

APPENDIX L: Additional Financial Analysis

The information contained in this Appendix has been updated since the date of the original PCBC to reflect further financial analysis and modelling and represents the most up to date position. Therefore, any inconsistencies with the main part of the PCBC are as a result of this updating. All NHS organisations believed it important that the public had the most up to date financial information available, that has been agreed by those organisations. As this continues to be updated – it will be reflected in information, available to the public, through the Success Regime website.

1.1.1 Definitions

Impact area	Definition	Potential overlap	Mitigations
Efficiency	The same service is provided at a lower cost. This could be achieved through more effective deployment of workforce, improved procurement etc.	Hospital transfers Additional mitigations (e.g. back-office savings)	Reduced overall cost base following efficiency assumptions
OOH interventions	Pathways and activity flows are changed to shift patients to lower cost settings of care	Across interventions Efficiency programmes	Reduced activity and associated cost Top-level sense-check
Hospital transfers	Benefits obtained by maximising potential economies of scale across different hospital sites and redesigning the organisations' service offering	OOH interventions Efficiency	Reduced overall cost base
Prevention	Reduce the instances of an illness in a population and their duration Detect and treat pre-symptomatic disease; and Reduce the incidence of chronic incapacity or recurrences in a population	OOH interventions on the preventative spectrum (e.g. self management, early diagnosis)	Reduced overall cost base following efficiency assumptions
Additional mitigations & other areas	Further potential benefits/impacts that could be achieved through additional transformation (e.g. back-office, workforce, IM&T and estates)	Efficiency Hospital transfers OOH interventions	Account for incremental impact only. Apply impact to relevant costs following other impacts (e.g. efficiency)

1.1.1 Efficiency plans by organisation

This section summarises the efficiency plans by organisation. The plans are front-loaded and as such look to identify significant savings in 2016/17 and 2017/18.

Efficiency plans by year

Organisation	2016/17	2017/18	2018/19	2019/20	2020/21
NCUH	-£18.2	-£14.8	-£4.2	-£3.2	-£3.1
CPFT	-£3.9	-£2.5	-£2.5	-£2.5	-£2.4
CCG	-£6.6	-£2.6	-£2.6	-£2.6	-£3.0
Total	-£28.7	-£19.8	-£9.2	-£8.2	-£8.5

Source: Success Regime analysis

The more detailed plans provided by each organisation are presented in the tables below. These comprise a range of schemes related to cost reduction.

For Cumbria CCG savings relate to non-activity reducing schemes to avoid either any duplication with the out of hospital activity reductions or any shift of financial challenge between commissioner and provider. It can be seen that the savings are focussed on areas such as mitigating significant growth in prescribing. In addition there are savings related to out of area acute QIPP targets.

Cumbria CCG (WNE) efficiencies

Cumbria CCG (WNE) 2020/21 reduction	Savings, £m
Running Cost Reductions	£0.6
Planned Disinvestments & Funding	£2.8
Continuing Health Care Reduced Growth	£1.2
Prescribing	£4.6
High Cost Drugs	£1.2
Pain Management	£0.4
Impact of out of hospital schemes on ambulance activity	£0.8
Reduction in GP Out of hours as a result of 7-day GP working	£0.4
Out of Area Benefit	£5.4
Total	£17.4

Source: Cumbria CCG efficiency plan

Provider efficiency

Provider efficiencies are presented for NCUH and CPFT below. These relate to the same clinical model but at a lower cost. For NCUH, baseline budget reductions and 2016/17 Business Unit CIPs are being delivered and would be realised in 2018/19 accounting for c. 62% of the overall plan. The remaining benefits are planned to be realised through efficiency programmes around procurement, staffing and site rationalisation.

NCUH efficiencies¹

NCUH 2020/21 reduction	Savings, £m
Baseline Budget reductions – delivery in progress	£10.7
2016/17 CIP (Business Units) – delivery in progress	£16.3
Staff Resource Programme	£5.9
Procurement Efficiency	£4.5
Cumberland Infirmary in Carlisle - Rates/Availability Payment/Hard FM/Soft FM	£4.0
West Cumberland Hospital - Site rationalisation	£0.4
Business Unit efficiency programme	£1.6
Total	£43.4

Source: NCUH CIP plan

For CPFT, c. 28% of the savings identified are in 2016/17, with the remaining savings then split fairly equally across the remaining 4 years. This represents a greater front loading of savings compared to the PCBC.

CPFT efficiencies²

CPFT 2020/21 reduction	Savings, £m
2016/17 Children's and Families Efficiency Schemes	£0.1
2016/17 Community Efficiency Schemes	£0.6
2016/17 Mental Health Efficiency Schemes	£0.5
2016/17 Specialist Services Efficiency Schemes.	£0.2
2016/17 Operational Management	£0.0
2016/17 Support Services Efficiency Schemes	£0.8
Contingency schemes	£2.7
Care Group Routine Efficiency Programmes	£3.6
Support Services Routine Efficiency Programmes	£1.3
Turnaround/transfer of loss making services	£0.7
Core EPR Efficiency Benefits & Programme Decommissioning	£0.5
Core Agile working Efficiency Benefits	£0.1
Procurement Efficiencies Delivered Via Shared Purchasing	£0.4
Workforce reshaping as ICCs are implemented	£1.0
Reduced overtime and agency usage	£0.3
Targeted estates costs reductions programme (incl. impact of valuation changes)	£0.9
Trust wide waste reduction programme	£0.3
Total	£13.9

Source: CPFT CIP plan

¹ It is assumed that 99% of NCUH's CIPs relate to WNE Cumbria.

