regardless of the political persuasion of their ruling administrations (Barzelay, 2001). Many progressive facets of NPFMS such as use of accrual based accounting (Olson 1998), pay-for-performance; quality outcomes frameworks (Gillam 2012) and rigorous audits have introduced accountability and improved outcomes to public services. None the less HSCA2012 which completes the structural change required for delivery of NPFMS in the NHS (*the previous iteration was the National Health Services Act of 2006*) is widely seen as privatization of NHS services or at least a significant step down that road.

Since enactment of HSCA2012 concerns have been raised regarding financial sustainability of NHS trusts (Lacobucci 2014). The influential health think-tank, *King's Fund* projected a financial crisis in the frontline healthcare services by 2015-16 (Appleby 2015). Evidence from this study suggests that in the first year following the enactment of HSCA2012, there was no significant change to the financial position of the Shelford group which had to [continue to](#) expand their clinical activity to meet significant increases in demand for services. There is some evidence however that in the second year following the enactment of HSCA2012 the Shelford group are operationally less robust and half of the members despite increases in the operational income failed to deliver an annual surplus. Considering that the Shelford group have been the largest and best performing NHS trusts in England such a finding is concerning. In 2015 a report from the Monitor revealed that almost 2 out of 3 NHS trusts reported an annual

deficit in FY 2014-15 (Dunhill 2015). Although a sizable minority of NHS trusts reported a surplus; with so many organizations at risk, it is hard not to see tipping-point which could threaten sustainability of hospital services in England.

This study was focused on the [finances](#) of the Shelford group of NHS trusts as a representative group of hospital services in England. It highlights the fact that enactment of HSCA2012 has altered the environment in which NHS trusts operate but had not rendered their business plan unviable. Despite the fact that HSCA2012 has opened the door to competition, demand for services provided by the Shelford group increased after HSCA2012. Acute hospitals are mandated by the annual NHS contract to deliver relatively expensive, emergency, unscheduled care for patients who are referred to them. This care needs to be delivered safely and meet quality of care standards. Since the scandal at Mid-Staffordshire NHS foundation trust the policy of practicing cost-control at the expense of quality of care is no longer a viable strategy. Organizations which have already practiced cost-control and cut capacity can only regain lost capacity by cancelling scheduled care episodes. This would result in further impairment of their financial position, as scheduled care episodes are the activity which can be planned and if the services to deliver them designed properly, tend to deliver a surplus.

The essential difference between HSCA2012 and healthcare reforms a decade previously is that HSCA2012 was enacted during a time of budgetary constraint. Unlike preceding 13 years when the NHS budget grew; there has been no increase in the national healthcare spending in England in the last 5 years. The nature of economic recovery and political climate means that it is safe to assume that the budgetary constraint is likely to continue, in the face of increased demand (Appleby 2014). This is likely to create a funding gap of £20 to £30 Billion in 5 years (HSC, House of parliament 2013). In previous decades NHS would have responded to the

funding constraint through cost-control and restricted supply, resulting in waiting lists for treatment to grow and quality of care to suffer, such an approach is not acceptable today. Closing the current funding gap involves a number of programs aimed at improving efficiency and productivity. QIPP (Quality, Innovation, Productivity and Prevention), are a series of transformational programs which aim to reduce the layers of management, centralize care, use innovative care pathways to reduce the costs and the need for limited and expensive inpatient resources. ~~Tariff efficiency (PbR) has had the largest impact on the savings achieved this is why it is a central part of HSCA2012.~~ The greatest burden of making NHS more productive and efficient (QIPP) has been through efficiency savings in frontline providers of acute services (Appleby 2014, HSC, House of parliament 2013). NHS trusts have attempted to achieved this through pay-control, improved productivity (increasing income per unit cost), or redistributing central savings achieved from such activities as reforming management structure to capture productive activity (Appleby 2014) or simply withdrawing from providing clinical activities which are not cost-efficient within the constraint of the NHS contract. This needs to be achieved within a business-plan designed to deliver 1% surplus with a fixed-tariff structure (Majeed 2013). It appears that this task was beyond the abilities of many of the senior leaders of NHSFTs in England.

Appleby performed structured interviews with 26 senior managers from 6 NHS providers in England. He encountered two different strands of opinion; the first viewed the relentlessness of the cuts coupled with the potential 10 year duration of efficiency drive as a threat. Five year into the QIPP program all the *'low hanging fruits'* of an efficiency drive have been exhausted and with the strict quality controls it is not possible to *'ration healthcare anymore'* (Appleby 2015). The second approach recognized that delivering a first-rate health service purely from

taxation and national insurance contributions means that such a system needs to run close to efficiency frontier or grapple with financial difficulties in some shape or form as has been the case with the NHS since 1970s (Appleby 2015). There was consensus amongst healthcare managers interviewed on the fact that due to the extent of cuts and the duration of austerity, usual NHS approaches towards efficiency would not be sufficient and transformational change was needed (Appleby 2015).