² It is assumed that 67% of CPFT's CIPs relate to WNE Cumbria.

1.1.2 Repatriation methodology

Step 1: Identify activity opportunity. Three areas of opportunity were identified including T&O procedures across:

1. Elective inpatients;
2. Elective day case; and
3. Outpatients.

The activity opportunity was measured in terms of increased activity for NCUH from north localities only and was provided by the workstream.

Step 2: Identify income opportunity. Using the income data from the financial model, the increase in income from the repatriated activity is estimated to be c. £5m.).

Step 3: Identify cost increase. In the model we split cost between fixed, semi-fixed and variable. When activity increases, fixed costs do not change; semi-fixed costs change by 70% of the change in activity (e.g. increase in activity by 10% increases semi-fixed costs by 7%); and variable costs shift in line with activity. Using these relations, the increase in cost from the repatriated activity is estimated.

Step 4: Estimate saving. The cost saving is estimated as the difference between the income change and the cost change i.e. the change in margin on the repatriated activity. This is the number that feeds one of the mitigations in the modelling and is c. £1.3m based on year 5 costs.

1.1.3 Acute reconfiguration – long list hurdles

For the acute, initially, 8 options were developed from host of sources and were discussed with the Finance Directors group.

Figure 1: Long list hurdles criteria

	Option 1 – Maintain existing services at CIC & WCH, and add MLUs to both sites	Option 2 – Maintain existing services at CIC & WCH, but change WCH's CLU to an MLU	Option 3 – Selected "blue light" cases and higher-risk maternities at CIC	Option 4 – Selected "blue light" cases, reduced A&E hours and all maternity at CIC	Option 5 – All acute services at CIC, MLU at WCH	Option 6 – All acute services & maternity/paeds at CIC	Option 7 – All acute services and higher risk maternities at WCH	Option 8 – Acute services relocated to new site
H3: Contribution to reducing financial deficit	Outcome: Why? This acute option is likely to cost as much as the current model RAG:	Outcome: Why? Consolidating CLUs at CIC could create some minor savings RAG:	Outcome: Why? Additional savings created through consolidating certain blue lights at CIC, on top of co-locating CLUs RAG:	Outcome: Why? Full consolidation of maternity inpatient services at CIC expected to generate incremental benefits RAG:	Outcome: Why? Additional consolidation of A&E and non-elective care on top of other services at CIC would create greater savings. RAG:	Outcome: Why? A full hot/ cold split between sites could generate greater savings RAG:	Outcome: Why? A full hot/ cold split between sites could generate greater savings however a significant proportion of activity would be delivered by out-of-area providers. RAG:	Outcome: Why? Greater consolidation could be generated by delivering the totality of WNE activity out of a single acute site. RAG:
Investment requirement	No additional investment would be required to support the development of this option. RAG:	No additional investment would be required to support the development of this option. RAG:	No additional investment would be required. RAG:	No additional investment would be required. RAG:	A small investment could be required. RAG:	A small investment could be required. RAG:	A significant investment could be required, as well as funding for additional capacity in other areas. RAG:	A significant investment would be required. RAG:

Source: WNE Cumbria Success Regime

In order to narrow the list of effective options, 3 hurdles were used, one of which was financial. The financial hurdle consisted of two parts; 'contribution to reducing the financial deficit' and 'investment requires'. The assessment was carried out using RAG ratings based on initial analysis of the potential costs and benefits associated with the proposed acute models of care. Through these 'hurdles, options 7 and 8 were demonstrated to be impractical since they required significant capital investment, which is unlikely to be available. Similarly options 1 and 2 were shown to not contribute greatly in reducing the financial gap and thereby not helping reach a long term sustainable model of care.

As well as using the above hurdle criteria to narrow down the long list of options, the options themselves were also broken down by services, to give more granular alternatives. Maternity and Children services were disentangled from the rest of acute.

The short list of options therefore consists of 3 options for Emergency and Acute Medical care services and 3 for maternity and children's services:

Emergency and Acute Medical care service options

Option 1 - *New ways of working*

Option 2 - *Partial consolidation*

Option 3 - *Full consolidation*

Women and Children's services options

Option 1 - *New ways of working*

Option 2 - *Partial consolidation*

Option 3 - *Full consolidation*

1.1.4 Key Growth assumptions for reaching do nothing scenario

CCG Allocation growth assumption

*The allocation from 2016/17 include the adjustment to reflect sparsity funding. Initial analysis of the population split between north and south Cumbria

Assumption	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	Source
CCG Total recurrent allocation	1.70%	3.05%	2.00%	1.99%	2.08%	3.66%	NHSE allocations*

suggests that the sparsity element is likely to be split relatively evenly between the two areas. <https://www.england.nhs.uk/wp-content/uploads/2016/01/ccg-allocations.pdf>, <https://www.england.nhs.uk/wp-content/uploads/2013/12/ccg-allocation-big-table-v2.pdf>

Provider expenditure inflation assumptions

Provider	Cost type	2016/17	2017/18	2018/19	2019/20	2020/21	Source
NCUHT	Pay	3.30%	2.40%	2.40%	2.40%	2.40%	National tariff update and draft prices for 16/17 Note: NHS A Call to Action Technical Annex used for Pay inflation for years 2017/18 and repeated for subsequent years
	Drugs	4.50%	4.50%	4.50%	4.50%	4.50%	
	Other	2.05%	2.05%	2.05%	2.05%	2.05%	
CPFT	Pay	3.30%	2.40%	2.40%	2.40%	2.40%	National tariff update and draft prices for 16/17 Note: CPFT data request values applied for Pay inflation applied based on NCUHT numbers for years 2017/18 and subsequent years
	Drugs	4.50%	4.50%	4.50%	4.50%	4.50%	
	Other	2.05%	2.05%	2.05%	2.05%	2.05%	

Estates backlog assumption (used as % of income)

Provider	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	Total	Source
NCUHT		-1.07%	-1.05%	-1.03%	-1.01%	-0.99%	£34.2m	Estimated using Eric returns
CPFT		-0.18%	-0.18%	-0.17%	-0.17%	-0.16%	£3.6m	Estimated from CPFT data request

Share of challenge relevant to North Cumbria Population

Provider	2016/17- 2020/21	Source
NCUHT	99%	NCUHT data request
CPFT	67%	CPFT data request
CCG	62%	To be Updated

Clinical standard uplift*

Provider	Cost type	2016/17 – 2020/21	Source
NCUHT	Clinical Standards	2.0% Plus incremental maternity cost equal to c.£2m in year 5	NHS services, Seven days a week forum (https://www.england.nhs.uk/wp-content/uploads/2013/12/costing-7-day.pdf)
CPFT	Clinical Standards	2.0%	NHS services, Seven days a week forum (https://www.england.nhs.uk/wp-content/uploads/2013/12/costing-7-day.pdf)
1. * Clinical standard uplift is assumed to be equivalent to implementing a seven day service (2% of total income), total cost will be spread over the 5 years totalling 2% of total income 2. Cost of clinical standards assumptions could vary between 0.7% and c. 3.5% 3. Clinical standards assumptions will be reassessed in the context of the solution to see if all costs apply			

Total deflator/inflation assumptions

Provider		2016/17	2017/18	2018/19	2019/20	2020/21	Source
NCUHT/Acute	Price uplift	3.1% (+0.7% CNST)					NHS England local assumptions. 0.4% uplift included to account for CNST in 2017/18 onwards
	Efficiency factor	-2.00%	0.4%	0.4%	0.4%	1.4%	
CPFT/Non-acute	Price uplift	3.1%					NHS England local assumptions
	Efficiency factor	-2.00%	0%	0%	0%	1.0%	

Activity growth assumptions sources

Source	Growth
North Cumbria's current activity growth estimate	c.1% p.a.
CCG 2015/16 seven month performance activity growth	-c. 0.4%
Latest NEL growth has been relatively flat	c. 0% for NEL
CAGR historical trend HES	c. 2.7% p.a.
CAGR historical trend reference costs	c. 2.3% p.a.
CNE average historical activity growth	c. 2.1% p.a.

Triangulated activity growth

Scenario	POD	2016/17	2017/18	2018/19	2019/20	2020/21
Low	All	1.5%	1.5%	1.5%	1.5%	1.5%
Medium	All	2.0%	2.0%	2.0%	2.0%	2.0%
High	All	2.7%	2.7%	2.7%	2.7%	2.7%

All growth rates have been weighted by cost in each acute point of delivery.
 Note: Activity growth will not equal cost growth, Activity growth is estimated from the sources above, whilst costs is separated into Fixed, Semi-Fixed and variable costs and cost growth being different for the different categories.

Source: WNE Cumbria Success Regime

1.1.5 Approach to developing the CCG challenge

The estimated gap will be based on the forecast outturn financial position as of FY15/16 and the adjustments in the table below:

Adjustment	Detail
Treatment of non-recurrent items	<ul style="list-style-type: none"> All non-recurrent funding, spend and QIPPs within FY14/15 forecast outturn excluded. For the purpose of this exercise, the South Cumbria local price modification has been considered as a non-recurrent item. Non-recurrent investments where it is judged spend will become recurrent not to be excluded These adjustments lead to a recurrent baseline position for funding and spend
Planning assumptions	<ul style="list-style-type: none"> Adjustments to be made to the underlying assumptions (e.g. demographic growth) to align national guidance and other organisations in the health economy. National assumptions for contingency, non-recurrent spend and surplus requirements to be accounted for.
Other adjustments	<ul style="list-style-type: none"> Exclude running cost allocations and expenditure in order to focus on the core commissioning pressures The proportion of CCG spend related to the North Cumbria population will be identified through a combination of activity flows and contractual agreements

The tables below presents the remaining provider planning and forecasting assumptions. All assumptions need to be discussed and agreed with providers.

Income assumptions

Year 0	Underlying position	Forecast real as on current prices
Activity growth	Demographic and non-demographic growth	Activity growth comprises of demographic and non-demographic growth. To reflect the uncertainty in activity growth and range of potential outcomes, three scenarios have been constructed based on a range of sources including current CCG estimates, historical activity trends and current 7 month outturn.