There are similarities between the banking crisis 5 years ago and the looming funding crisis in HNS trusts in England. Whilst it is true that deficits generated by NHSFTs are small in comparison to the banks, there are over 150 of NHSFTs. A sector-wide collapse could trigger similar economic instability. The banking crisis of 2008 led to a sovereign debt crisis, austerity and debt buyouts which continue in the Euro-zone today (Varoufakis 2011). This is why financial sustainability of NHS trusts has implications beyond the regional health economies and is a national imperative.

A study such as this one whilst useful provides only a limited view of the health economy in England following the enactment of HSCA 2012. It will take many years for the full effects of HSCA 2012 on the regional health economies to become apparent. as-The involvement of private sector in the provision of NHS services will take time. Many other factors such as the economic turmoil caused by the United Kingdom's withdrawal from the European Union, chronic shortage of trained staff will impact the financial sustainability of NHS organizations in England for some time to come.

|

References

- Appleby J, Galea A, Murray R (2014). THE NHS productivity Challenge: Experience from the Frontlines. *The King's Fund*. http://www.kingsfund.org.uk/sites/files/kf/field/field_publication_file/the-nhs-productivity-challenge-kingsfund-may14.pdf.
- Appleby J (2015). UK NHS: Less money (but more bangs per buck)? *BMJ*, 350, h1037. doi: <http://dx.doi.org/10.1136/bmj.h1037>.
- Barzelay, M. (2001). The new public management. *Improving research and policy*. University of California Press, London.
- Chalkey M, McVicar D (2008). Choice of contracts in the British National Health Service: An empirical study. *Journal of Health Economics*; 27(5): 1155-1167.
- Cooper ZN, McGuire A, Jones S, Le Grand J. (2009). Equity, Waiting Times and NHS reforms: Retrospective study. *British Med J*; 339:b3264.
- Department of Health. Health and Social Care Act 2012: Chapter 7, Explanatory Notes. The Stationery Office; 2012 Apr 17.
- Department of Health (2013). NHS foundation trusts: annual reporting manual 2013/14. <https://www.gov.uk/government/publications/nhs-foundation-trusts-annual-reporting-manual-2013-to-2014>
- Donabedian A. (2005). Evaluating the quality of medical care. *Milbank Q.*;83(4):691-729.
- Dunhill L (2015). Updated: NHS provider sector reports £822m deficit. *Health Service Journal*. <http://www.hsj.co.uk/news/updated-nhs-provider-sector-reports-822m-deficit/5085271.article?blocktitle=Foundation-trust-news&contentID=1569>
- Francis R, QC (6 February 2013). Report of the Mid Staffordshire NHS Foundation Trust Public Inquiry.(Report). House of Commons. ISBN 9780102981476. Retrieved 9 February 2013.
- Gillam SJ, Siriwardena AN, Steel N (2012). Pay-for-performance in the United Kingdom: impact of the Quality and Outcomes Framework—a systematic review. *The Annals of Family Medicine*, 10(5), 461-468.
- Hawkes N (2013). Welcome to the most exclusive clud in the NHS. *BMJ*; 347: doi: <http://dx.doi.org/10.1136/bmj.f7318>.
- Health Select Committee of The House of Parliament of the United kingdom(2013) <http://www.publications.parliament.uk/pa/cm201213/cmselect/cmhealth/651/65107.htm>
- Hodges R, Mellett H (2003). Reporting public sector financial results. *Public Management Review*, 5(1), 99-113.
- Hodges, R., & Mellett, H. (1999). Accounting for the private finance initiative in the United Kingdom national health service. *Financial Accountability & Management*, 15(3-4), 275-290.
- Jones R (2010). The nature of healthcare costs and financial risk in commissioning. *British Journal of Healthcare Management* 16(9): 424-430.
- Lacobucci G (2014). Foundation trusts in England record overall deficit for first time. *British Medical Journal*349: doi: <http://dx.doi.org/10.1136/bmj.g5769>.
- Le Grand L (1991). Quasi-Markets and Social Policy. *The Economic Journal*; 101(408):1256-1267
- Le Grand L (2007). The Other Invisible Hand: Delivering Public Services through choice and competition. Princeton University Press.

Majeed A (2013). Re: Welcome to the most exclusive club in the NHS. *BMJ*; 347: doi:<http://dx.doi.org/10.1136/bmj.f7318>

Marshall L, Charlesworth A, Hurst J. (2014). The NHS payment system: evolving policy and emerging evidence. *Nuffield trust*.
http://www.nuffieldtrust.org.uk/sites/files/nuffield/publication/140220_nhs_payment_research_report.pdf.

Nicoletti, G Scarpetta S(2003). Regulation, Productivity Growth, the OECD experience. *Economic Policy*; 18(36): 9-72.

Olson O, Guthrie J, Humphrey CH. International experiences with 'new' public financial management (NPFM) reforms: New world? Small world? Better world. *Global warning: Debating international developments*

Porter ME (2010). What is value in health care? *N Engl J Med*; 363:2477-81. in new public financial management. 1998:17-48.

Raftery J, Robinson R, Mulligan JA, Forrest S (1996). Contracting in the NHS quasi-market. *Health Economist*; 5(4):353-62.