Cost assumptions

Year 0	Underlying position	Forecast real as on current prices
Cost volume relationships	Variable costs	100% of variable costs increase or decrease with activity
	Semi-fixed costs	70% of semi-fixed costs scale with activity (cross-referenced with DoH study on cost elasticities and previous projects such as CHE Northamptonshire) –
	Fixed costs	Fixed costs do not change with activity. This assumption may be revisited following the estates review

1.1.6 Abbreviations

Acute						
Service line	A&E	EL-IP	EL-DC	NEL-IP	NEL - DC	OP
Defined as	Accident & Emergency	Elective Inpatient	Elective Daycase	Non-elective Inpatient	Non-elective Daycase	Outpatients

Community and Mental Health				
Service line	CO-IP	CO-OP	MH - IP	MH-OP
Defined as	Community Inpatients	Community Outpatients	Mental Health Inpatients	Mental Health Outpatients

Acute / Community and Mental Health			
Unit	Att	Adm/LoS	Adm
Defined as	Attendances	Length of Stay	Admissions

1.1.7 Activity shift assumptions breakdown for each option

	New ways of working		Partial consolidation		Full consolidation	
	WCH	CIC	WCH	CIC	WCH	CIC
A&E Type I / complex	-10%		-29%		-100%	
A&E Type III / non-complex (incl. MIU)						
NEL Day cases					-50%	
NEL IP Non-complex					-50%	
NEL IP Complex	-100%		-100%		-100%	
Maternity - Non-complex (MLU) DC					-100%	
Maternity - Complex (CLU) DC	-100%		-100%		-100%	
Maternity - Non-complex (MLU) IP					-100%	
Maternity - Complex (CLU) IP	-100%		-100%		-100%	
Maternity - Outpatient						
EL - Day cases		-5%		-5%		-20%
EL - Non-complex		-5%		-5%		-20%
EL - Complex	-100%		-100%		-100%	
Paediatrics - Outpatient						
Paediatrics - NEL IP Non-complex	-20%		-100%		-100%	
Paediatrics - NEL IP complex	-100%		-100%		-100%	
Paediatrics - NEL DC					-100%	
Paediatrics - EL IP	-20%		-100%		-100%	
Paediatrics - EL DC					-100%	
Neonatal services IP	-20%		-100%		-100%	
Neonatal services DC	-20%		-100%		-100%	
OP						

Source: WNE Cumbria Success Regime

1.1.8 Leakage assumptions

Leakage assumptions from WCH to CIC

Source site	Acute service line	Leakage
CIC	A&E Type I / complex	54%
CIC	A&E Type III / non-complex (incl. MIU)	74%
CIC	NEL Day cases	37%
CIC	NEL IP Non-complex	29%
CIC	NEL IP Complex	29%
CIC	Maternity - Non-complex (MLU) DC	63%
CIC	Maternity - Complex (CLU) DC	67%
CIC	Maternity - Non-complex (MLU) IP	63%
CIC	Maternity - Complex (CLU) IP	67%
CIC	Maternity - Outpatient	37%
CIC	EL - Day cases	30%
CIC	EL - Non-complex	22%
CIC	EL - Complex	22%
CIC	Paediatrics - Outpatient	37%
CIC	Paediatrics - NEL IP Non-complex	80%
CIC	Paediatrics - NEL IP complex	80%
CIC	Paediatrics - NEL DC	80%
CIC	Paediatrics - EL IP	57%
CIC	Paediatrics - EL DC	57%
CIC	Neonatal services IP	67%
CIC	Neonatal services DC	67%
CIC	OP	37%

Source: WNE Cumbria Success Regime

Leakage assumptions from WCH to CIC

Source site	Acute service line	Leakage
WCH	A&E Type I / complex	0%
WCH	A&E Type III / non-complex (incl. MIU)	0%
WCH	NEL Day cases	0%
WCH	NEL IP Non-complex	5.0%
WCH	NEL IP Complex	5.0%
WCH	Maternity - Non-complex (MLU) DC	12.3%
WCH	Maternity - Complex (CLU) DC	12.3%
WCH	Maternity - Non-complex (MLU) IP	12.3%
WCH	Maternity - Complex (CLU) IP	12.3%
WCH	Maternity - Outpatient	0%
WCH	EL - Day cases	0%
WCH	EL - Non-complex	0%
WCH	EL - Complex	0%
WCH	Paediatrics - Outpatient	0%
WCH	Paediatrics - NEL IP Non-complex	5%
WCH	Paediatrics - NEL IP complex	5%
WCH	Paediatrics - NEL DC	0%
WCH	Paediatrics - EL IP	0%
WCH	Paediatrics - EL DC	0%
WCH	Neonatal services IP	0%
WCH	Neonatal services DC	0%
WCH	OP	0%

Source: WNE Cumbria Success Regime

1.1.9 Consolidation list of capital expenditure

PCBC specific capital	Value (£m)	Area included in modelling	Assumptions used in modelling	Notes
IM&T acute	7.8	Assumed flat over 5 years (benefits offset capital investment)	-	-
IM&T non-acute	9.5	Assumed flat over 5 years (benefits offset capital investment)	-	-
Capital investment acute options	0.0	Capital associated with options analysis	Annualised at 10% of the capital cost	Value varies depending on option, currently based on the options included in the I&E
Capital investment community options	2.0	Capital associated with options analysis	Annualised at 10% of the capital cost	Value varies depending on option, currently based on the options included in the I&E.
Ambulance requirements from options	0.4	Capital associated with options analysis	23.5% cost of capital accounting for 5 year renewal	Value varies depending on option, currently based on the options included in the I&E
Total	19.7			

Existing local pressures	Value (£m)	Area included in modelling	Assumptions used in modelling	Notes
Phase 2 WCH	20.0	Additional capital cost	Annualised at 10% of the capital cost	Benefits of £2m per annum included from reduced double running
Backlog maintenance (NCUH and CPFT)	27.3	Included in the financial challenge	Annualised in the do nothing financial challenge	Based on Eric Returns
Total	47.3			

Other capital pressures	Value (£m)	Area included in modelling	Assumptions used in modelling	Notes
Specialised services	35.0	Additional external capital cost	Not included in the PCBC	This relates to the specialised radiotherapy building which is essential for the LHE
Primary care	22.5	Additional external capital cost	Not included in the PCBC	Bids submitted as part of the Estates and Technology Transformation Fund (ETTF) process
Mental health	15.0	Additional county wide capital cost	Not included in the PCBC	Required for the reconfiguration of mental health services
Total	72.5			

1.1.10 Shared Organisational Arrangements (SOA)

Table: Approach to Shared Organisational Arrangements benefits

Scenario*	Description	Opportunity NCUHT**	Opportunity CPFT	Total opportunity
Shared Organisational Arrangements benefits (providers)	Functions affected account for 3% of providers' expenditure. Of this cost, up to 30% can be saved through Shared Organisational Arrangements.	c.£3.3m over five years	c.£1.1m over five years	c.£4.4m over five years

*Source: Quality, Innovation, Productivity and Prevention QIPP national workstream: Shared Organisational Arrangements efficiency and management optimisation (November 2010).

**Note that expenditure figures for both providers have been adjusted by the respective factors accounting for the activity that goes to North Cumbria

NCUHT - Current 2015/16 spend on "back office"*

Finance	£2.3m
HR	£2.2m
IM&T	£4.5m
Procurement	£0.6m
Payroll	£0.5m
Total	£10.1m

*Source: NCUHT

It is noted that we are looking to challenge these impacts with Shared Organisational Arrangements initiatives undertaken in Northumbria.

1.1.13 Agency Spend

CIPs

NCUHT CIPs currently identify a potential opportunity of c. 4% of total expenditure around half of this relates to agency spend.

NCUHT	
CIPs	3.8%
% CIPs related to agency spend	c. 50%

Source: Information provided by NCUHT

Current CIPs identify a reduction in agency spend of c. £6m.

Agency Benchmarks

Other peers have a lower agency spend (c. 2.4%) compared to NCUHT (c. 6.6%) by c. 4.2%.

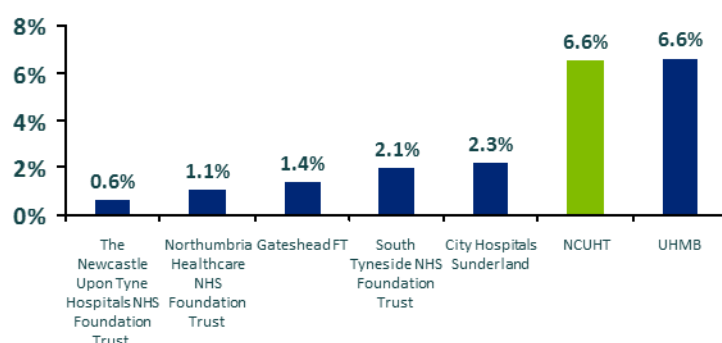
	NCUHT	Peer average	Potential opportunity
Agency spend*	6.6%	2.4%	4.2%

Source: Annual Reports 2014/15 for the trusts under consideration

** As % of total operating expenses.*

If NCUHT could reduce its agency spend to peers, it could save c. £13.9m. However, this could be challenging to achieve and reliant on the new care model being developed.

Agency spend NCUHT and peer group (% of total operating expenses)



The opportunity to reduce agency spend is supported by the clinical workstreams, in particular P&EC report a current overspend on agency of £3m, raising to £3.4m in a “do nothing” scenario, and falling to £1.6m in a consolidation scenario.

1.1.14 Additional details on Hospital Transfers

1. General modelling assumptions

Assumption	Description	Value used in Model
<i>Cost splits by specialty</i>	Acute: Using Patient Level Information and Costing Systems (PLICS) data provided by the trust, costs for each specialty are split into fixed, semi-fixed and variable costs. Income is split by site and specialty using CCG SUS extracts. Community/Mental health: Using benchmark data from other similar health economies. This needs to be sense-checked with the Trust	For the acute, This approximates to splits of 19% for fixed costs, 69% for semi-fixed costs and 12% for variable costs.
<i>Economies of scale</i>	<ul style="list-style-type: none"> Variable costs and income are able to move completely between sites Fixed costs are assumed to not be able to move at all 85% of semi-fixed costs are reallocated to the larger receiving site 	It is assumed that 15% of the semi-fixed costs of the smaller site are saved due to economies of scale for a service that is consolidated
<i>Activity leakage to out of area</i>	Assumptions on activity to go out if area have been developed based on a range of sources, taking into consideration both transport and capacity constraints.	

2. Service Line Activity Mapping

Assumption	Description	Value used in Model
<i>Complex v non-complex activity</i>	This assumption is applied to all specialties and PODs except for A&E and Maternity where additional assumptions are applied (see below). Day case activity was assumed to be non-complex, apart from Maternity. With the exception of gynaecology, no complex NEL activity is apportioned to WCH.*	Non-complex activity is assumed to make up 85% of activity in a specialty, with the remaining 15% assumed to be complex.
<i>A&E activity</i>	According to one of the PU&EC propositions (Fin v6.1WCH Med Staff Clin Strategy Props'n.doc draft.doc), if WCH was reconfigured as a Minor Injuries / Minor Illness Unit & Ambulatory Care / Frailty Unit, 69% of current WCH A&E attendances (Type I/II) would still take place at WCH.	69% of WCH A&E activity assumed to be non-complex.
<i>Maternity, Paediatrics and Neonatology</i>	These service lines were dealt with separately. For Paediatrics, only speciality 420 Paediatrics was taken into account. For Maternity, two specialties were considered relevant: 501 Obstetrics and 560 Midwife Episodes. Specialty 422 Neonatology was also singled out as a key dependency with a CLU.	-
<i>Maternity complex v non-complex activity</i>	Based on the Maternity proposition (20160216 Maternity Clinical Strategy Proposition.doc), 30% of births could be delivered in an MLU – this was assumed to be the proportion of non-complex births.	30% of maternity activity is non-complex.