Rausser G, Stevens R (2009). Public-private partnerships: goods and the structure of contracts. *Annu. Rev. Resour. Econ.*, 1(1), 75-98.

Rosko MD. (2004) The supply of uncompensated care in Pennsylvania hospitals: motives and financial consequences. *Health Care Management Review*, 29(3):229-39.

Roberts A, Marshall L, Anita Charlesworth A. (2012). A decade of Austerity. *Nuffield trust*.
http://www.nuffieldtrust.org.uk/sites/files/nuffield/121203_a_decade_of_austerity_full_report_1.pdf.

Varoufakis Y, Holland S (2011). *A modest proposal for overcoming the Euro crisis* (No. 11-03). Levy Economics Institute

Caption for Tables and Figures

Table-1: Operating surplus (deficit) of the Shelford group of NHS foundation trusts.

Table-2: Annual surplus (deficit) of NHS the Shelford group of foundation trusts.

Table-3: Annual financial liabilities of the Shelford group of NHS trusts.

Table-4: Total capital employed (a) and total assets employed (b) in the Shelford group of NHSTs before and after HSCA2012.

Figure-1: Levels of Clinical activity provided by the Shelford group of NHS trusts.

Figure-2: Annual operating incomes of each of the Shelford NHSTs for FYs 11-12, 12-13 and 13-14.

Figure-3: Annual operating surplus-deficits of each of the Shelford NHSTs for FYs 11-12, 12-13, 13-14 and 14-15.

Figure-4: Net financial liabilities ratio of Shelford group NHS trusts.

Figure-5: Shelford group NHS trusts' PbR income from inpatient activity compared with mean value for NHS England.

Figure-6: Shelford group of NHS trusts' PbR income from accident and emergency activity compared with mean value for NHS England.

Figure-7: Shelford group NHS trusts' PbR income from outpatient activity compared with mean value for NHS England.

Operating Surplus/Deficit	FY 11-12	FY 12-13	FY 13-14	FY 14-15
CUH	£10,170,000	£16,791,000	£ 4,479,000	£(2,157,000)
CMH	£83,812,000	£38,866,000	£33,299,000	£125,004,000
GST	£31,943,000	£5,214,000	£ 42,839,000	£51,277,000
ICH	£3,402,000	£ (17,370,000)	£(82,970,000)	£(94,550,000)
KCL	£18,772,000	£11,366,000	£20,179,000	£(15,930,000)
NUTH	£23,725,000	£22,116,000	£52,665,000	£36,341,000
OXF	£36,992,000	£27,491,000	£44,987,000	£(8,727,000)
STH	£20,816,000	£15,677,000	£20,147,000	£21,400,000
UCL	£22,325,000	£44,192,000	£56,826,000	£(15,294,000)
UHB	£(14,839,000)	£15,090,000	£50,605,000	£ 38,067,000
Median	£21,570,500	£16,234,000	£38,069,000	£9,621,500

Table- 1: Operating surplus (deficit) of the Shelford group of NHS foundation trusts

Annual Surplus/Deficit	FY 11-12	FY 12-13	FY 13-14	FY 14-15
CUH	£2,457,000	£4,080,000	£8,392,000	£(2,157,000)
CMH	£50,051,000	£78,274,000	£1,191,000	£97,745,000
GST	£5,368,000	£(7,455,000)	£113,349,000	£71,318,000
ICH	£ (15,572,000)	£(27,389,000)	£15,128,000	£15,405,000
KCL	£8,371,000	£3,953,000	£117,368,000	£(31,679,000)
NUTH	£33,888,000	£33,358,000	£32,954,000	£34,982,000
OXF	£15,340,000	£1,374,000	£36,784,000	£(21,339,000)
STH	£10,023,000	£9,787,000	£18,266,000	£16,676,000
UCL	£42,000	£1,607,000	£21,821,000	£(31,200,000)
UHB	£30,005,000	£7,734,000	£37,266,000	£18,010,000
Mean	£14,658,960	£18,113,480	£33,775,160	£16,040,500

Table-2: Annual surplus (deficit) of NHS the Shelford group of foundation trusts

CUH	Cambridge University hospitals NHSFT	OXF	Oxford University NHST
CMUH	Central Manchester hospitals NHSFT	STH	Sheffield Teaching Hospitals NHSFT
GST	Guys & St Thomas' NHSFT	NUTH	Newcastle upon Tyne Hospitals NHSFT
IHC	Imperial College Healthcare	UCL	University College Hospital NHSFT
KCL	King's College Hospital NHSFT	UHB	University Hospitals Birmingham NHSFT

Net Finance Costs	FY 11-12	FY 12-13	FY 13-14	FY 14-15
CUH	£12,627,000	£12,711,000	£12,871,000	£13,512,000
CMH	£27,706,000	£31,573,000	£33,299,000	£33,019,000
GST	£20,756,000	£20,330,000	£21,800,000	£27,029,000
ICH	£1,939,000	£1,791,000	£857,000	£812,000
KCL	£17,877,000	£18,021,000	£27,250,000	£36,642,000
NUTH	£30,238,000	£28,262,000	£27,967,000	£29,843,000
OXF	£29,389,000	£28,807,000	£27,555,000	£6,120,000
STH	£12,837,000	£13,261,000	£12,883,000	£13,009,000
UCL	£38,469,000	£38,851,000	£33,441,000	£33,346,000
UHB	£18,793,000	£21,290,000	£21,562,000	£22,248,000
Mean	£23,257,300	£25,457,800	£24,554,700	£24,638,500

Table-3 Annual financial liabilities of the Shelford group of NHS trusts

Assets Less Current Liabilities	31-Mar-12	31-Mar-13	31-Mar-14	31-Mar-15
CUH	£312,777,000	£335,661,000	£363,641,000	£379,346,000
CMH	£471,874,000	£559,472,000	£546,721,000	£682,025,000
GST	£948,619,000	£968,983,000	£1,155,836,000	£935,798,000
ICH	£716,441,000	£687,395,000	£601,899,000	£448,514,000
KCL	£359,589,000	£356,173,000	£616,361,000	£603,276,000
NUTH	£597,270,000	£571,165,000	£593,446,000	£666,024,000
OXF	£132,478,000	£152,414,000	£181,642,000	£160,057,000
STH	£433,194,000	£441,043,000	£458,189,000	£473,096,000
UCL	£710,038,000	£723,426,000	£738,875,000	£703,587,000
UHB	£517,296,000	£489,606,000	£510,627,000	£473,096,000
Mean	£519,957,600	£528,533,800	£576,723,700	£552,481,900

(a) The capital employed in the Shelford group of NHSTs

Total Assets Employed	31/03/2012	31/03/2013	31/03/2014	31/03/2015
CUH	£192,854,000	£220,922,000	£214,266,000	£228,068,000
CMH	£98,239,000	£188,422,000	£189,634,000	£307,925,000
GST	£936,613,000	£929,941,000	£1,049,786,000	£1,124,404,000
ICH	£45,046,000	£23,362,000	£37,858,000	£416,662,000
KCL	£262,561,000	£258,346,000	£402,910,000	£374,411,000
NUTH	£316,176,000	£291,573,000	£325,241,000	£415,340,000
OXF	£116,829,000	£117,910,000	£148,794,000	£128,234,000
STH	£376,153,000	£385,940,000	£405,892,000	£422,735,000
UCL	£401,239,000	£393,906,000	£418,102,000	£367,359,000
UHB	-£60,063,000	-£68,154,000	-£31,228,000	-£2,861,000
Mean	£268,564,700	£274,216,800	£316,125,500	£378,227,700

(b) The total assets employed in the Shelford group of NHSTs

CUH	Cambridge University hospitals NHSFT	OXF	Oxford University NHST
CMUH	Central Manchester hospitals NHSFT	STH	Sheffield Teaching Hospitals NHSFT
GST	Guys & St Thomas' NHSFT	NUTH	Newcastle upon Tyne Hospitals NHSFT
IHC	Imperial College Healthcare	UCL	University College Hospital NHSFT
KCL	King's College Hospital NHSFT	UHB	University Hospitals Birmingham NHSFT

Table-4 Total capital employed (a) and total assets employed (b) in the Shelford group of NHSTs before and after HSCA2012

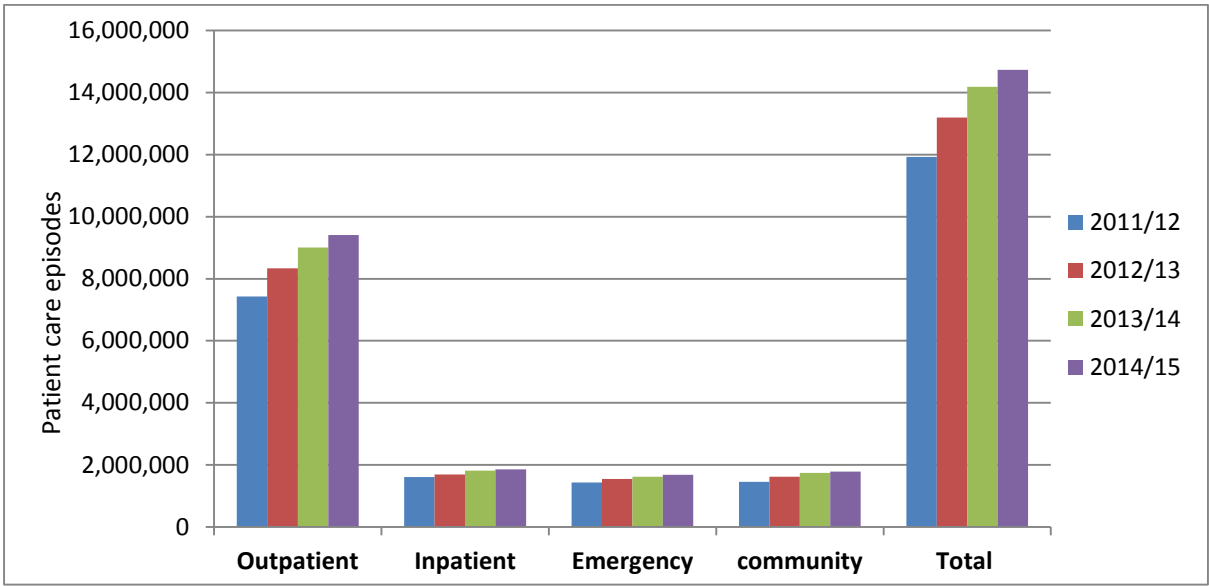


Figure-1 Levels of Clinical activity provided by the Shelford group of NHS trusts.