3. Pre-reconfiguration position

The starting position for reconfiguration is the activity and cost split by site post-OOH stretch, i.e. after the high OOH KCBFF impacts and high CIPs have been applied

4. Activity data set-up

POD Methodology in obtaining dataset for modelling purposes

<i>A&E</i>	Suppressed attendances are approximated from the CCG data by averaging the suppressed values across all data gaps. The data is apportioned into population subgroups by comparing the difference in EL and A&E population subgroups of a similar health economy and applying this difference to the existing EL subgroup population subgroups.
<i>OP</i>	Suppressed attendances are approximated from the CCG data by averaging the suppressed values across all data gaps. The data is apportioned into population subgroups under the assumption that the subgroups will be approximately aligned to that of the EL population subgroups. Finally, the data is split between NCUHT and OOA sites using data provided by the trust.
<i>NEL / EL</i>	Suppressed admissions are approximated from the CCG data by averaging the suppressed values across all data gaps. Suppressed length of stay values are estimated using the average for a specialty, with bed days estimated using this average and the approximated number of admissions.
<i>Additional</i>	Only the top 20 specialties, classified by activity, were included in the modelling. Remaining data is compiled into an 'Other' category. The final data is sense checked across all available data sources and compared to data sources of similar health economies.

5. Cost data set-up

Methodology in obtaining dataset for modelling purposes

<i>Data</i>	Provider data containing information on site splits for HRGs within the A&E, EL and NEL PODs is combined with Patient Level Information and Costing Systems (PLICS) data, which contained only HRG and specialty level data (i.e. not by POD).
<i>Assumptions</i>	The HRGs of A&E, EL – IP and NEL – IP from the provider dataset are matched to the PLICS dataset under the assumption that HRG site splits are constant across specialties. Specialties within EL – DC and OP are assumed to have the same HRG splits as EL – IP and NEL – DC is likewise assumed to have the same HRG split as NEL – IP.

6. Service Delivery Savings

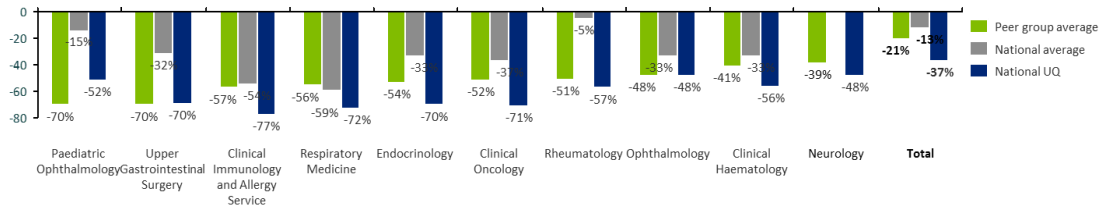
<i>A&E</i>	Reduction of complex A&E service provision to in hours only is assumed to change the service delivery of non-complex services. This is assumed to generate a saving of 50% on the out of hours semi-fixed and variable costs of complex A&E activity.
<i>Maternity</i>	Reconfiguration of the maternity services is assumed to generate savings of 10% of existing non-complex (MLU) semi-fixed and variable costs (when maternity services are kept in place).

7. Fixed cost savings and capital investment

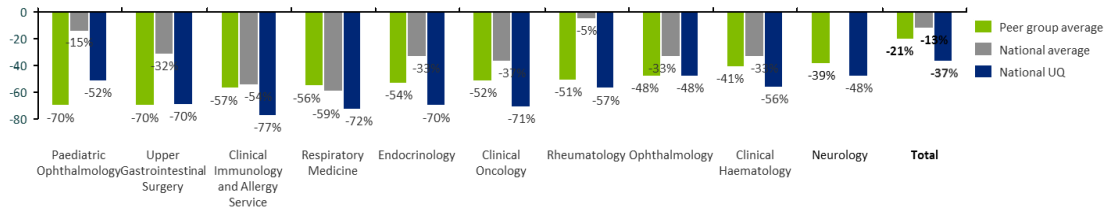
<i>Fixed cost savings</i>	40% of fixed costs, linked to beds as a proxy. 40% of costs reflects catering, cleaning and other running costs, and excludes items such as depreciation and potentially PFI.
<i>Annualised capital charges</i>	Bed demand increases proxy for capacity requirements following reconfiguration. It is assumed that the investment cost of one additional bed is c.£1m