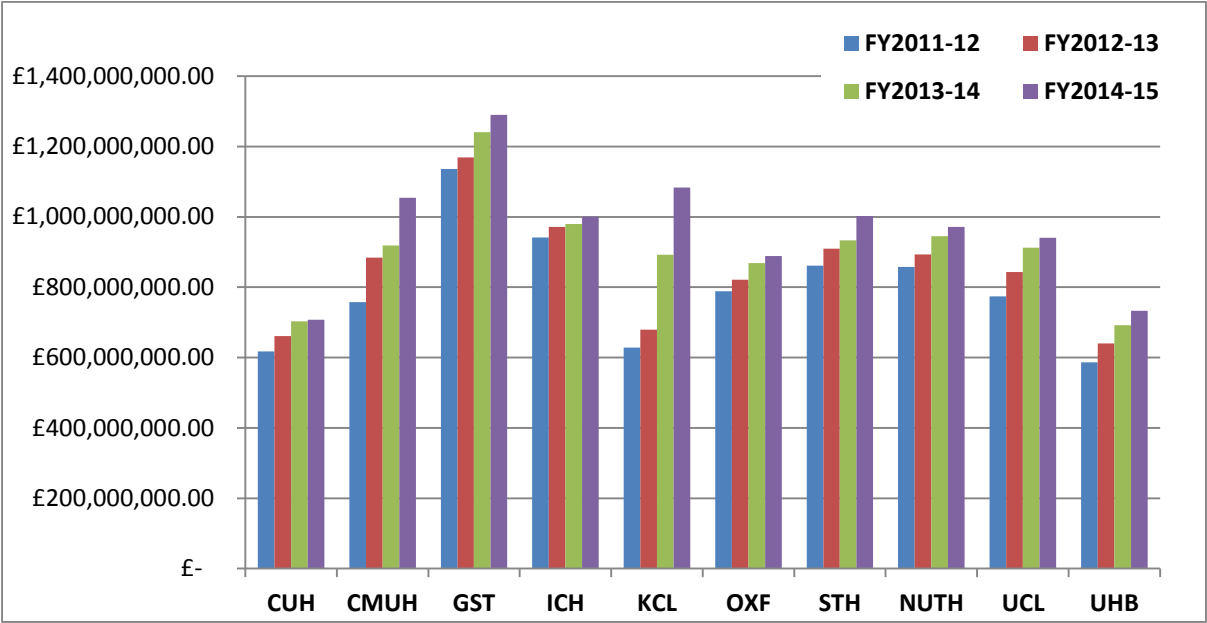


Figure-2: Annual operating incomes of each of the Shelford NHSTs for FYs 11-12, 12-13 and 13-14.

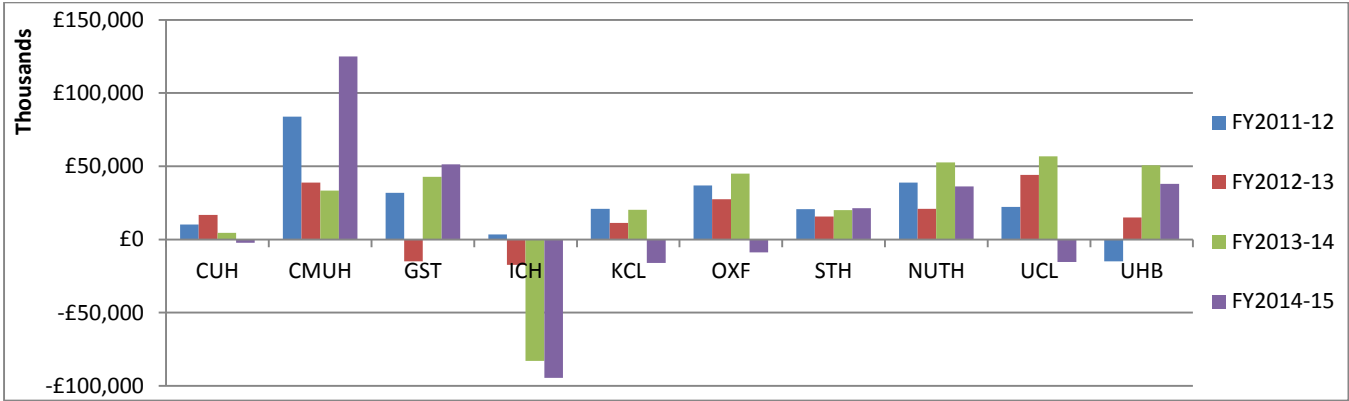


Figure: 3 Annual operating surplus-deficits of each of the Shelford NHSTs for FYs 11-12, 12-13, 13-14 and 14-15.

CUH	Cambridge University hospitals NHSFT	OXF	Oxford University NHST
CMUH	Central Manchester hospitals NHSFT	STH	Sheffield Teaching Hospitals NHSFT
GST	Guys & St Thomas' NHSFT	NUTH	Newcastle upon Tyne Hospitals NHSFT
IHC	Imperial College Healthcare	UCL	University College Hospital NHSFT
KCL	King's College Hospital NHSFT	UHB	University Hospitals Birmingham NHSFT

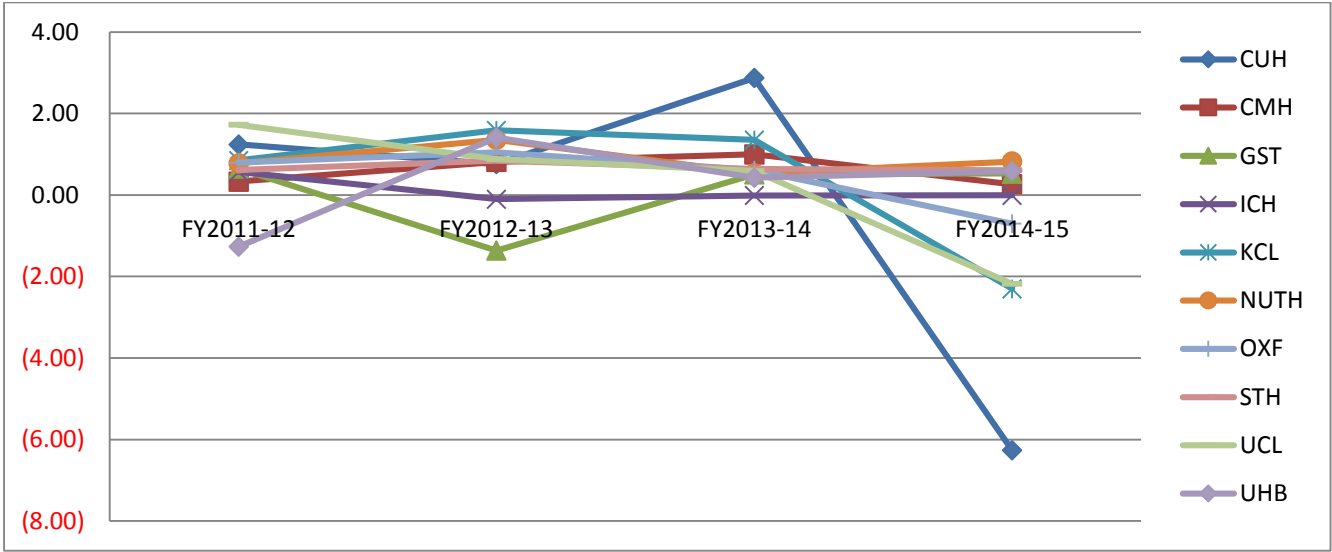


Figure-4: Net financial liabilities ratio of Shelford group NHS trusts.