1.1.15 Reference Cost Benchmarking

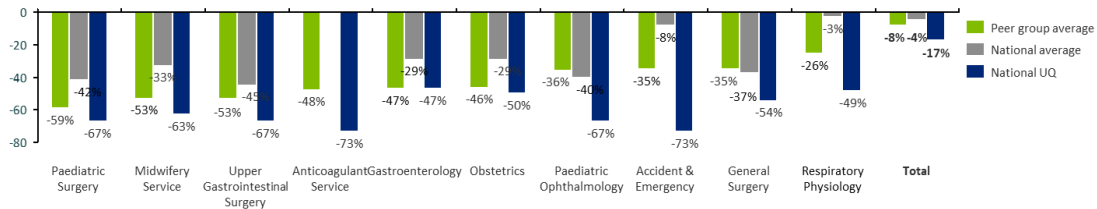
Cost per ordinary elective FCE



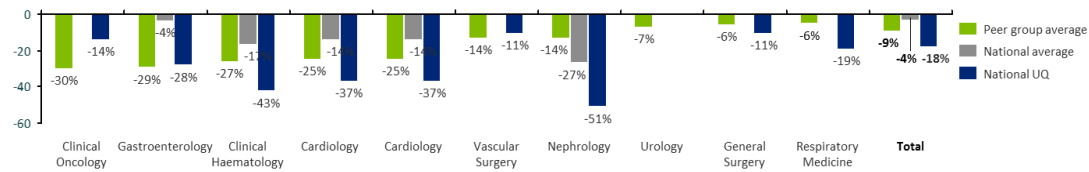
Cost per day case FCE



Cost per outpatient activity unit

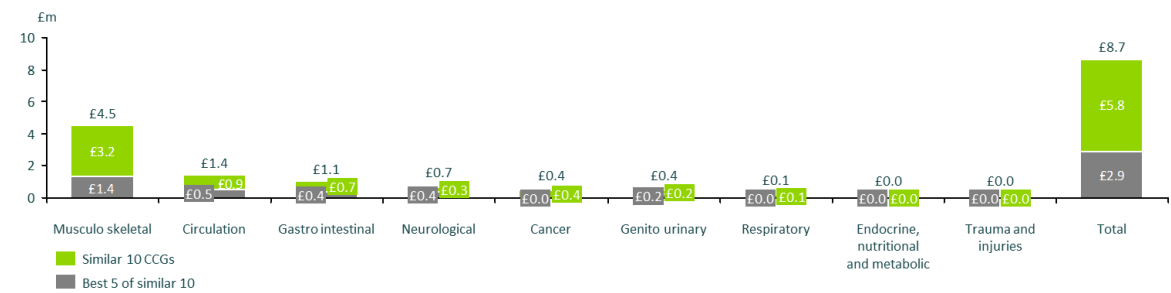


Cost per non-elective FCE

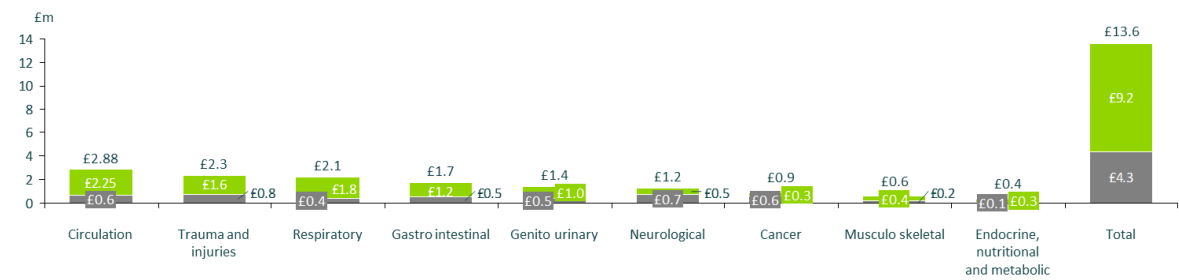


1.1.16 Rightcare indicators

Elective



Non-elective



1.1.17 Community Bed Base

North Cumbria's 39 beds per 100,000 weighed is higher than its peers.

Considerations in light of fewer beds	Considerations in light of additional community beds
A 2015 National Audit of Intermediate Care found an average number of beds commissioned per 100,000 weighted population was c.26. North Cumbria is currently c.39*	The National Audit of Intermediate Care finds the average community hospital only meets c. 50% of capacity required, as such there could be significant unmet need.*
Potential peers have a lower bed base; Surrey downs CCG, Coastal West Sussex & North, East, and West Devon CCG have c.27, c.31 & c.34 respectively. (per weighed 100,000 pop)	Some LHEs have a higher bed base than NC. Somerset CCG has c.75 (per 100,000 weighed pop)
	Rural communities use community hospitals differently from urban areas, tending to have a higher bed base**

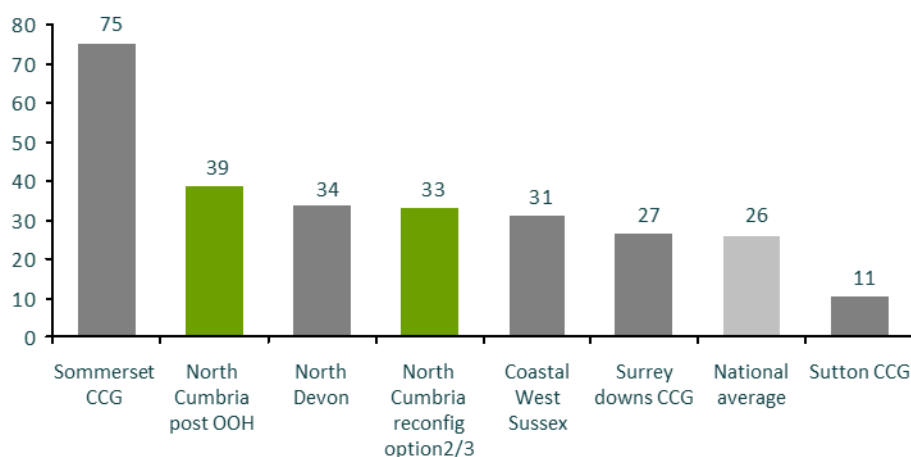
- If North Cumbria's beds per population was consistent to national average, its bed base would reduce by 35, from 119 to 84.***
- If North Cumbria's number of beds per population was consistent to ND, CWS & SD, its bed base would reduce by 23 beds, from 119 to 96.
- Doubling the bed base to address potential unmet need would imply a national average of c. 52 beds per 100k population, for North Cumbria this would increase its bed base by 45 from 119 to 164.