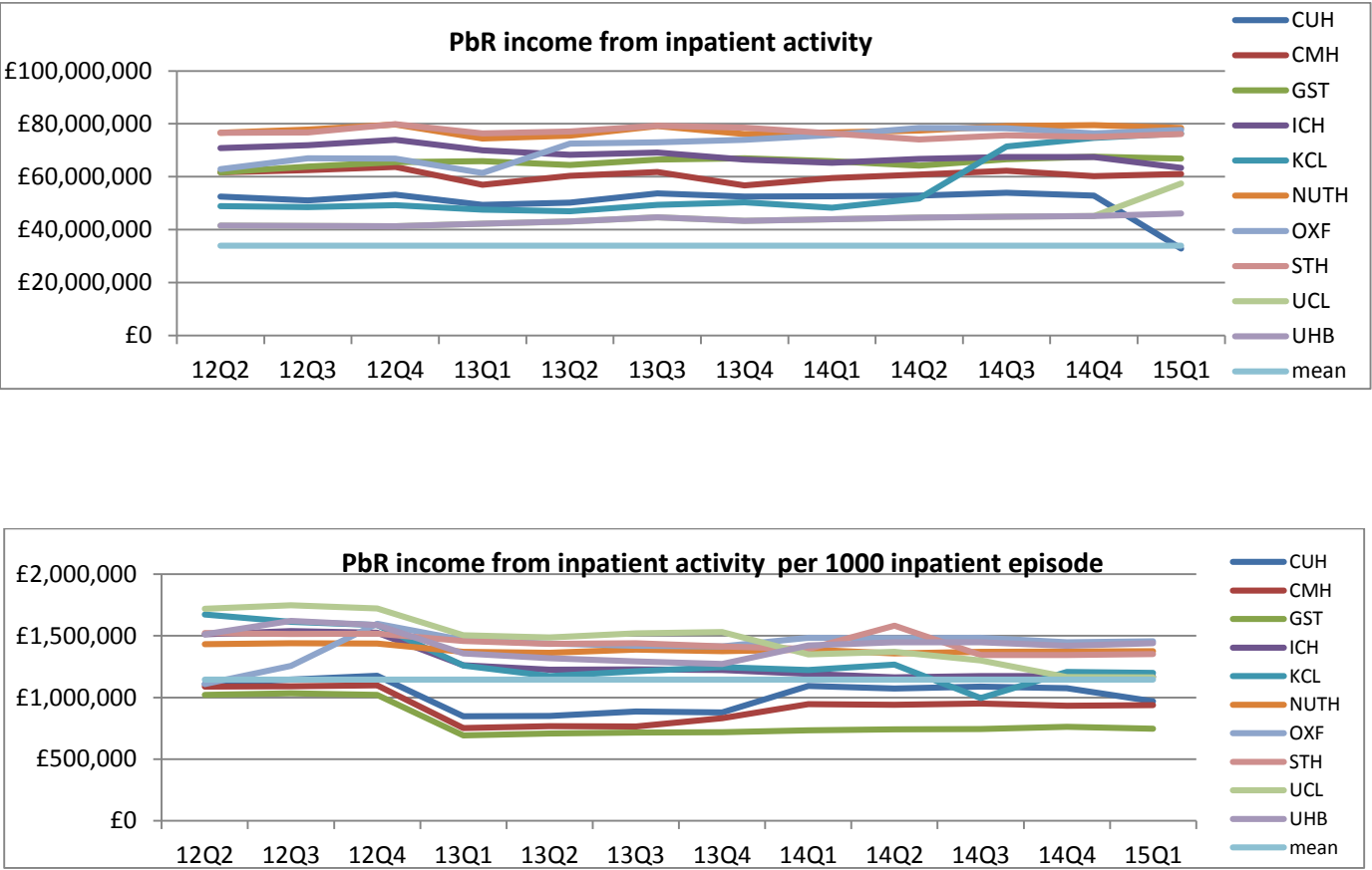


Figure-5 Shelford group NHS trusts’ PbR income from inpatient activity compared with mean value for NHS England.