*2015 National Audit of intermediate care summary report

**Review of community Hospital/intermediate care provision

***Community work stream's current work

Commissioned bed base per population



- CCG's such as Somerset may use community hospitals differently.
- Note that many studies agree, comparisons between Community hospitals is difficult due to the great variation between them

1.1.18 Efficiency Analysis – Carter Focus

Carter efficiencies

	Opportunity	£ savings
Total (all specialties)	11.5%*	£35.8m

Efficiency Analysis Comparison

Efficiency area	Carter	CIP plans	Ref. cost benchmark	Econometric benchmarks	Average provider
Frontier shift (per year)	1.25%	1.25%	1.25%	1.25%	1.25%
Catch-up (over 5 years)	11.5%	4-5%	9.10%	13%	6.0%
Total envelope over five years	19.0%	11.25%	15.35%	19.25%	12.25%
Yearly average	3.8%	2.25%	3.1%	3.9%	2.5%

NCUHT efficiency scenario

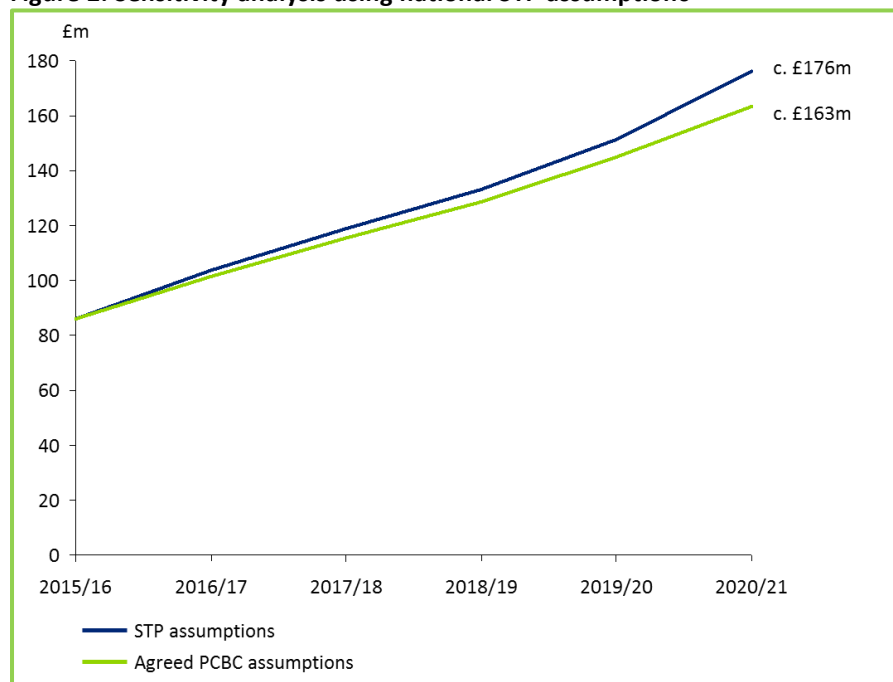
Scenario	Total envelope	Yearly average
Stretch	17.5%	3.5%
Core	13.0%	2.6%

1.1.1 STP planning assumptions sensitivity analysis

The assumptions currently underpinning WNE Cumbria's financial challenge of c. £163m by 2020/21 have been discussed and signed off by the Finance Directors Group. NHS England / NHS Improvement have recently released a finance and efficiency template for all STPs.³ This template includes a set of guidelines assumptions to support financial planning.

To support further sensitivity testing, the impact of updating the current assumptions underpinning WNE Cumbria's financial challenge with those included in the national STP template has been estimated. This sensitivity is included in Figure 2 below.

Figure 2: Sensitivity analysis using national STP assumptions



Source: Success Regime financial analysis

The initial analysis suggests that based on applying the national STP assumptions the WNE Cumbria do nothing financial challenge could increase by c. £13m, from c. £163m in 2020/21 to c. £176m in 2020/21.

Drivers of change

The greater deficit is driven by differences in a number of assumptions:

1. **Activity growth.** The agreed PCBC assumption is an annual activity growth rate of 2%. The STP assumptions imply an annual growth rate of c. 2.2% for WNE Cumbria for acute activity. Mental Health and Community activity growth rates are also higher, which increases the deficit.
2. **Provider Inflation – Pay.** The STP assumptions around pay inflation are slightly higher than those agreed for the purposes of the PCBC, driving a reduction in the deficit.
3. **Continuing Health Care.** The STP assumptions on CHC growth (c. 6% per annum) are higher than those used in the PCBC financial challenge from the CCG assumptions (c. 2% per annum), which drives an increase in the deficit.

³ Source: <https://www.england.nhs.uk/wp-content/uploads/2015/12/planning-guid-16-17-20-21.pdf>

4. **Primary Care Drugs.** The STP assumptions on the growth in primary care drugs spend (c. 7% per annum) are higher than those used in the PCBC financial challenge from the CCG assumptions (c. 4% per annum), driving an increase in the deficit.

It is noted that not all assumptions included in the STP guidance have been included in this sensitivity at this stage.