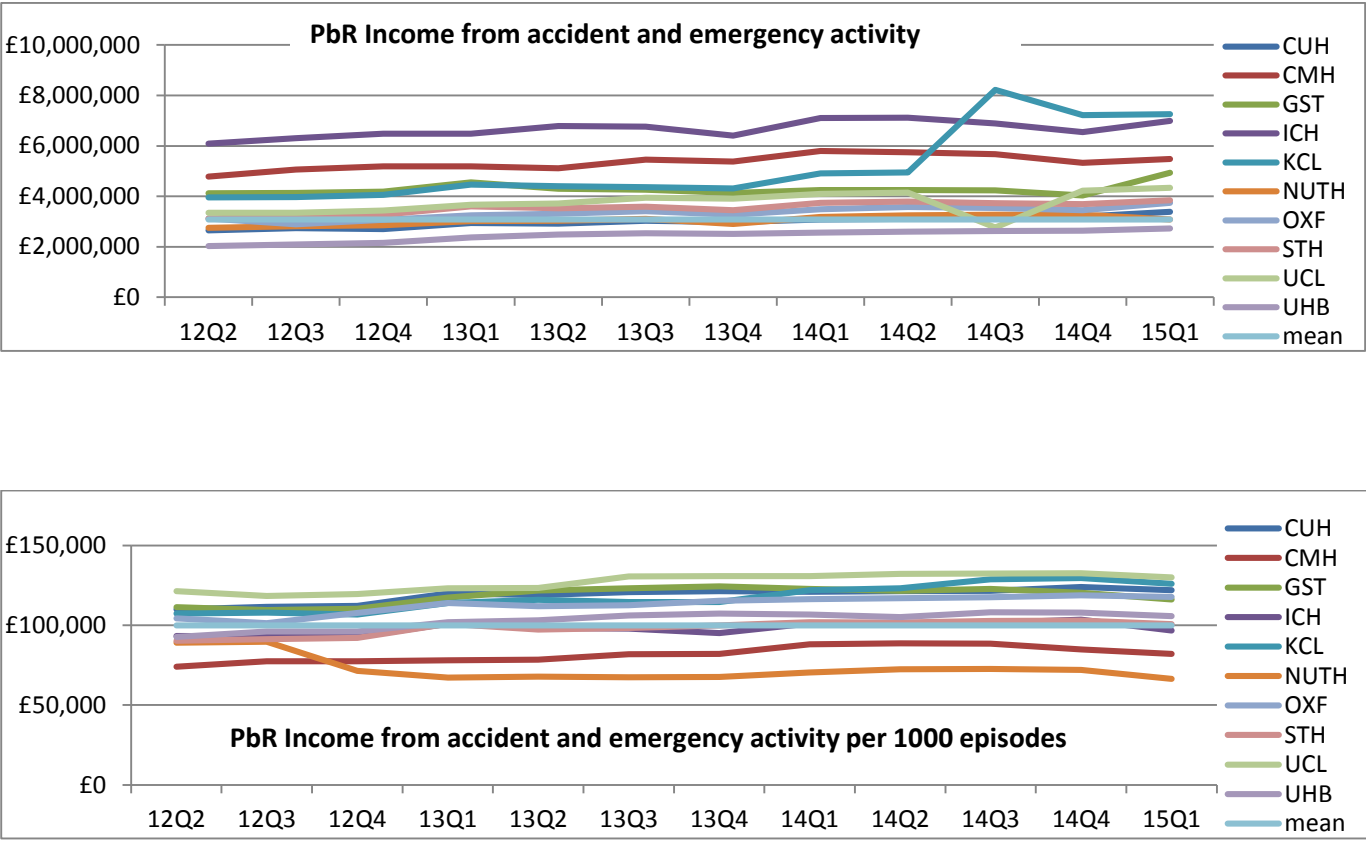


Figure-6: Shelford group of NHS trusts' PbR income from accident and emergency activity compared with mean value for NHS England.

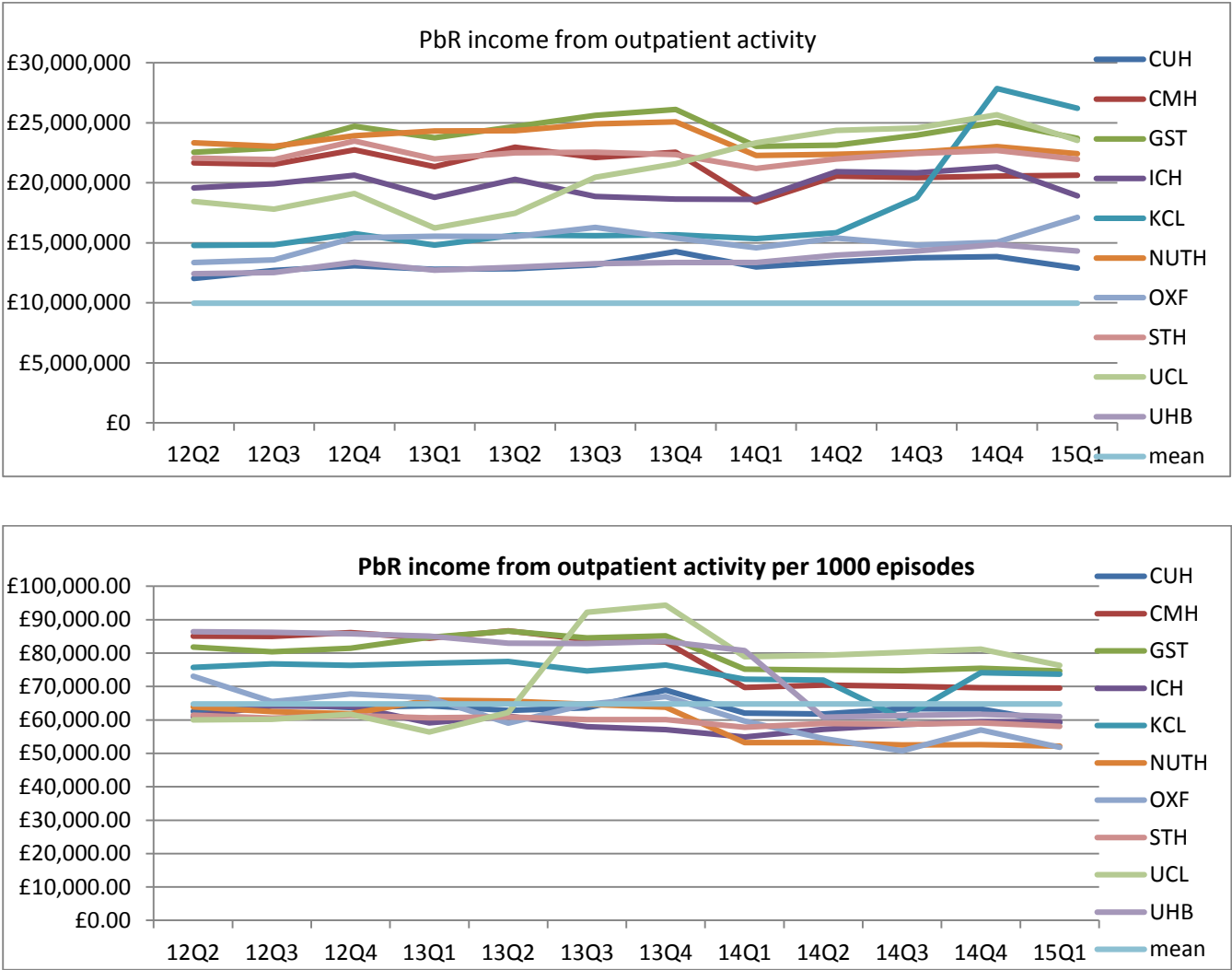


Figure-7: Shelford group NHS trusts’ PbR income from outpatient activity compared with mean value for NHS England.